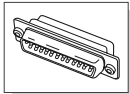


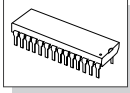
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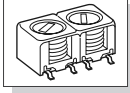
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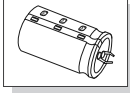
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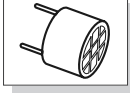
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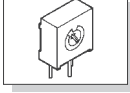


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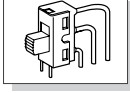
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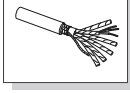
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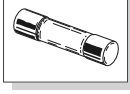
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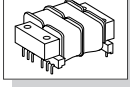


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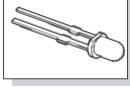
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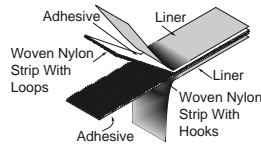
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3M Fastening Systems

Scotchmate™ brand Hook and Loop Fastening Systems

When the two sides of a Scotch-mate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mesh with a surface of pliable loops. Simply press together to fasten and pull apart to open. And do it thousands of times during the life of your product. Depending on the application, select either plain-backed or adhesive-backed versions.



Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, plus wood, glass and more.

Plain, standard sew on: Wash or dry clean • Operating Temp.: Up to 250°F (121°C) continuous • Features: Tailored appearance for garments

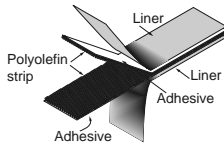
Pressure sensitive rubber adhesive: • Features: General purpose adhesion to most smooth surfaces • Operating Temp.: -20°F to 120°F (-29°C to 49°C)

Note: Roll length is 50 yards (45.72 meters)

Description	Digi-Key Part No.	Price Each
Hook & Loop Fastening Systems - 50 yds. (45.72 meters)		
Loop, plain back sew on, 5/8" (15.88mm), black	SJ340158-0-ND	10.98
Hook, plain back sew on, 5/8" (15.88mm), black	SJ340258-0-ND	10.98
Loop, plain back sew on, 5/8" (15.88mm), white	SJ340158-9-ND	10.98
Hook, plain back sew on, 5/8" (15.88mm), white	SJ340258-9-ND	10.98
Loop, plain back sew on, 1" (25.40mm), black	SJ340110-0-ND	15.68
Hook, plain back sew on, 1" (25.40mm), black	SJ340210-0-ND	15.69
Loop, plain back sew on, 1" (25.40mm), white	SJ340110-9-ND	15.69
Hook, plain back sew on, 1" (25.40mm), white	SJ340210-9-ND	15.69
Hook, adhesive back, 5/8" (15.88mm), black	SJ352658-0-ND	54.61
Loop, adhesive back, 5/8" (15.88mm), black	SJ352758-0-ND	54.61
Hook, adhesive back, 1" (25.40mm), black	SJ352610-0-ND	68.28
Loop, adhesive back, 1" (25.40mm), black	SJ352710-0-ND	68.28

Dual Lock™ brand Reclosable Fastening Systems

When Dual Lock brand Reclosable Fasteners are pressed together, hundreds of mushroom-shaped stems interlock with one another. An audible snap announces that the fastener is locked. Compared to hook and loop fasteners, you get improved tensile strength with five times more holding power. Open and close hundreds of times during the life of your product. Depending on the applications, you can select either plain-backed or adhesive-backed versions.



Plain-backed versions can be easily sewn, stapled or ultrasonically bonded in place. Adhesive-backed versions are available for bonding to bare or painted metal, many plastics including plasticized vinyl, plus wood, glass and more. Mating Type 400 and Type 170 stems provides the most universal Dual Lock fastener combination. As an alternative when the closure involves two flexible surfaces, Type 400 can be mated with itself. For even greater strength closures with limited openings and closing, Type 170 can be mated with Scotchmate Loop Products. **Plain-backed:** Sew on or staple. Wash or dry clean. • Operating Temp.: -20°F - 200°F (-29°C - 93°C) **Pressure sensitive rubber adhesive:** General purpose. Bonds to most surfaces. • Operating Temp.: -20°F - 120°F (-29°C - 49°C) continuous. **Pressure sensitive very high bond Scotch™ VHB™ acrylic adhesive:** High performance for aircraft, automotive, business equipment, electronics. Resists harsh wet/dry, hot/cold cycles. • Operating Temp.: -20°F - 158°F (-29°C - 70°C) continuous

Note: Roll length is 50 yards (45.72 meters)

Description	Digi-Key Part No.	Price Each
Dual-Lock Fastening Systems		
Loop, plain back sew on, .5" (12.70mm), black	SJ344112-ND†	60.42
Hook, plain back sew on, .5" (12.70mm), black	SJ344212-ND†	60.42
Loop, plain back sew on, 1" (25.40mm), black	SJ344110-ND†	100.72
Hook, plain back sew on, 1" (25.40mm), black	SJ344210-ND†	100.72
Loop, pressure sensitive adhesive back, .5" (12.70mm), black	SJ354112-ND†	76.63
Hook, pressure sensitive adhesive back, .5" (12.70mm), black	SJ354212-ND†	76.63
Loop, pressure sensitive adhesive back, 1" (25.40mm), black	SJ354110-ND†	127.77
Hook, pressure sensitive adhesive back, 1" (25.40mm), black	SJ354210-ND†	127.77
Dual-Lock High Bond Fastening Systems		
Loop, pressure sensitive adhesive back, .5" (12.70mm), black	SJ355112-ND†	110.20
Hook, pressure sensitive adhesive back, .5" (12.70mm), black	SJ355212-ND†	110.20
Loop, pressure sensitive adhesive back, 1" (25.40mm), black	SJ355110-ND†	176.12
Hook, pressure sensitive adhesive back, 1" (25.40mm), black	SJ355210-ND†	176.12
Hook, plain back sew on, .5" (12.70mm), clear	SJ346012-ND	89.05
Loop, pressure sensitive very hi bond back, .5" (12.70mm), clear	SJ356012-ND	123.28
Hook, plain back sew on, 1" (25.40mm), clear	SJ346010-ND	115.16
Loop, pressure sensitive very hi bond back, 1" (25.40mm), clear	SJ356010-ND	197.01

† Mating Type 400 • Mating Type 170

3M Bumpons® Protective Products

Available in: White, Gray, Brown, Black. Dimensions in Inches (mm).

Fig. 1 W: .50 (12.70) Ht: .12 (3.05)	Fig. 2 W: .50 (12.70) Ht: .14 (3.56)
Fig. 3 W: .50 (12.70) Ht: .23 (5.84)	Fig. 4 W: .81 (20.57) Ht: .30 (7.62)
Fig. 5 W: .63 (16.00) Ht: .31 (7.87)	Fig. 6 W: .44 (11.18) Ht: .20 (5.08)
Fig. 7 W: .50 (12.70) Ht: .14 (3.56)	Fig. 8 W: .44 (11.18) Ht: .20 (5.08)
Fig. 9 W: .88 (22.35) Ht: .40 (10.16)	Fig. 10 W: .81 (20.57) Ht: .52 (13.21)
Fig. 11 W: .40 (10.16) Ht: .10 (2.54)	Fig. 12 W: .75 (19.05) Ht: .38 (9.65)

Fig.	Digi-Key Part No.*	Pricing					
		64	640	1,024	3,072	6,144	9,216
1	SJ5508-□-ND	4.46	38.25	49.81/M	34.37/M	32.64/M	30.88/M
		56	560	1,008	3,024	6,048	9,072
2	SJ5012-□-ND	4.17	35.72	53.16/M	36.68/M	34.84/M	32.96/M
		64	640	1,024	3,072	6,144	9,216
3	SJ5518-□-ND	7.71	66.12	86.11/M	59.41/M	56.44/M	53.39/M
		4	36	504	1,008	5,040	10,080
4	SJ5523-□-ND	.73	5.64	65.78	90.06/M	85.55/M	80.93/M
		40	520	1,040	5,200	10,400	15,600
5	SJ5027-□-ND	7.49	83.48	92.31/M	87.15/M	82.95/M	76.79/M
		56	560	1,008	3,024	6,048	9,072
6†	SJ5303-7-ND	4.80	41.13	61.21/M	42.23/M	40.12/M	37.95/M
		56	560	1,008	3,024	6,048	9,072
7†	SJ5312-7-ND	4.91	42.12	62.68/M	43.25/M	41.08/M	38.86/M
		56	560	1,008	3,024	6,048	9,072
8	SJ5003-□-ND	3.87	33.18	49.38/M	34.07/M	32.37/M	30.62/M
		24	72	504	1008	5,040	10,080
9	SJ5009-□-ND	7.51	19.30	112.58	154.13/M	146.41/M	138.50/M
		4	36	504	1,008	5,040	10,080
10	SJ5514-□-ND	1.71	13.19	153.85	210.63/M	200.07/M	189.26/M
		54	540	1,080	3,024	6,048	9,072
11	SJ5007-0-ND	3.50	29.99	46.28/M	31.94/M	30.33/M	28.70/M
		40	520	1,040	5,200	10,400	15,600
12	SJ5017-□-ND	9.59	106.91	118.22/M	112.29/M	106.23/M	98.35/M

* To designate color, use the following numbers:

9=white, 8=gray, 1=brown, 0=black, in the □ of each part number.

† Transparent.

3M Tape

Foil Shielding Tape

Scotch® EMI/RFI Copper Foil Shielding Tapes provide an easy-to-apply, time saving, cost-effective way to shield against EMI/RFI radiation. Foil tapes are conductive through the adhesive, and offer mechanical, electrical and thermal values to meet your shielding effectiveness/frequency requirements.

Description	Digi-Key Part No.	Pricing	
		1	5
1/4" x 18 yds. (6.35mm x 16.46 meters)	3M1181A-ND	10.29	44.10
1/2" x 18 yds. (12.70mm x 16.46 meters)	3M1181B-ND	20.56	88.13
1" x 18 yds. (25.40mm x 16.46 meters)	3M1181C-ND	41.14	176.33

Scotchcode Wire Marker Tape Dispenser



BK = Black
BL = Blue
BN = Brown
GN = Green
GY = Gray
OR = Orange
RD = Red
VL = Violet
WH = White
YL = Yellow

Description	Digi-Key Part No.	Price
Dispenser Only	STD-ND	9.74
Dispenser with 0-9 Marker Tape	STD-0-9-ND	29.66
Dispenser with Colored Marker Tape	STD-C-ND	29.66
Refill, 1 roll, number - □ = 0 thru 9	SDR-□-ND*	2.18
Refill, 1 roll, colors - □ □ =	SDR-□ □-ND*	2.18

* Refill Rolls 8 Feet (2.44 Meters) in Length

Electrical Tape

Description	Digi-Key Part No.	Price
Super 33+ Vinyl Plastic Electrical Tape, 3/4" x 66' (19.05mm x 20.12m).....	3M33+A-ND	4.52/Roll
Super 88 Vinyl Plastic Electrical Tape, 3/4" x 66' (19.05mm x 20.12m).....	3M88A-ND	5.12/Roll
Highland Vinyl Plastic Tape, 3/4" x 66' (19.05mm x 20.12m).....	3M1700-ND	.86/Roll
Vinyl Mastic Pad, 3 3/4" x 4 1/2" (82.55mm x 114.30mm).....	3M11008-ND	2.62/Roll
Vinyl Mastic Pad, 2 1/2" x 2 1/2" (63.50mm x 63.50mm).....	3M06149-ND	7.42/25

Scotch™ brand Adhesive Transfer Tapes 9703

Scotch Adhesive Transfer Tapes aren't really "tapes" at all. They're actually thin strips of pressure sensitive adhesive pre-applied on special release liners. This allows you to quickly and easily apply a neat, precise strip of clean, dry adhesive exactly where you want it. And with no mess or time-consuming cleanup. They are very often the better alternative to liquid adhesives, hot melts, staples, waxes and other conventional joining methods. **Mounts flat, flexible circuits:** Scotch 9703 Adhesive Transfer Tape features electrical conductivity only through the adhesive thickness, not along the plane of the tape. This allows you to mount or splice flat, flexible circuits very quickly. Completely eliminates the need for soldering, solvents, messy cleanup. • Thickness: .002" (.05mm) • Adhesive: Acrylic A-40 **Applications:** • Attach EMI/RFI shields • Connect flat flexible circuits • Attach electronic components

Width In. (mm)	Digi-Key Part No.	Price Each
0.75 (19.05)	3M970334-ND	79.96
0.5 (12.70)	3M970312-ND	59.97

Scotch-Mount™ brand No. 4008 & 4026 Double Coated Foam Tapes



These tapes are composed of a layer of adhesive, a foam carrier, another layer of adhesive and a liner. The foam carrier makes them flexible and conformable, great for filling space and ideal for joining rough and irregular surfaces. • Adhesive: Acrylic A-20 **Description:** Off-white, open-cell urethane foam carrier. Features high shear adhesive with high temperature resistance. **Applications:** • Bond mirrors to walls or furniture • Bond acoustic panels to walls • Mount air fresheners and soap dispensers • Mount interior signs and nameplates • Attach wire clips to various surfaces

Thickness In. (mm)	Digi-Key Part No.	Price Each
0.125 (3.18)	3M4008-ND	42.76
0.062 (1.57)	3M4026-ND	24.73

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

Fig. 1

Lid adds 4mm to height of box. For dimensions A, B and C, see charts below.

Part No.	Dim. - Inch (mm)	J	K
1591L	1.4 (35)	2.5 (64)	
1591A	1.1 (29)	3.1 (79)	
1591B	1.6 (41)	3.5 (91)	
1591C	1.7 (44)	3.9 (99)	
1591D	2.3 (59)	5.0 (129)	
1591E	3.5 (89)	6.6 (170)	
1591G	2.8 (73)	3.9 (100)	
1591H	1.9 (50)	5.6 (144)	
1591S	2.4 (61)	3.5 (89)	
1591T	2.3 (59)	3.9 (99)	
1591U	3.9 (99)	3.9 (99)	
1591V	3.9 (99)	3.9 (99)	

Fig. 2

Lid adds 4mm to height of box. For dimensions A, B and C, see charts below.

Part No.	Dim. - Inch (mm)	F	G
1590A	.89 (22.5)	3.01 (76.5)	
1590B	1.71 (43.5)	3.76 (95.5)	
1590BB	3.05 (77.5)	4.04 (102.5)	
1590C	3.07 (78)	4.09 (104)	
1590D	4.07 (103.5)	6.75 (171.5)	
1590DD	4.07 (103.5)	6.77 (172)	
1590E	4.07 (103.5)	6.75 (171.5)	
1590F	6.75 (171.5)	6.75 (171.5)	
1590LB	1.36 (34.5)	1.36 (34.5)	
1590P1	2.87 (73)	5.38 (137)	
1590S	2.58 (65.5)	3.72 (94.5)	
1590T	2.50 (63.5)	4.11 (104.5)	
1590U	4.07 (103.5)	4.07 (103.5)	
1590V	4.07 (103.5)	4.07 (103.5)	

Fig. 3

Example of case with optional tilt handle

Example of Digi-Key Part # 1598E mounting bosses

Fig. 4

1593K

Fig. 5

1593Q

Fig. 6

Cover adds 12mm to height.

Fig. 7

Aluminum lid and rubber feet included

Part No.	Dimensions			
	D	E	G	I
1595C	39.62	62.23	21.84	10.16
1595E	51.59	85.09	21.84	10.16

For dimensions A, B and C, see charts below.

Fig. 8

Fig. 9

Cover sold separately.

Cover No.	Use with Digi-key #	Use with Hammond #
HM275-ND	HM257-ND	1444-6
HM276-ND	HM258-ND	1444-8
HM277-ND	HM259-ND	1444-9
	HM260-ND	1444-10
HM278-ND	HM261-ND	1444-12
HM279-ND	HM262-ND	1444-14
HM280-ND	HM263-ND	1444-15
	HM264-ND	1444-16
HM281-ND	HM265-ND	1444-18
HM282-ND	HM266-ND	1444-20
HM283-ND	HM267-ND	1444-22
	HM268-ND	1444-24
HM284-ND	HM269-ND	1444-26
	HM270-ND	1444-28
HM285-ND	HM271-ND	1444-29
	HM272-ND	1444-30
HM286-ND	HM273-ND	1444-32
	HM274-ND	1444-33

Fig. 10

Fig. 11

Fig. 12

Fig. 13

Fig. 1 - Plastic Instrument Enclosures - 1591 Series: Available in both High Impact Polystyrene (black) and in Flame Retardant ABS (black, blue, or light grey). Economical styrene versions come with four self-tapping #4 x 1/2" (12.7mm) flat head screws countersunk into the lid. ABS versions carry a UL flammability rating of 94V-0 at 1.47mm thickness and a continuous use temperature rating of 60°C. ABS versions come with M3 x .5 x 10mm Philips head screws, countersunk lid, and integral tapped brass bushings. Both versions have interlocking flanged lid and integral card guides to accept .062" (1.57mm) PC cards.

Fig. 2 - Diecast Aluminum Enclosures - 1590 Series: Drilled and tapped with lid and four 6-32 x 1/2" (12.7mm) countersunk Philips screws. Interlocking flanged lid provides complete RF shielding.

Fig. 3 - Plastic Instrument Cases - 1598 Series: Available in both Flame Retardant ABS (black or light grey) and High Impact Polystyrene (light grey). Both versions have a matte textured finish, .064" (1.63mm) thick brushed aluminum front and rear panels, integral horizontal PC board mounts on Eurocard centers, front and rear vertical PC board slots. Both versions accept optional tilt handles. ABS versions carry a UL flammability rating of 94V-0 and are secured with M3 x .5 x 10mm Philips head screws into integral brass bushings. Styrene versions are secured with #4 x 1/2" (12.7mm) self-tapping screws.

Fig. 4 - Plastic Hand Held Cases - 1599 Series: Available in both High Impact Polystyrene (light grey) and Flame Retardant ABS (black or light grey). Both versions have these features: attractively styled and ergonomically designed for use as a hand held enclosure; ends sized for infra-red applications; extra deep top and ultra shallow base; two piece lap joint construction; recessed top area ideal for membrane display; internal universal battery compartment; user friendly 10mm x 10mm reference grid is molded into the top interior; six PC board mounting bosses molded into both the top and the base; vertical mounting slots molded into the top for PC boards or optional dividers. ABS versions carry UL flammability rating of 94V-0 and are secured with integral tapped brass bushings. Styrene versions are secured with self-tapping screws.

Fig. 5 - Plastic Hand Held Instrument Boxes - 1593 Series: Electronic instrument enclosures. Two-piece lap joint construction. ABS plastic. Unit is secured with self-tapping screws.

Fig. 6 - Plastic Instrument Boxes - 1594 Series: Available in both High Impact Polystyrene (light grey) and Flame Retardant ABS (black or light grey). Both versions feature lap joint construction, interlocking flange on lid, and a rugged and robust design.

Fig. 7 - Plastic Instrument Consoles - 1595 Series: Available in Flame Retardant ABS (black or light grey) which meets UL 94V-0 flammability tests. Unique sloped front design comes with .064" (1.02mm) thick brushed aluminum front panel, four self-adhesive rubber feet, and four M3 x .5 x 10mm machine screws threaded into integral brass bushings. Integral card guides accept .062" (1.57mm) PC boards. Base has four internal 0.20" (5.08mm) stand-off bosses.

Fig. 8 - Aluminum Utility Cases - 1411 Series: .040" (1.02mm) thick aluminum. 4 self-tapping screws included. ASA 61 grey baked enamel finish (outside only).

Fig. 9 - Heavy Duty Chassis Case and Cover Plates - 1444 Series: Spot welded heavy duty construction chassis. Cover holes are punched with 4 holes (hardware not provided). Natural finish.

Fig. 10 - Metal Utility Cases - 1415 Series: Sizes A to E are 20 gauge 0.036" (.91mm) thick steel. Sizes F to J are 18 gauge 0.048" (1.22mm) thick steel. Self-tapping screws included. ASA 61 grey baked enamel finish (outside only). Models A to D have 4 mounting holes. Models E to J have 6 mounting holes.

Fig. 11 - Ventilated Low Profile Instrument Cases - 1426 Series: 20 gauge steel enclosure finished in satin off-white. 0.064" (1.63mm) thick aluminum panels front and rear. Front panel is satin black, rear panel matches case color.

Fig. 12 - Low Profile Instrument Cases - 1458 Series: 20 gauge steel case with black satin finish. 0.064" (1.63mm) thick aluminum panels (one satin black and one satin white for each case). Symmetrical design so either end can be front. 6-32 Philips nickel plated screws and self-adhesive rubber feet included.

Fig. 13 - Ventilated High Profile Instrument Cases - 1401 Series: 20 gauge steel case finished in satin off-white. 0.064" (1.63mm) thick aluminum panels, front finished in satin black; vented back finished in satin off-white. Rear panel is vented top and bottom 6-32 Philips nickel plated screws and self-adhesive rubber feet included.

Color	Dimensions - Inch (mm)			Digi-Key Part No.	Pricing			Hammond Part No.
	A	B	C		1	10	100	
Fig. 1 - 1591 Economy Styrene Plastic Enclosures								
Black	3.3 (84)	2.2 (56)	1.4 (36)	HM100-ND	3.32	27.70	255.00	1591LSBK
	3.9 (100)	2.0 (50)	0.8 (21)	HM102-ND	3.09	25.70	237.00	1591ASBK
	4.4 (112)	2.4 (62)	1.1 (28)	HM103-ND	3.34	27.80	257.00	1591BSBK
	4.7 (120)	2.6 (65)	1.4 (36)	HM104-ND	3.55	29.60	273.00	1591CSBK
	5.9 (150)	3.2 (81)	1.8 (46)	HM105-ND	5.25	43.80	404.00	1591DSBK
	7.5 (191)	4.3 (110)	2.2 (56)	HM106-ND	6.30	52.50	485.00	1591ESBK
	4.8 (121)	3.7 (94)	1.2 (30)	HM107-ND	4.20	35.00	323.00	1591GSBK
	6.5 (165)	2.8 (71)	1.0 (25)	HM108-ND	4.18	34.80	321.00	1591HSBK
	4.3 (110)	3.2 (81)	1.6 (41)	HM109-ND	4.49	37.50	346.00	1591ISBK
	4.7 (120)	3.2 (81)	2.2 (56)	HM110-ND	4.96	41.30	381.00	1591JSBK
	4.7 (120)	4.7 (120)	2.2 (56)	HM111-ND	5.31	44.30	409.00	1591USBK
	4.7 (120)	4.7 (120)	3.5 (90)	HM112-ND	6.36	53.00	489.00	1591VSBK
Fig. 1 - 1591 ABS Flame Retardant Plastic Enclosures								
Black	3.3 (84)	2.2 (56)	1.4 (36)	HM113-ND	5.29	44.10	407.00	1591LBK
	3.9 (100)	2.0 (50)	0.8 (21)	HM114-ND	4.93	41.10	380.00	1591ABK
	4.4 (112)	2.4 (62)	1.1 (28)	HM115-ND	5.33	44.40	410.00	1591BBK
	4.7 (120)	2.6 (65)	1.4 (36)	HM116-ND	5.67	47.30	436.00	1591CBK
	5.9 (150)	3.2 (81)	1.8 (46)	HM117-ND	8.40	70.00	646.00	1591DBK
	7.5 (191)	4.3 (110)	2.2 (56)	HM118-ND	10.08	84.00	775.00	1591EBK
	4.8 (121)	3.7 (94)	1.2 (30)	HM119-ND	6.72	56.00	517.00	1591GBK
	6.5 (165)	2.8 (71)	1.0 (25)	HM120-ND	6.68	55.70	514.00	1591HBK
	4.3 (110)	3.2 (81)	1.6 (41)	HM121-ND	7.18	59.70	552.00	1591IBK
	4.7 (120)	3.2 (81)	2.2 (56)	HM122-ND	7.94	66.20	611.00	1591TBK

Color	Dimensions - Inch (mm)			Digi-Key Part No.	Pricing			Hammond Part No.
	A	B	C		1	10	100	
Black	4.7 (120)	4.7 (120)	2.2 (56)	HM123-ND	8.51	70.90	654.00	1591LUBK
	4.7 (120)	4.7 (120)	3.5 (90)	HM124-ND	10.19	84.90	783.00	1591VUBK
	3.3 (84)	2.2 (56)	1.4 (36)	HM125-ND	5.29	44.10	407.00	1591LBU
	3.9 (100)	2.0 (50)	0.8 (21)	HM126-ND	4.93	41.10	380.00	1591ABU
	4.4 (112)	2.4 (62)	1.1 (28)	HM127-ND	5.33	44.40	410.00	1591BBU
	4.7 (120)	2.6 (65)	1.4 (36)	HM128-ND	5.67	47.30	436.00	1591CBU
Blue	5.9 (150)	3.2 (81)	1.8 (46)	HM129-ND	8.40	70.00	646.00	1591DUB
	7.5 (191)	4.3 (110)	2.2 (56)	HM131-ND	10.08	84.00	775.00	1591EUB
	4.8 (121)	3.7 (94)	1.2 (30)	HM132-ND	6.72	56.00	517.00	1591GUB
	6.5 (165)	2.8 (71)	1.0 (25)	HM133-ND	6.68	55.70	514.00	1591HUB
	4.3 (110)	3.2 (81)	1.6 (41)	HM134-ND	7.18	59.70	552.00	1591IUB
	4.7 (120)	3.2 (81)	2.2 (56)	HM135-ND	7.94	66.20	611.00	1591TUB
Lt. Grey	4.7 (120)	4.7 (120)	2.2 (56)	HM136-ND	8.51	70.90	654.00	1591LUG
	4.7 (120)	4.7 (120)	3.5 (90)	HM137-ND	10.19	84.90	783.00	1591VUG
	3.3 (84)	2.2 (56)	1.4 (36)	HM138-ND	5.29	44.10	407.00	1591LGY
	3.9 (100)	2.0 (50)	0.8 (21)	HM139-ND	4.93	41.10	380.00	1591AGY
	4.4 (112)	2.4 (62)	1.1 (28)	HM140-ND	5.33	44.40	410.00	1591BGY
	4.7 (120)	2.6 (65)	1.4 (36)	HM141-ND	5.67	47.30	436.00	1591CGY

Color	Dimensions - Inch (mm)			Digi-Key Part No.	Pricing			Hammond Part No.	
	A	B	C		1	10	100		
Lt. Grey	4.7 (120)	4.7 (120)	2.2 (56)	HM148-ND	8.51	70.90	654.00	1591UGY	
	4.7 (120)	4.7 (120)	3.5 (90)	HM149-ND	10.19	84.90	783.00	1591VGY	
Fig. 2 - 1590 Diecast Aluminum Alloy Enclosures									
—	3.64 (92.5)	1.52 (38.5)	1.06 (27.0)	HM150-ND	7.00	58.30	538.00	1590A	
	4.39 (111.5)	2.34 (59.5)	1.06 (27.0)	HM151-ND	8.00	66.70	615.00	1590B	
	4.67 (118.5)	3.68 (93.5)	1.18 (30.0)	HM152-ND	10.40	86.70	800.00	1590B	
	4.72 (120.0)	3.70 (94.0)	2.07 (52.5)	HM153-ND	11.70	97.50	900.00	1590C	
	7.38 (187.5)	4.70 (119.5)	2.05 (52.0)	HM154-ND	19.16	159.70	1474.00	1590D	
	7.40 (188)	4.70 (120)	1.30 (33.0)	HM347-ND	14.84	123.63	1141.30	1590DD	
	7.38 (187.5)	4.70 (119.5)	3.07 (78.0)	HM155-ND	20.50	170.80	1577.00	1590E	
	7.38 (187.5)	7.38 (187.5)	2.48 (63.0)	HM156-ND	27.56	229.70	2120.00	1590F	
	1.99 (50.5)	1.99 (50.5)	1.06 (27.0)	HM157-ND	7.22	60.20	555.00	1590LB	
	6.01 (153)	3.24 (82)	1.81 (46)	HM348-ND	14.30	119.20	1100.00	1590P1	
	4.35 (110.5)	3.21 (81.5)	1.57 (40.0)	HM158-ND	10.56	88.00	812.00	1590S	
	4.74 (120.5)	3.13 (79.5)	2.17 (55.0)	HM159-ND	10.90	90.80	838.00	1590T	
	4.70 (119.5)	4.70 (119.5)	2.17 (55.0)	HM160-ND	16.00	133.30	1231.00	1590U	
	4.70 (119.5)	4.70 (119.5)	3.54 (90.0)	HM161-ND	22.00	183.30	1692.00	1590V	
	Fig. 3 - 1598 ABS Flame Retardant 2-Piece Plastic Instrument Case								
	Black	6.18 (157)	3.70 (94)	1.42 (36)	HM162-ND	9.74	81.10	749.00	1598ABK
		5.28 (134)	5.31 (135)	1.96 (50)	HM163-ND	10.68	89.00	822.00	1598BBK
7.09 (180)		6.10 (155)	2.04 (52)	HM164-ND	13.36	111.30	1027.00	1598CBK	
7.09 (180)		8.11 (206)	2.52 (64)	HM165-ND	16.30	135.80	1254.00	1598DBK	
6.30 (160)		6.30 (160)	3.38 (86)	HM166-ND	16.04	133.60	1233.00	1598EBK	
9.84 (250)		6.30 (160)	1.58 (40)	HM167-ND	17.14	142.80	1318.00	1598FBK	
9.84 (250)		6.30 (160)	3.00 (76)	HM168-ND	20.08	167.30	1544.00	1598GBK	
11.02 (280)		7.87 (200)	1.58 (40)	HM169-ND	21.08	175.60	1621.00	1598HBK	
11.02 (280)		7.87 (200)	3.00 (76)	HM170-ND	26.12	217.60	2009.01	1598JBK	
6.18 (157)		3.70 (94)	1.42 (36)	HM171-ND	9.74	81.10	749.00	1598AGY	
5.28 (134)		5.31 (135)	1.96 (50)	HM172-ND	10.68	89.00	822.00	1598BGY	
7.09 (180)	6.10 (155)	2.04 (52)	HM173-ND	13.36	111.30	1027.00	1598CGY		
7.09 (180)	8.11 (206)	2.52 (64)	HM174-ND	16.30	135.80	1254.00	1598DGY		
6.30 (160)	6.30 (160)	3.38 (86)	HM175-ND	16.04	133.60	1233.00	1598EGY		
9.84 (250)	6.30 (160)	1.58 (40)	HM176-ND	17.14	142.80	1318.00	1598FGY		
9.84 (250)	6.30 (160)	3.00 (76)	HM177-ND	20.08	167.30	1544.00	1598GGY		
11.02 (280)	7.87 (200)	1.58 (40)	HM178-ND	21.08	175.60	1621.00	1598HGY		
11.02 (280)	7.87 (200)	3.00 (76)	HM179-ND	26.12	217.60	2009.01	1598JGY		
Fig. 3 - 1598 Styrene 2-Piece Plastic Instrument Cases									
Lt. Grey	6.18 (157)	3.70 (94)	1.42 (36)	HM245-ND	7.14	59.50	549.00	1598ASGY	
	5.28 (134)	5.31 (135)	1.96 (50)	HM246-ND	8.00	66.70	615.00	1598BSGY	
	7.09 (180)	6.10 (155)	2.04 (52)	HM247-ND	9.38	78.10	721.00	1598CSGY	
	7.09 (180)	8.11 (206)	2.52 (64)	HM248-ND	11.24	93.60	864.00	1598DSGY	
	6.30 (160)	6.30 (160)	3.38 (86)	HM249-ND	11.19	93.30	861.00	1598ESGY	
	9.84 (250)	6.30 (160)	1.58 (40)	HM250-ND	10.95	91.30	842.00	1598FSGY	
	9.84 (250)	6.30 (160)	3.00 (76)	HM251-ND	12.83	106.90	987.00	1598GSGY	
	11.02 (280)	7.87 (200)	1.58 (40)	HM252-ND	12.81	106.80	985.00	1598HSGY	
	11.02 (280)	7.87 (200)	3.00 (76)	HM253-ND	14.93	124.40	1148.00	1598JSGY	
	Chrome Plated Tilt Handles for Instrument Cases								
	Handle for 1598C, E, F, G Series			HM255-ND	13.05	116.00	966.86	1598TH1	
Handle for 1598D, H, J Series			HM256-ND	13.70	121.80	1015.20	1598TH2		
Fig. 4 - 1599 Styrene Hand Held Cases									
Lt. Grey	5.12 (130)	2.56 (65)	0.98 (25)	HM209-ND	5.24	43.60	403.00	1599BSGY	
	6.70 (170)	3.35 (85)	1.33 (34)	HM210-ND	5.90	49.10	453.00	1599CSGY	
	8.66 (220)	4.33 (110)	1.73 (44)	HM211-ND	6.78	56.50	522.00	1599HSGY	
	5.12 (130)	2.56 (65)	0.98 (25)	HM212-ND	6.90	57.50	531.00	1599BBK	
Black	6.70 (170)	3.35 (85)	1.33 (34)	HM213-ND	8.39	69.90	645.00	1599EBK	
	8.66 (220)	4.33 (110)	1.73 (44)	HM214-ND	10.28	85.60	790.00	1599HBK	
	5.12 (130)	2.56 (65)	0.98 (25)	HM215-ND	6.90	57.50	531.00	1599BGY	
	6.70 (170)	3.35 (85)	1.33 (34)	HM216-ND	8.39	69.90	645.00	1599EGY	
Lt. Grey	8.66 (220)	4.33 (110)	1.73 (44)	HM217-ND	10.28	85.60	790.00	1599HGY	
	Fig. 4 - 1599 ABS Hand Held Case w/Battery Box								
Black	5.12 (130)	2.56 (65)	0.98 (25)	HM351-ND	8.70	72.50	669.00	1599BBKBAT	
	6.70 (170)	3.35 (85)	1.33 (34)	HM353-ND	10.35	86.30	796.00	1599EBKBAT	
Grey	5.12 (130)	2.56 (65)	0.98 (25)	HM352-ND	8.70	72.50	669.00	1599BGBAT	
	6.70 (170)	3.35 (85)	1.33 (34)	HM354-ND	10.35	86.30	796.00	1599EGBAT	
Fig. 4 - 1599 Styrene Plastic Case w/Battery Box									
Grey	5.12 (130)	2.56 (65)	0.98 (25)	HM349-ND	6.65	55.40	511.00	1599BSGBYBAT	
	6.70 (170)	3.35 (85)	1.33 (34)	HM350-ND	7.68	64.00	591.00	1599ESGBYBAT	
Fig. 5 - 1593 ABS Plastic Hand Held Boxes									
Black	2.60 (66)	2.60 (66)	1.10 (28)	HM355-ND	2.10	17.50	162.00	1593KBK	
	3.60 (91)	2.60 (66)	1.10 (28)	HM357-ND	3.00	25.00	231.00	1593PBK	
	4.40 (111)	2.60 (66)	1.10 (28)	HM359-ND	3.38	28.10	260.00	1593QBK	
Grey	2.60 (66)	2.60 (66)	1.10 (28)	HM356-ND	2.10	17.50	162.00	1593KGY	
	3.60 (91)	2.60 (66)	1.10 (28)	HM358-ND	3.00	25.00	231.00	1593PGY	
	4.40 (111)	2.60 (66)	1.10 (28)	HM360-ND	3.38	28.10	260.00	1593QGY	
Fig. 6 - 1594 Styrene Plastic Instrument Boxes									
Lt. Grey	2.2 (56)	2.2 (56)	1.1 (28)	HM221-ND	3.62	30.10	278.00	1594ASGY	
	3.2 (81)	2.2 (56)	1.1 (28)	HM222-ND	3.81	31.80	293.00	1594BSGY	
	4.1 (105)	2.6 (66)	1.3 (33)	HM223-ND	4.16	34.60	320.00	1594CSGY	
	5.2 (131)	2.6 (66)	1.7 (43)	HM224-ND	4.44	37.00	342.00	1594DSGY	
	6.6 (167)	4.2 (107)	2.1 (53)	HM225-ND	5.79	48.30	445.00	1594ESGY	
	2.2 (56)	2.2 (56)	1.1 (28)	HM226-ND	6.30	52.50	485.00	1594ABK	
Black	3.2 (81)	2.2 (56)	1.1 (28)	HM227-ND	6.59	54.90	507.00	1594BBK	
	4.1 (105)	2.6 (66)	1.3 (33)	HM228-ND	8.10	67.50	623.00	1594CBK	
	5.2 (131)	2.6 (66)	1.7 (43)	HM229-ND	9.63	80.30	741.00	1594DBK	
	6.6 (167)	4.2 (107)	2.1 (53)	HM230-ND	11.87	98.90	913.00	1594EBK	
	2.2 (56)	2.2 (56)	1.1 (28)	HM231-ND	6.30	52.50	485.00	1594AGY	
	3.2 (81)	2.2 (56)	1.1 (28)	HM232-ND	6.59	54.90	507.00	1594BGY	
Lt. Grey	4.1 (105)	2.6 (66)	1.3 (33)	HM233-ND	8.10	67.50	623.00	1594CGY	
	5.2 (131)	2.6 (66)	1.7 (43)	HM234-ND	9.68	80.70	744.00	1594DGY	
	6.6 (167)	4.2 (107)	2.1 (53)	HM235-ND	11.87	98.90	913.00	1594EGY	
	6.34 (161)	3.78 (96)	2.29 (58)	HM241-ND	10.05	83.70	750.00	1595CGY	
	8.47 (215)	5.12 (130)	2.96 (75.1)	HM242-ND	12.45	103.80	929.00	1595EGY	
	Black	6.34 (161)	3.78 (96)	2.29 (58)	HM243-ND	10.05	83.70	750.00	1595CBK
8.47 (215)		5.12 (130)	2.96 (75.1)	HM244-ND	12.45	103.80	929.00	1595EBK	

Color	Dimensions - Inch (mm)			Digi-Key Part No.	Pricing			Hammond Part No.
	A	B	C		1	10	100	
Lt. Grey	2.7 (69)	2.2 (56)	1.6 (41)	HM315-ND	5.00	41.60	384.00	1411B
	3.2 (81)	2.2 (56)	1.1 (28)	HM316-ND	5.07	42.30	390.00	1411C
	3.2 (81)	2.2 (56)	1.6 (41)	HM317-ND	5.10	42.50	392.00	1411D
	4.0 (102)	2.2 (56)	3.0 (76)	HM318-ND	5.60	46.60	430.00	1411F
	4.0 (102)	2.2 (56)	1.6 (41)	HM319-ND	5.30	44.10	407.00	1411G
	4.0 (102)	2.2 (56)	2.2 (56)	HM320-ND	5.39	44.90	414.00	1411H
	5.0 (127)	2.2 (56)	2.2 (56)	HM321-ND	6.18	51.50	475.00	1411K
	5.0 (127)	4.0 (102)	3.0 (76)	HM322-ND	8.04	67.00	618.00	1411L
	6.0 (152)	3.0 (76)	3.0 (76)	HM323-ND	9.00	75.00	692.00	1411M
	5.0 (127)	3.0 (76)	2.2 (56)	HM324-ND	6.57	54.80	505.00	1411N
	6.0 (152)	5.0 (127)	4.0 (102)	HM325-ND	11.27	93.90	867.00	1411P
	7.0 (178)	5.0 (127)	3.0 (76)	HM326-ND	10.98	91.50	845.00	1411Q
	8.0 (203)	6.0 (152)	3.5 (89)	HM327-ND	18.00	150.00	1385.00	1411R
	8.0 (203)	4.0 (102)	3.0 (76)	HM328-ND	16.50	137.50	1269.00	1411S
	10.0 (254)	2.2 (56)	1.6 (41)	HM329-ND	18.08	150.60	1390.00	1411T
	10.0 (254)	6.0 (152)	3.5 (89)	HM330-ND	21.92	182.60	1686.00	1411U
	12.0 (305)	3.0 (76)	2.2 (56)	HM331-ND	21.00	175.00	1615.01	1411V
	12.0 (305)	7.0 (178)	4.0 (102)	HM332-ND	26.25	218.80	2019.00	1411X
	17.0 (432)	5.0 (127)	4.0 (102)	HM333-ND	28.50	237.50	2192.01	1411Z
	Fig. 8 - 1411 Aluminum Utility Cases							
Color	Dimensions - Inch (mm)			Digi-Key Part No.	Pricing			Hammond Part No.
A	B	C	1		50	100		
Natural	4.0 (102)	4.0 (102)	2.0 (51)	HM257-ND	7.91	40.14	310.50	1444-6
	6.0 (152)	4.0 (102)	2.0 (50)	HM258-ND	8.11	41.22	319.00	1444-8
	8.0 (203)	4.0 (102)	1.0 (25)	HM259-ND	8.45	42.90	332.00	1444-9
	8.0 (203)	4.0 (102)	2.0 (50)	HM260-ND	8.66	43.98	340.00	1444-10
	7.0 (178)	5.0 (127)	2.0 (50)	HM261-ND				

SERPAC Plastic Electronic Enclosures

Models available with or without 9-volt battery compartments. All models come with vertical card guides and are banded for mounting horizontal circuit boards. All enclosures are made from ABS GSM UL Rated 94 HB plastic.

Colors Available: Black (B), Gray (G), and Almond (A).

<p>"A" Series</p>	<p>Standard/Standard with Insert</p>
<p>Standard Enclosure Copper Clad Board</p>	<p>9V Standard/9V Standard with Insert</p>
<p>Slanted</p>	<p>9V Slanted</p>
<p>M4, M6, M8 Series</p>	<p>C-4 Series</p>
<p>"H" Series</p>	<p>9V "H" Series</p>

Dimensions (mm)				Digi-Key Part No.	Pricing			Serpac Model No.
A	B	C	D		1	25	50	
A Series								
66.04	107.95	28.45	—	SR421-ND	5.95	118.13	203.18	A-21
66.04	107.95	22.23	—	SR420-ND	5.76	114.38	196.73	A-20
85.09	134.62	38.10	—	SR427-ND	8.66	171.88	295.63	A-27
127.00	180.34	33.02	—	SR441-ND	12.29	243.75	419.25	A-41
127.00	180.34	41.15	—	SR442-ND	13.26	263.13	452.58	A-42
129.54	134.62	43.43	—	SR431-ND	10.99	218.13	375.18	A-31
A Series - 9V								
66.04	109.22	27.94	—	SR421-9V-ND	7.47	148.13	254.78	A-219V
85.09	134.62	38.10	—	SR427-9V-ND	11.62	230.63	396.68	A-279V
129.54	134.62	45.72	—	SR431-9V-ND	14.40	285.63	491.28	A-319V
127.00	180.34	33.02	—	SR441-9V-ND	14.33	284.38	489.13	A-419V
127.00	180.34	40.64	—	SR442-9V-ND	15.31	303.75	522.45	A-429V
A Series Optional End Panels								
A20 Series End Panel	SR420-ND	2.14	42.50	73.10	2003			
A21 Series End Panel	SR421-ND	2.14	42.50	73.10	2005			
A27 Series End Panel	SR427-ND	2.30	45.63	78.48	2010			
A31 Series End Panel	SR431-ND	3.37	66.88	115.03	2015			
A41 Series End Panel	SR441-ND	3.15	62.50	107.50	2020			
A42 Series End Panel	SR442-ND	3.37	66.88	115.03	2024			
Standard								
57.15	91.44	38.10	—	SR111-ND	4.22	83.75	144.05	SR111
82.55	111.25	22.86	—	SR031-ND	4.88	96.88	166.63	SR031
82.55	111.25	48.26	—	SR033-ND	5.73	113.75	195.65	SR033
82.55	142.85	35.56	—	SR052-ND	6.14	121.88	209.63	SR052
82.55	142.85	48.26	—	SR053-ND	6.62	131.25	225.75	SR053
82.55	111.25	38.10	—	SR131-ND	5.36	106.25	182.75	SR131
82.55	111.25	63.50	—	SR133-ND	6.05	120.00	206.40	SR133
82.55	142.85	38.10	—	SR151-ND	6.30	125.00	215.00	SR151
82.55	142.85	50.80	—	SR152-ND	6.62	131.25	225.75	SR152
123.95	174.75	38.10	—	SR171-ND	9.14	181.25	311.75	SR171
123.95	174.75	50.80	—	SR172-ND	10.02	198.75	341.85	SR172
123.85	174.65	63.50	—	SR173-ND	10.52	208.75	359.05	SR173
123.95	174.75	22.86	—	SR071-ND	8.35	165.63	284.88	071
161.29	241.30	48.26	—	SR093-ND	13.45	266.88	459.03	093
161.04	241.30	38.10	—	SR191-ND	13.70	271.88	467.63	191
161.04	241.30	63.50	—	SR193-ND	14.30	283.75	488.05	193
Standard with Insert (Non-Textured Top)								
82.55	111.25	22.86	—	SR031-ND	4.88	96.88	166.63	SR031-I
82.55	142.85	22.86	—	SR051-ND	5.76	114.38	196.73	SR051-I
57.15	91.44	25.27	—	SR110-ND	3.65	72.50	124.70	SR110-I
82.55	111.25	38.10	—	SR131-ND	5.36	106.25	182.75	SR131-I
82.55	142.85	38.10	—	SR151-ND	6.30	125.00	215.00	SR151-I
123.95	174.75	38.10	—	SR171-ND	9.14	181.25	311.75	SR171-I
123.85	174.65	50.80	—	SR172-ND	10.02	198.75	341.85	SR172-I
123.85	174.65	63.50	—	SR173-ND	10.52	208.75	359.05	SR173-I
123.95	360.93	51.05	—	SR182-ND	15.40	305.63	525.68	182
161.29	241.30	48.26	—	SR093-ND	13.45	266.88	459.03	093
161.04	241.30	38.10	—	SR191-ND	13.70	271.88	467.63	191
161.04	241.30	63.50	—	SR193-ND	14.30	283.75	488.05	193
Standard Enclosure Prototyping Boards								
1" (2.54mm) Grid Perforation								
For Box #s "SRX1X"	SR310-ND	2.74	54.38	93.53	310SR			
For Box #s "SRX3X"	SR330-ND	11.62	230.63	396.68	330SR			
For Box #s "SRX5X"	SR350-ND	11.47	227.50	391.30	350SR			
For Box #s "SRX7X"	SR370-ND	24.92	494.38	850.33	370SR			

Note: □ B = Black, G = Gray, A = Almond. Note: □ IR = Infrared, CL = Clear

Dimensions (mm)				Digi-Key Part No.	Pricing			Serpac Model No.
A	B	C	D		1	25	50	
Standard Enclosure Prototyping Boards								
Copper Clad Board (1 Side)								
For Box #s "SRX1X"	SR410-ND	4.03	80.00	137.60	410SR			
For Box #s "SRX3X"	SR430-ND	4.25	84.38	145.13	430SR			
For Box #s "SRX5X"	SR450-ND	4.63	91.88	158.03	450SR			
For Box #s "SRX7X"	SR470-ND	10.11	200.63	345.08	470SR			
9-Volt								
66.04	104.14	38.10	—	SR211-ND	5.13	101.88	175.23	SR211
82.55	111.25	50.80	—	SR232-ND	6.65	131.88	226.83	SR232
82.55	142.85	50.80	—	SR252-ND	8.19	162.50	279.50	SR252
123.85	174.65	50.80	—	SR272-ND	10.93	216.88	373.03	SR272
9-Volt with Insert (Non-Textured Top)								
82.55	111.25	38.10	—	SR231-ND	6.30	125.00	215.00	SR231-I
82.55	142.85	38.10	—	SR251-ND	7.69	152.50	262.30	SR251-I
123.85	174.65	50.80	—	SR272-ND	10.93	216.88	373.03	SR272-I
Standard Slant								
82.55	142.85	38.10	24.59	SR15-SC-ND	6.30	125.00	215.00	SR15-S
174.75	123.95	47.75	22.86	SR07S-ND	8.35	165.63	284.88	07-S
174.75	123.95	62.99	38.10	SR17S-ND	9.14	181.25	311.75	17-S
9-Volt Slanted								
82.55	142.85	38.10	24.59	SR25-SC-ND	7.69	152.50	262.30	SR25-S
174.75	123.95	62.99	38.10	SR27S-ND	10.21	202.50	348.30	27-S
C-4 Series								
35.05	54.10	14.73	—	SCR4-ND	3.06	60.63	104.28	C-4
40.97	57.48	19.05	—	SCR6-ND	3.06	60.63	104.28	C-6
46.99	60.96	23.50	—	SCR8-ND	3.06	60.63	104.28	C-8
Remote M 4 (AA), M6-M8 (AA or 9V)								
55.88	71.12	18.03	—	SRM4-ND	5.48	108.75	187.05	M-4
60.96	105.41	21.59	—	SRM6-ND	6.77	134.38	231.13	M-6
60.96	177.04	21.84	—	SRM8-ND	8.00	158.75	273.05	M-8
M Series Lenses								
M4 Series Clear	SRM4-FPC-ND	2.02	40.00	68.80	4004CL			
M4 Series Infrared	SRM4-FPI-ND	2.14	42.50	73.10	4004IR			
M6/8 Series Clear	SRM6/8-FPC-ND	2.02	40.00	68.80	4008CL			
M6/8 Series Infrared	SRM6/8-FPI-ND	2.14	42.50	73.10	4008IR			
Rubber Feet								
1xx, 2xx	SR50-ND	.76/4	3.60/24	6.19/48	SR50			
For A Series	SR52-ND	1.01/4	4.80/24	8.26/48	52			
Standoff Kits								
100pc Standoff/Screws	SR6KIT-ND	30.17	—	—	60 KIT			
100pc Standoff Posts	SR6KIT-ND	27.60	—	—	61 KIT			
H Series (Standard, AC, 9V, or AA)								
69.85	125.48	23.88	—	SRH65-ND	6.36	126.25	217.15	H-65
69.85	125.48	32.39	—	SRH67-ND	6.52	129.38	222.53	H-67
69.85	125.48	23.88	—	SRH65-AC-ND	6.36	126.25	217.15	H-65 AC
69.85	125.48	32.39	—	SRH67-AC-ND	6.52	129.38	222.53	H-67 AC
69.85	125.48	23.88	—	SRH65-9V-ND	6.99	138.75	238.63	H-65 9V
69.85	125.48	32.39	—	SRH67-9V-ND	7.15	141.88	244.05	H-67 9V
69.85	125.48	23.88	—	SRH65-AA-ND	7.18	142.50	245.10	H-65 AA
69.85	125.48	32.39	—	SRH67-AA-ND	7.37	146.25	251.50	H-67 AA
H Series Optional End Panels								
H-65 Series Infrared	SRH65-FPI-ND	2.14	42.50	73.10	2105IR			
H-65 Series Clear	SRH65-FPC-ND	2.02	40.00	68.80	2105CL			

Note: Bottom half of enclosure height remains at 0.79" (20.07mm).

Plastic E.M.I. Enclosures 50-55dB @ 30-2000MHz

<p>"A" Series</p>	<p>"M" Series</p>	<p>Standard</p>	<p>9V Std. / 9V Std. with Insert</p>	<p>Slanted</p>
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Electromagnetic Interference (E.M.I.) is "electronic pollution" that can cause damage to sensitive electronic components should they be exposed to it. Serpac E.M.I. enclosures offer a higher degree of protection than painting the surface of a standard plastic enclosure. The shielding effectiveness of an enclosure is equal to the sum of the reflected energy and the absorbed energy $S.E. = (R+A)$, (db = 10 LOG [incident power / transmitted power]). *"It is recommended that open field site measurement tests be conducted to determine the actual emission and susceptibility of a completed product. Material: ABS Stainless Steel Fiber. Note: EMI plastic enclosures should be considered electronically conductive, and require the same design considerations given a metal enclosure."*

Dimensions (mm)				Digi-Key Part No.	Pricing			Serpac Model No.
A	B	C	D		1	25	50	
A Series								
85.09	134.62	38.10	—	SRA27E-B-ND	17.39	345.00	593.40	A-27-EMI-BLACK
Remote "M" Series								
60.96	105.41	21.59	—	SRM6E-9VB-ND	10.27	203.75	350.45	M-6-EMI-BLACK
Standard								
57.15	91.44	38.10	—	SR111E-B-ND	6.52	129.38	222.53	111-EMI-BLACK
82.55	111.25	38.10	—	SR131E-B-ND	8.16	161.88	278.43	131-EMI-BLACK
82.55	142.75	38.10	—	SR151E-B-ND	9.58	190.00	326.80	151-EMI-BLACK
123.95	174.75	50.80	—	SR172E-B-ND	15.03	298.13	512.78	172-EMI-BLACK
161.04	241.30	38.10	—	SR191E-B-ND	20.44	405.63	697.68	191-EMI-BLACK
9-Volt Standard								
66.04	104.14	38.10	—	SR211E-B-ND	7.84	155.63	267.68	211-EMI-BLACK
9-Volt with Insert (Non-Textured Top)								
82.55	111.25	38.10	—	SR231E-B-ND	9.58	190.00	326.80	231-I-EMI-BLACK
Standard Slant								
82.55	142.75	38.10	24.59	SRO15E-B-ND	6.77	134.38	231.13	15-S-EMI-BLACK

Fig. 1 - Aluminum Boxes: • .040" (1.02mm) Plain aluminum • Screw fastening, punched and tapped

Fig. 2 - Snap Together Aluminum Boxes: • .040" (1.02mm) Plain aluminum • An ideal box for construction where screws cannot be used and where access to the box must be quick and often, the catches hold the box together tightly

Fig. 2 - Crown Royal Series Chassis: • Versatile and rugged construction • Constructed of .050" (1.27mm) aluminum, Type 3003-H14 • Plain aluminum • Screws included

Fig. 3 - Aluminum Consoles: • Plain aluminum • The length of the Flat Top of the MDC Series is 1/2 the total depth

Figs. 3 and 4 - Uni-Cab Universal Cabinet System: • Bases are .090 (2.29mm) aluminum. Covers are .063" (1.60mm) aluminum, Type 3003-H14 metal • Pem nuts used throughout for longer life and ease of assembly and disassembly • All parts are primed to protect the metal against the elements and to serve as a paint base. Bases are finished in textured blue, covers are finished in semi-gloss white • The base is approximately 1/4" (6.35mm) larger than the cover dimensions

Fig. 5 - Small Cabinets: • Finished in Grey • By removing four screws in bottom, cover slides off for easy access to interior of enclosure • A housing for small instruments, amplifiers, intercoms, public address systems, and for small or medium sized item that is being prepared for the market and where price and appearance is a major factor

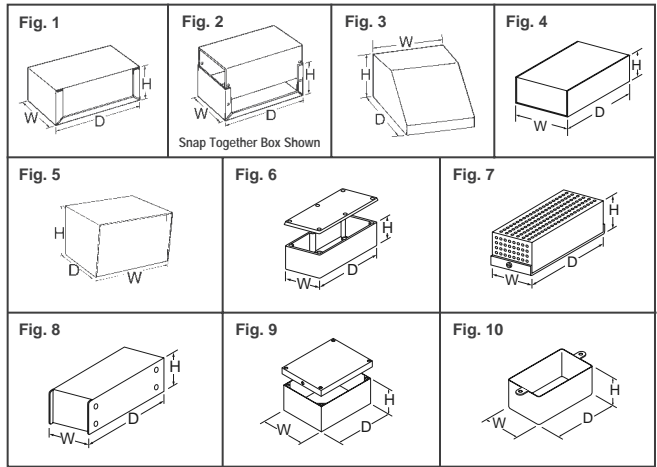
Fig. 6 - Die Cast Enclosures: Easily machined units useful as instrument and meter cases • Close-fitted flange lids fasten to bosses in the body with counter sunk screws • Aluminum alloy (380) offers excellent strength properties. • Lid adds .156" (3.96mm) to height of enclosure.

Fig. 7 - LMB Perforated Box Chassis: • LMB perforated boxes are adaptable wherever heat dissipation is required, as well as utmost shielding • Plain aluminum

Fig. 8 - UNI-PAC Universal Packaging System: A quality cabinet, engineered for versatility and value, at an affordable price. The Uni-Pac is constructed with .063" (1.60mm) aluminum, with .125" (3.18mm) aluminum sides and four adhesive rubber feet. The top, bottom, and sides are finished in textured blue, the front and rear panels are finished in semi-gloss white • Interchangeable front, back, top and bottom panels

Fig. 9 - Cap Cover Chassis: • Cap cover construction enable the builder to use either the top or the bottom of the chassis for construction • Chassis can also be mounted on its side and construction can be on both top and bottom at the same time • Built from Aircraft quality .040" (1.02mm) aluminum, Type 3003-H14 • Plain aluminum

Fig. 10 - Drawn Miniature Box: • Cold rolled steel, with mounting ears • Made of steel only • Covers are soldered-in when used in assembly • Not fabricated (holes punched in the box) • Plain steel



Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 1 - Aluminum Boxes</i>				
2.75 x 2.13 x 2.75 (69.85 x 53.98 x 69.85)	L100-ND	4.52	37.52	339.00
3.50 x 2.13 x 1.63 (88.90 x 53.98 x 41.28)	L101-ND	4.32	35.86	324.00
4.00 x 2.25 x 2.25 (101.60 x 57.15 x 57.15)	L102-ND	5.44	45.15	408.00
5.00 x 2.25 x 2.25 (127.00 x 57.15 x 57.15)	L103-ND	5.84	48.47	438.00
5.00 x 4.00 x 3.00 (127.00 x 101.60 x 76.20)	L104-ND	8.14	67.56	610.50
6.00 x 5.00 x 4.00 (152.40 x 127.00 x 101.60)	L105-ND	11.40	94.62	855.00
7.00 x 5.00 x 3.00 (177.80 x 127.00 x 76.20)	L106-ND	11.54	95.78	865.50
8.00 x 6.00 x 3.50 (203.20 x 152.40 x 88.90)	L107-ND	14.06	116.70	1054.50
10.00 x 6.00 x 3.50 (254.00 x 152.40 x 88.90)	L108-ND	16.62	137.95	1246.50
12.00 x 7.00 x 4.00 (304.80 x 177.80 x 101.60)	L109-ND	23.08	191.56	1731.00
17.00 x 5.00 x 4.00 (431.80 x 127.00 x 101.60)	L110-ND	25.34	210.32	1900.50

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 2 - Aluminum Boxes (Snap Together)</i>				
2.75 x 2.13 x 1.63 (69.85 x 53.98 x 41.28)	L111-ND	4.00	33.20	300.00
2.75 x 2.13 x 2.75 (69.85 x 53.98 x 69.85)	L112-ND	4.52	37.52	339.00
3.25 x 2.13 x 1.13 (82.55 x 53.98 x 28.58)	L113-ND	4.00	33.20	300.00
4.00 x 2.13 x 1.63 (101.60 x 53.98 x 41.28)	L114-ND	4.44	36.85	333.00
4.00 x 2.00 x 2.75 (101.60 x 50.80 x 69.85)	L115-ND	5.46	45.32	409.50
5.00 x 2.25 x 2.25 (127.00 x 57.15 x 57.15)	L116-ND	5.84	48.47	438.00
5.00 x 4.00 x 3.00 (127.00 x 101.60 x 76.20)	L117-ND	8.14	67.56	610.50
6.00 x 5.00 x 4.00 (152.40 x 127.00 x 101.60)	L118-ND	11.40	94.62	855.00
7.00 x 5.00 x 3.00 (177.80 x 127.00 x 76.20)	L119-ND	11.54	95.78	865.50
8.00 x 6.00 x 3.50 (203.20 x 152.40 x 88.90)	L120-ND	14.06	116.70	1054.50
10.00 x 6.00 x 3.50 (254.00 x 152.40 x 88.90)	L121-ND	16.62	137.95	1246.50

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 2 - Crown Royal Series Aluminum Boxes</i>				
2.25 x 1.50 x 1.38 (57.15 x 38.10 x 35.05)	L198-ND	4.88	40.50	366.00
4.25 x 2.25 x 1.25 (107.95 x 57.15 x 31.75)	L199-ND	6.64	55.11	498.00
5.50 x 3.00 x 2.25 (139.70 x 76.20 x 31.75)	L200-ND	9.20	76.36	690.00
5.25 x 3.00 x 1.13 (133.35 x 76.20 x 53.98)	L201-ND	9.62	79.85	721.50
6.25 x 3.50 x 2.13 (158.75 x 88.90 x 53.98)	L202-ND	12.10	100.43	907.50
7.00 x 5.00 x 3.00 (177.80 x 127.00 x 76.20)	L203-ND	18.24	151.39	1368.00
8.00 x 6.00 x 4.50 (203.20 x 152.40 x 114.30)	L204-ND	24.60	204.18	1845.00

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 3 - Aluminum Consoles</i>				
4.00 x 3.00 x 2.00 (101.60 x 76.20 x 50.80)	L122-ND	7.42	61.59	556.50
5.00 x 3.00 x 2.00 (127.00 x 76.20 x 50.80)	L123-ND	8.56	71.05	642.00
6.00 x 4.00 x 2.25 (152.40 x 101.60 x 57.15)	L124-ND	10.24	84.99	768.00
7.00 x 5.00 x 2.50 (177.80 x 127.00 x 63.50)	L125-ND	11.80	97.94	885.00
8.00 x 6.00 x 2.75 (203.20 x 152.40 x 69.85)	L126-ND	15.50	128.65	1162.50
9.00 x 7.00 x 3.00 (228.60 x 177.80 x 76.20)	L127-ND	17.06	141.60	1279.50
10.00 x 4.50 x 2.50 (254.00 x 114.30 x 63.50)	L128-ND	15.28	126.82	1146.00
11.00 x 8.00 x 3.50 (279.40 x 203.20 x 88.90)	L129-ND	25.52	211.82	1914.00
13.00 x 10.00 x 4.00 (330.20 x 254.00 x 101.60)	L130-ND	34.63	287.45	2597.40
15.00 x 15.00 x 4.00 (381.00 x 381.00 x 127.00)	L131-ND	56.48	468.78	4236.00

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 3 - Uni-Cab Universal Cabinet System</i>				
5.00 x 5.00 x 1.75 (127.00 x 127.00 x 44.45)	L155-ND	26.68	221.44	2001.00
6.00 x 6.00 x 2.75 (152.40 x 152.40 x 69.85)	L156-ND	31.02	257.47	2326.50
7.00 x 6.00 x 3.50 (177.80 x 152.40 x 88.90)	L157-ND	33.06	274.40	2479.50
5.00 x 7.00 x 3.00 (127.00 x 177.80 x 76.20)	L158-ND	30.66	254.48	2299.50
6.00 x 6.00 x 5.00 (152.40 x 152.40 x 127.00)	L159-ND	35.50	294.65	2662.50
10.00 x 10.00 x 3.00 (254.00 x 254.00 x 76.20)	L161-ND	48.94	406.20	3670.50
10.00 x 12.00 x 4.00 (254.00 x 304.80 x 101.60)	L162-ND	60.66	503.48	4549.50

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 4 - Uni-Cab Universal Cabinet System</i>				
6.00 x 4.00 x 2.00 (152.40 x 101.60 x 50.80)	L154-ND	27.70	229.91	2077.50
10.00 x 6.00 x 4.00 (254.00 x 152.40 x 101.60)	L160-ND	39.18	325.19	2938.50

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 5 - Small Cabinets</i>				
5.00 x 6.00 x 4.00 (127.00 x 152.40 x 101.60)	L147-ND	23.18	192.39	1738.50
6.00 x 8.00 x 5.00 (152.40 x 203.20 x 127.00)	L148-ND	34.03	282.47	2552.40

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 6 - Die Cast Enclosures</i>				
3.63 x 1.50 x 1.06 (92.20 x 38.10 x 26.99)	L149-ND	6.38	52.95	478.50
4.38 x 2.38 x 1.06 (111.13 x 60.33 x 26.99)	L150-ND	6.96	57.77	522.00
4.69 x 3.69 x 2.06 (119.08 x 93.65 x 52.40)	L151-ND	11.34	94.12	850.50
7.39 x 4.70 x 2.06 (187.73 x 119.46 x 52.40)	L152-ND	17.80	147.74	1335.00
7.39 x 4.70 x 3.06 (187.73 x 119.46 x 77.80)	L153-ND	18.92	157.04	1419.00

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 7 - LMB Perforated Box Chassis</i>				
2.75 x 2.13 x 2.63 (69.85 x 53.98 x 66.68)	L163-ND	6.83	56.67	512.10
4.25 x 2.25 x 1.25 (107.95 x 57.15 x 31.75)	L164-ND	6.46	53.62	484.50
4.00 x 2.00 x 2.75 (101.60 x 50.80 x 69.85)	L165-ND	8.26	68.52	619.20
2.75 x 2.13 x 2.13 (69.85 x 53.98 x 53.98)	L166-ND	6.65	55.18	498.60
4.00 x 2.25 x 2.25 (101.60 x 57.15 x 57.15)	L167-ND	7.78	64.54	583.20
5.00 x 2.25 x 2.25 (127.00 x 57.15 x 57.15)	L168-ND	9.00	74.70	675.00
3.75 x 3.00 x 2.13 (95.25 x 76.20 x 53.98)	L169-ND	8.82	73.21	661.50
5.25 x 3.00 x 2.13 (133.35 x 76.20 x 53.98)	L170-ND	9.95	82.57	746.10
8.00 x 3.00 x 2.75 (203.20 x 76.20 x 69.85)	L171-ND	14.40	119.52	1080.00
6.25 x 3.50 x 2.13 (158.75 x 88.90 x 53.98)	L172-ND	12.41	102.99	930.60
5.50 x 3.00 x 1.25 (139.70 x 76.20 x 31.75)	L173-ND	9.55	79.28	716.40
3.00 x 4.00 x 5.00 (76.20 x 101.60 x 127.00)	L174-ND	12.71	105.48	953.10
6.00 x 4.00 x 3.00 (152.40 x 101.60 x 76.20)	L175-ND	14.92	123.80	1118.70
6.00 x 4.00 x 5.00 (152.40 x 101.60 x 127.00)	L176-ND	18.01	149.50	1350.90
4.00 x 4.00 x 2.00 (101.60 x 101.60 x 50.80)	L177-ND	9.77	81.07	732.60
10.00 x 4.00 x 2.50 (254.00 x 101.60 x 63.50)	L178-ND	18.65	154.78	1398.60
7.00 x 5.00 x 3.00 (177.80 x 127.00 x 76.20)	L179-ND	18.56	154.05	1392.00
8.00 x 6.00 x 4.50 (203.20 x 152.40 x 114.30)	L180-ND	25.74	213.64	1930.50

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 8 - UNI-PAC Universal Packaging System</i>				
7.00 x 12.00 x 1.75 (177.80 x 304.80 x 44.45)	L181-ND	61.14	507.46	4585.50
9.00 x 12.00 x 3.50 (228.60 x 304.80 x 88.90)	L182-ND	75.05	622.90	5628.60
9.00 x 17.00 x 3.50 (228.60 x 431.80 x 88.90)	L183-ND	87.48	726.08	6561.00
12.00 x 17.00 x 3.50 (304.80 x 431.80 x 88.90)	L184-ND	102.25	848.69	7668.90
7.00 x 14.00 x 5.25 (177.80 x 355.60 x 133.35)	L185-ND	80.58	668.81	6043.50
9.00 x 17.00 x 5.25 (228.60 x 431.80 x 133.35)	L186-ND	97.37	808.15	7302.60
12.00 x 17.00 x 5.25 (304.80 x 431.80 x 133.35)	L187-ND	114.80	952.87	8610.30
12.00 x 17.00 x 7.00 (304.80 x 431.80 x 177.80)	L188-ND	128.47	1066.32	9635.40
14.00 x 17.00 x 7.00 (355.60 x 431.80 x 177.80)	L189-ND	140.26	1162.12	10519.20

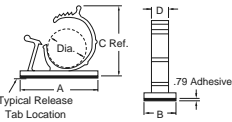
Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 9 - Cap Cover Chassis</i>				
5.00 x 7.00 x 2.00 (127.00 x 177.80 x 50.80)	L190-ND	17.18	142.59	1288.50
5.00 x 7.00 x 3.00 (127.00 x 177.80 x 76.20)	L191-ND	18.50	153.55	1387.50
6.00 x 4.00 x 3.00 (152.40 x 101.60 x 76.20)	L192-ND	16.54	137.28	1240.50
7.00 x 10.00 x 3.00 (177.80 x 254.00 x 76.20)	L193-ND	26.44	219.45	1983.00
8.00 x 10.00 x 2.00 (203.20 x 254.00 x 50.80)	L194-ND	24.10	200.03	1807.50
8.00 x 10.00 x 3.00 (203.20 x 254.00 x 76.20)	L195-ND	27.60	229.08	2070.00
8.00 x 10.00 x 4.00 (203.20 x 254.00 x 101.60)	L196-ND	29.80	247.34	2235.00
8.00 x 12.00 x 3.00 (203.20 x 304.80 x 76.20)	L197-ND	30.62	254.15	2296.50

Dimensions - Inches (mm) D x W x H	Digi-Key Part No.	1	10	100
<i>Fig. 10 - Drawn Miniature Box with Ears (Lids Sold Separately)</i>				
1.75 x 1.25 x .88 (44.45 x 31.75 x 22.23)	L206-ND	1.54	12.78	115.50
2.00 x 1.75 x .75 (50.80 x 44.45 x 19.05)	L208-ND	1.54	12.78	115.50
2.00 x 1.75 x 1.00 (50.80 x 44.45 x 25.40)	L210-ND	1.54	12.78	115.50
2.00 x 2.00 x 1.25 (50.80 x 50.80 x 31.75)	L212-ND	1.54	12.78	115.50

<i>Optional Lids for Drawn Miniature Boxes</i>				
Lid for L206-ND Box	L205-ND	1.06	8.80	79.50
Lid for L208-ND Box	L			

Richco Adjustable Kwik Klip

- 4 sizes adjust to any holding diameter from 5/16" to 1" (7.9-25.4mm)
- Locks securely, easily reopened for routing changes. Adhesive back • Material: Nylon 6/6 • Color: Natural



Dia. Range (mm)	Dimensions (mm)			Digi-Key Part No.	Pricing			Richco Part No.	
	A	B	C		10	100	500		
7.87-10.16	25.40	19.05	22.10	10.16	RP309-ND	7.34	61.20	244.80	AKKL-3140A-RT
11.68-14.22	31.75	19.05	27.69	10.16	RP310-ND	9.18	76.52	306.06	AKKL-4756A-RT
14.48-19.05	38.10	19.05	31.75	12.70	RP311-ND	12.66	105.50	421.98	AKKL-5775A-RT
22.10-25.40	50.80	25.40	44.45	12.70	RP312-ND	14.33	119.39	477.56	AKKL-8710A-RT

Tie Holders

- Fig. 1**
- Multi-directional • Material: Nylon 6/6, UV Stabilized Nylon 6/6

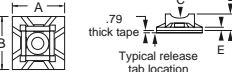
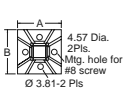


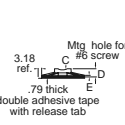
Fig. 2

- Ramp feature allows ties to pass through easily • 4-way entry • Material: Nylon 6/6, Adhesive, UV Stabilized Nylon 6/6

Digi-Key Part No.	Digi-Key Part No.	A	B	C	D	E	Tensile Force (kg)
RP301-ND	RP305-ND	19.05	19.05	6.35	6.10	1.52	6.72/11.20
RP302-ND	RP306-ND	25.40	25.40	11.68	7.11	1.78	18.66/22.39
RP303-ND	RP307-ND	38.10	38.10	19.92	7.62	2.03	44.79
RP304-ND	RP308-ND	50.80	50.80	10.92	7.62	2.03	44.79



Digi-Key Part No.	Digi-Key Part No.	Pricing	Richco Part No.		
Fig.	Part No.	10	100	500	Part No.
Nylon					
1	RP301-ND	4.19	34.95	139.78	FTH-5A-RT
1	RP302-ND	5.25	43.79	175.16	FTH-7A-RT
2	RP303-ND	12.70	105.81	423.22	FTH-8A-RT
2	RP304-ND	16.93	141.08	564.32	FTH-10A-RT



Digi-Key Part No.	Digi-Key Part No.	Pricing	Richco Part No.		
Fig.	Part No.	10	100	500	Part No.
Ultra Violet - Exterior or Outdoor Use (Black)					
1	RP305-ND	4.61	38.44	153.76	FTH-5A-RT-UVB
1	RP306-ND	5.78	48.17	192.68	FTH-7A-RT-UVB
2	RP307-ND	13.97	116.39	465.54	FTH-8A-RT-UVB
2	RP308-ND	18.62	155.19	620.76	FTH-10A-RT-UVB

LED Spacers

- Spaces LED from surface of board • Easily installed by hand • Insulates and spaces leads • Slots and holes for choice of mount • Material for LEDS1E and LEDS2E: Nylon 6/6 • Color: Natural

Fig. 1

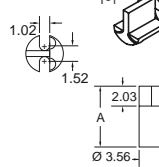


Fig. 2

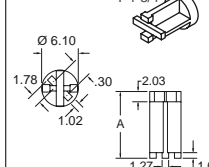
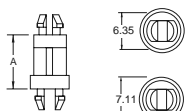


Fig.	Dim. A (mm)	Digi-Key Part No.	Pricing			Richco Part No.
			10	100	500	
1	4.57	RP500-ND	3.21	26.76	107.02	LEDS1E-3-01
	6.35	RP501-ND	3.39	28.27	113.08	LEDS1E-4-01
	12.70	RP502-ND	3.75	31.25	125.00	LEDS1E-8-01
	15.75	RP503-ND	3.84	32.01	128.04	LEDS1E-10-01
	19.05	RP504-ND	3.91	32.58	130.30	LEDS1E-12-01
2	4.57	RP505-ND	4.06	33.85	135.40	LEDS2E-3-01
	6.35	RP506-ND	4.24	35.36	141.42	LEDS2E-4-01
	12.70	RP507-ND	4.60	38.33	153.30	LEDS2E-8-01
	15.75	RP508-ND	4.67	38.96	155.82	LEDS2E-10-01
	19.05	RP509-ND	4.74	39.53	158.10	LEDS2E-12-01

Support Posts

- Easily installed by hand • Larger base on one side differentiates one end from the other • .10" (2.5mm) maximum protrusion past panel • Material: Nylon 6/6 • Color: Natural



Dim. A (mm)	Snap Locks Into	Digi-Key Part No.	Pricing			Richco Part No.
			10	100	500	
15.75	156/187 Dia. Hole Comb.	RP421-ND	2.41	20.06	80.22	SP3-10-01

Hole Grommet

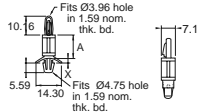
- Installs instantly • Material: Flexible vinyl • Color: Black



Inside Dia. ID (mm)	Hole Size H (mm)	Panel Thick. P (mm)	Outside Dia. OD (mm)	Thick. T (mm)	Digi-Key Part No.	10	100	500	Richco Part No.
3.05	4.57	1.52	7.87	6.35	RP450-ND	1.39	11.55	46.20	HG-2
3.81	6.35	1.52	9.40	6.35	RP451-ND	1.43	11.90	47.60	HG-2.5
4.57	7.87	1.52	10.92	6.35	RP452-ND	1.57	13.07	52.26	HG-3
5.33	7.87	1.52	10.92	5.33	RP453-ND	1.75	14.57	58.26	HG-3.5
6.35	9.40	2.29	14.22	7.11	RP454-ND	1.92	16.04	64.16	HG-4
9.40	12.70	1.52	17.27	7.11	RP455-ND	3.21	26.73	106.90	HG-6
14.22	17.27	1.52	22.10	4.57	RP456-ND	4.06	33.86	135.42	HG-9
17.27	19.05	1.52	23.62	4.57	RP457-ND	4.49	37.41	149.62	HG-11

Locking Circuit Board Supports

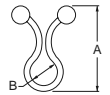
- Both ends lock by hand; no tools required • Strong, dependable grip • Material: Nylon 6/6 • Color: Natural



Dim. A (mm)	Digi-Key Part No.	Pricing			Richco Part No.
		10	100	1,000	
4.57	RP425-ND	2.01	16.79	67.16	LCBS-3
6.35	RP426-ND	2.14	17.87	71.46	LCBS-4
9.40	RP428-ND	2.25	18.77	75.06	LCBS-6
10.92	RP429-ND	2.34	19.52	78.06	LCBS-7
12.70	RP430-ND	2.42	20.18	80.72	LCBS-8
15.75	RP431-ND	2.59	21.59	86.34	LCBS-10
19.05	RP432-ND	2.76	23.01	92.02	LCBS-12
22.10	RP433-ND	2.88	23.96	95.84	LCBS-14
25.40	RP434-ND	3.10	25.87	103.46	LCBS-16
34.80	RP437-ND	3.54	29.53	118.10	LCBS-22

Twist-Lok (TL Series)

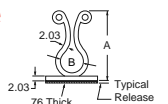
- Twist to secure wire bundles • Material: Nylon 6/6, RMS-01 • Color: Natural



"A" Overall Height (mm)	"B" Wire Bundle Dia. (mm)	Digi-Key Part No.	Pricing			Richco Part No.
			25	100	1,000	
22.86	5.08-7.62	RP600-ND	2.65	9.09	54.54	TL-250
26.16	7.62-10.16	RP601-ND	2.84	9.72	58.32	TL-350
30.48	10.16-12.70	RP602-ND	3.06	10.48	62.89	TL-450
33.78	13.97-16.51	RP603-ND	3.19	10.94	65.66	TL-600
39.37	17.78-20.32	RP604-ND	3.70	12.70	76.21	TL-750
43.18	Max. 25.40	RP605-ND	3.81	13.07	78.41	TL-950
55.63	Max. 30.23	RP606-ND	5.16	17.69	106.16	TL-1125
68.07	Max. 36.58	RP607-ND	6.14	21.05	126.32	TL-1375
74.42	Max. 39.62	RP608-ND	7.62	26.13	156.78	TL-1500
87.63	Max. 45.97	RP609-ND	8.08	27.71	166.25	TL-1750

Kurly-Lok On Base (KLB Series)

- Adhesive backing, RMS-15 • Material: Nylon 6/6, RMS-01 • Color: Natural



"A" Overall Height (mm)	"B" Wire Bundle (mm)	Digi-Key Part No.	Pricing			Richco Part No.
			25	100	1,000	
27.18	7.62-10.16	RP610-ND	11.84	40.61	243.65	KLB-350A-RT
31.24	10.16-12.70	RP611-ND	13.10	44.90	269.39	KLB-450A-RT
40.13	17.78-20.32	RP612-ND	13.76	47.18	283.07	KLB-750A-RT

Wire Cord Klip (WCK Series)

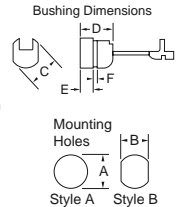
- Adhesive backing for quick mounting • Material: Nylon 6/6, RMS-01 • Color: Natural

Hole Dia.	Dimensions (mm)			
	A	B	C	D
4.57	16.00	15.75	7.87	4.06
11.43	25.15	25.15	11.94	7.11
18.29	25.40	25.40	12.70	13.46

Description	Digi-Key Part No.	Pricing			Richco Part No.
		25	100	1,000	
4.57mm. Dia., w/Tape	RP617-ND	13.10	44.93	269.57	WCK-180-01A-RT
11.43mm. Dia., w/Tape	RP618-ND	23.00	78.84	473.04	WCK-460-01A-RT
18.29mm. Dia., w/Tape	RP619-ND	28.59	98.02	588.13	WCK-720-01A-RT
4.57mm. Dia., w/oTape	RP620-ND	9.11	31.24	187.45	WCK-180-01
11.43mm. Dia., w/oTape	RP621-ND	18.39	63.07	378.40	WCK-460-01
18.29mm. Dia., w/oTape	RP622-ND	22.72	77.88	467.28	WCK-720-01

Strain Relief Bushings (SRB-D/F/R Series)

- Bushing eliminates strain and wear on wires and cords
- Withstands temperatures to 150°F (65°C)
- Material: Nylon 6/6, RMS-40
- Color: Black
- UL #E40234, CSA #LR52044



Digi-Key Part No.	Approx. Wire Size (mm)	Mounting Hole (mm)		Dimensions (mm)				
		A	Style B	C	D	E	F	F'
RP460-ND	3.05 x 5.59	11.10	10.03	11.68	10.41	4.06	1.57	
RP461-ND	2.79 x 5.33 2.29 x 4.57	9.52	8.76	10.79	10.41	3.94	1.57	
RP462-ND	4.09 x 7.62 3.81 x 7.11	13.08	11.81	14.48	12.70	4.34	2.54	
RP463-ND	4.06 x 9.40 3.81 x 8.64 5.08 x 9.40 4.57 x 8.89	14.27	13.46	15.49	15.24	6.10	3.30	
RP464-ND	4.83 x 7.62 3.81 x 7.11	12.70	11.58	13.84	10.19	3.61	1.80	
RP465-ND	4.06 x 7.62 6.73 6.73 6.86 8.25	12.70	11.81	14.22	10.92	4.19	2.54	
RP466-ND	7.62 9.02 8.38	16.66	14.48	18.45	17.27	6.98	3.18	

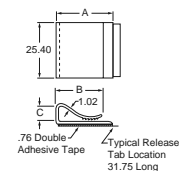
* Maximum Panel Thickness

Digi-Key Part No.	Size (mm)	Pricing				Richco Part No.
		25	100	1,000	5,000	
RP460-ND	3.01	10.32	61.92	49.88/M	SRB-D-3	
RP461-ND	9.01	30.89	185.33	149.30/M	SRB-F-2	
RP462-ND	3.83	13.14	78.84	63.51/M	SRB-F-4	
RP463-ND	12.16	41.68	250.09	201.47/M	SRB-F-5	
RP464-ND	3.12	10.70	64.22	51.74/M	SRB-F-7	
RP465-ND	3.32	11.38	68.29	55.02/M	SRB-R-5	
RP466-ND	7.37	25.26	151.56	122.09/M	SRB-R-6	

RPSRPL-ND SRB Pincher Tool\$85.70 each SRPL-2

C-Type Flat Cable Clamps (CFCC Series)

- Designed for routing flat ribbon cable
- Serrated grip to prevent slippage
- Adhesive backing for quick mount in any direction • Material: Noryl-White, RMS-05, PVC-Gray RMS-04



Richco Wrap-It-Ties

- Easy to use permanent lock • Strong, one-piece construction • Serviceable to 185°F (85°C) • UL recognized #E71558
- Material: Nylon 6/6, UV Stabilized Nylon 6/6.

Wire Tie Gun



RPWTA-ND\$12.09

Economy Installation Tool

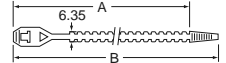


RPWTG-ND\$52.80

Max. Bundle Dia. (mm)	Approx. Length (mm)	Tensile Strength (Kgs.)	Approx. Width (mm)	Color	Digi-Key Part No.	100	Pricing 1,000	5,000	Richco Part No.
Nylon									
15.24	82.55	8.16	2.54	Natural	RP101-ND	2.78	16.70	13.46/M	WIT-18SF
15.24	82.55	8.16	2.54	Blue	RP101BL-ND	2.81	16.88	13.61/M	WIT-18SF-BL
15.24	82.55	8.16	2.54	Green	RP101GN-ND	2.81	16.88	13.61/M	WIT-18SF-GN
15.24	82.55	8.16	2.54	Red	RP101RD-ND	2.81	16.88	13.61/M	WIT-18SF-RD
15.24	82.55	8.16	2.54	Yellow	RP101YL-ND	2.81	16.88	13.61/M	WIT-18SF-YL
17.78	114.30	8.16	2.54	Natural	RP102-ND	3.04	18.22	14.68/M	WIT-18R
17.78	114.30	8.16	2.54	Blue	RP102BL-ND	3.07	18.40	14.82/M	WIT-18R-BL
17.78	114.30	8.16	2.54	Green	RP102GN-ND	3.07	18.40	14.82/M	WIT-18R-GN
17.78	114.30	8.16	2.54	Red	RP102RD-ND	3.07	18.40	14.82/M	WIT-18R-RD
17.78	114.30	8.16	2.54	Yellow	RP102YL-ND	3.07	18.40	14.82/M	WIT-18R-YL
33.02	146.05	8.16	2.54	Natural	RP213-ND	3.55	21.28	17.14/M	WIT-18L
53.34	203.20	8.16	2.54	Natural	RP103-ND	5.79	34.74	27.99/M	WIT-18V
53.34	203.20	8.16	2.54	Blue	RP103BL-ND	5.77	34.63	27.90/M	WIT-18V-BL
53.34	203.20	8.16	2.54	Green	RP103GN-ND	5.77	34.63	27.90/M	WIT-18V-GN
53.34	203.20	8.16	2.54	Red	RP103RD-ND	5.77	34.63	27.90/M	WIT-18V-RD
53.34	203.20	8.16	2.54	Yellow	RP103YL-ND	5.77	34.63	27.90/M	WIT-18V-YL
30.48	146.05	13.61	3.56	Natural	RP104-ND	5.63	33.77	27.21/M	WIT-30R
30.48	146.05	13.61	3.56	Blue	RP104BL-ND	5.76	34.56	27.84/M	WIT-30R-BL
30.48	146.05	13.61	3.56	Green	RP104GN-ND	5.76	34.56	27.84/M	WIT-30R-GN
30.48	146.05	13.61	3.56	Red	RP104RD-ND	5.76	34.56	27.84/M	WIT-30R-RD
30.48	146.05	13.61	3.56	Yellow	RP104YL-ND	5.76	34.56	27.84/M	WIT-30R-YL
45.72	185.42	13.61	3.56	Natural	RP105-ND	6.05	36.32	29.27/M	WIT-30L
45.72	185.42	13.61	3.56	Blue	RP105BL-ND	6.13	36.76	29.61/M	WIT-30L-BL
45.72	185.42	13.61	3.56	Green	RP105GN-ND	6.13	36.76	29.61/M	WIT-30L-GN
45.72	185.42	13.61	3.56	Red	RP105RD-ND	6.13	36.76	29.61/M	WIT-30L-RD
45.72	185.42	13.61	3.56	Yellow	RP105YL-ND	6.13	36.76	29.61/M	WIT-30L-YL
17.78	114.30	18.14	3.56	Natural	RP214-ND	5.46	32.76	26.39/M	WIT-40S
30.48	146.05	18.14	3.56	Natural	RP106-ND	6.52	39.10	31.50/M	WIT-40R
30.48	146.05	18.14	3.56	Blue	RP106BL-ND	6.69	40.14	32.34/M	WIT-40R-BL
30.48	146.05	18.14	3.56	Green	RP106GN-ND	6.69	40.14	32.34/M	WIT-40R-GN
30.48	146.05	18.14	3.56	Red	RP106RD-ND	6.69	40.14	32.34/M	WIT-40R-RD
30.48	146.05	18.14	3.56	Yellow	RP106YL-ND	6.69	40.14	32.34/M	WIT-40R-YL
45.72	185.42	18.14	3.56	Natural	RP107-ND	8.12	48.71	39.24/M	WIT-40L
45.72	185.42	18.14	3.56	Blue	RP107BL-ND	8.33	50.00	40.29/M	WIT-40L-BL
45.72	185.42	18.14	3.56	Green	RP107GN-ND	8.33	50.00	40.29/M	WIT-40L-GN
45.72	185.42	18.14	3.56	Red	RP107RD-ND	8.33	50.00	40.29/M	WIT-40L-RD
45.72	185.42	18.14	3.56	Yellow	RP107YL-ND	8.33	50.00	40.29/M	WIT-40L-YL
78.74	281.94	18.14	3.81	Natural	RP215-ND	17.93	107.60	86.69/M	WIT-40VL
38.10	152.40	22.68	4.83	Natural	RP108-ND	6.64	39.82	32.08/M	WIT-50S
38.10	152.40	22.68	4.83	Blue	RP108BL-ND	6.81	40.86	32.92/M	WIT-50S-BL
38.10	152.40	22.68	4.83	Green	RP108GN-ND	6.81	40.86	32.92/M	WIT-50S-GN
38.10	152.40	22.68	4.83	Red	RP108RD-ND	6.81	40.86	32.92/M	WIT-50S-RD
38.10	152.40	22.68	4.83	Yellow	RP108YL-ND	6.81	40.86	32.92/M	WIT-50S-YL
50.80	203.20	22.68	4.83	Natural	RP109-ND	7.81	46.87	37.76/M	WIT-50R
50.80	203.20	22.68	4.83	Blue	RP109BL-ND	7.88	47.27	38.08/M	WIT-50R-BL
50.80	203.20	22.68	4.83	Green	RP109GN-ND	7.88	47.27	38.08/M	WIT-50R-GN
50.80	203.20	22.68	4.83	Red	RP109RD-ND	7.88	47.27	38.08/M	WIT-50R-RD
50.80	203.20	22.68	4.83	Yellow	RP109YL-ND	7.88	47.27	38.08/M	WIT-50R-YL
114.30	388.62	22.68	4.57	Natural	RP110-ND	13.49	80.93	65.20/M	WIT-50L
114.30	388.62	22.68	4.57	Blue	RP110BL-ND	13.85	83.09	66.94/M	WIT-50L-BL
114.30	388.62	22.68	4.57	Green	RP110GN-ND	13.85	83.09	66.94/M	WIT-50L-GN
114.30	388.62	22.68	4.57	Red	RP110RD-ND	13.85	83.09	66.94/M	WIT-50L-RD
114.30	388.62	22.68	4.57	Yellow	RP110YL-ND	13.85	83.09	66.94/M	WIT-50L-YL
68.58	271.78	27.22	4.57	Natural	RP216-ND	11.62	69.73	56.18/M	WIT-60R
106.68	382.52	54.43	7.62	Natural	RP111-ND	31.45	188.71	152.02/M	WIT-120R
Ultra Violet – Exterior or Outdoor Use									
15.24	82.55	8.16	2.54	Black	RP201-ND	3.06	18.36	14.79/M	WIT-18SF-UVB
17.78	114.30	8.16	2.54	Black	RP202-ND	3.34	20.02	16.13/M	WIT-18R-UVB
53.34	203.20	8.16	2.54	Black	RP203-ND	6.37	38.20	30.77/M	WIT-18V-UVB
30.48	146.05	13.61	3.56	Black	RP204-ND	6.19	37.15	29.93/M	WIT-30R-UVB
45.72	185.42	13.61	3.56	Black	RP205-ND	6.67	40.00	32.22/M	WIT-30L-UVB
30.48	146.05	18.14	3.56	Black	RP206-ND	7.17	43.02	34.66/M	WIT-40R-UVB
45.72	185.42	18.14	3.56	Black	RP207-ND	8.93	53.57	43.16/M	WIT-40L-UVB
38.10	152.40	22.68	4.83	Black	RP208-ND	7.30	43.78	35.27/M	WIT-50S-UVB
50.80	203.20	22.68	4.83	Black	RP209-ND	8.59	51.55	41.53/M	WIT-50R-UVB
114.30	388.62	22.68	4.57	Black	RP210-ND	14.84	89.06	71.75/M	WIT-50L-UVB
106.68	382.52	54.43	7.62	Black	RP211-ND	34.60	207.58	167.22/M	WIT-120R-UVB
Release Tab Wrap It Ties (WIT-RT)									
31.75	139.70	18.14	5.33	Natural	RP217-ND	14.24	85.43	68.82/M	WIT-RT-0550
50.80	203.20	18.14	5.33	Natural	RP218-ND	15.70	94.18	75.87/M	WIT-RT-0800
63.50	266.70	18.14	5.33	Natural	RP219-ND	23.72	142.31	114.64/M	WIT-RT-1050
101.60	387.35	113.40	13.21	Natural	RP221-ND	128.12	768.71	619.24/M	WIT-RT-1525
152.40	546.10	113.40	13.21	Natural	RP222-ND	153.74	922.46	743.10/M	WIT-RT-2150
203.20	704.85	113.40	13.21	Natural	RP223-ND	175.57	1053.40	848.57/M	WIT-RT-2775
Wrap-It-Ties, Size 10 / Screw Mount									
38.10	171.45	22.68	4.83	Natural	RP224-ND	15.32	91.94	74.07/M	WITSH-10-50MRL
50.80	220.73	22.68	4.83	Natural	RP225-ND	17.32	103.90	83.70/M	WITSH-10-50MRL
76.20	285.75	22.68	4.83	Natural	RP226-ND	18.35	110.12	88.72/M	WITSH-10-50MR

Hanking Ties

- Wrap electrical cords for shipping and packaging • Material: Polyethylene • Color: Natural



Max. Bundle Dia. (mm)	Dim. (mm) A	Dim. (mm) B	Digi-Key Part No.	100	Pricing 1,000	5,000	Richco Part No.
22.86	81.28	99.06	RP701-ND	19.97	119.81	96.52/M	HT-3.9
27.94	106.68	124.46	RP702-ND	23.88	143.28	115.42/M	HT-4.9
35.56	132.08	149.86	RP703-ND	25.09	150.55	121.28/M	HT-5.9

Beaded Ties

- Easy to install and release • Material: Nylon 6/6 • Color: Natural

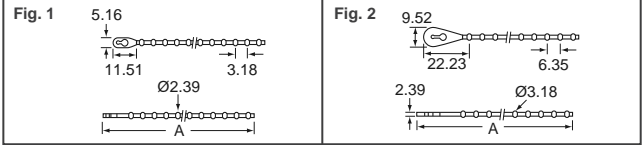
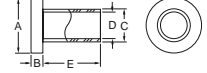


Fig.	Dim "A" (mm) (approx.)	Digi-Key Part No.	100	Pricing 1,000	5,000	Richco Part No.
1	101.60	RP731-ND	8.36	50.15	40.40/M	BT-4-01-NT
	127.00	RP732-ND	10.33	61.99	49.94/M	BT-5-01-NT
	152.40	RP733-ND	14.62	87.70	70.65/M	BT-6-01-NT
2	222.25	RP734-ND	20.24	121.46	97.85/M	BT-8-01-NT
	273.05	RP735-ND	25.27	151.60	122.12/M	BT-10-01-NT
	323.85	RP736-ND	28.82	172.91	139.29/M	BT-12-01-NT

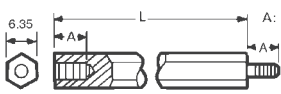
Molded Nylon Insulators (MNI Series)

- Use as screw insulators and in many bushing applications • Light-weight • High dielectric strength • Resistant to corrosion and abrasion • Material: Nylon 6/6, RMS-48 • Color: Natural



Screw Size	Approx. Met. Equiv.	Dimensions (mm)					Digi-Key Part No.	Pricing				Richco Part No.
		A	B	C	D	E		25	100	1,000	5,000	
#2	M2.2	4.60	1.19	3.05	2.29	.79	RP330-ND	5.64	19.33	115.99	93.44/M	MNI #2-2
		4.60	1.19	3.05	2.29	1.60	RP331-ND	5.64	19.33	115.99	93.44/M	MNI #2-4
		4.60	1.19	3.05	2.29	2.36	RP332-ND	5.64	19.33	115.99	93.44/M	MNI #2-6
		4.60	1.19	3.05	2.29	3.18	RP333-ND	5.64	19.33	115.99	93.44/M	MNI #2-8
		4.60	1.19	3.05	2.29	4.75	RP334-ND	5.64	19.33	115.99	93.44/M	MNI #2-12
		4.60	1.19	3.05	2.29	6.35	RP335-ND	5.64	19.33	115.99	93.44/M	MNI #2-16
#4	M3	6.40	1.19	3.05	2.29	1.17	RP336-ND	5.64	19.33	115.99	93.44/M	MNI #4-2
		6.40	1.19	3.56	2.92	1.17	RP337-ND	5.64				

**Male/Female 6.35mm
Hex Threaded Standoffs**



Aluminum (Iridite MIL-C-5441)

"L" Length (mm)	4-40 Thread Part No.	Pricing		6-32 Thread Part No.	Pricing	
		100	1000		100	1000
6.35	8714K-ND*	2.28	19.35	8717K-ND*	2.52	21.50
9.52	8400K-ND†	2.59	21.90	8413K-ND†	2.68	22.80
12.70	8401K-ND	3.60	30.65	8414K-ND	2.71	23.00
15.88	8402K-ND	3.88	32.90	8415K-ND	3.42	29.00
19.05	8403K-ND	3.94	33.45	8416K-ND	3.45	29.35
22.23	8404K-ND	4.28	36.35	8417K-ND	3.75	31.90
25.40	8405K-ND	4.52	38.45	8418K-ND	3.94	33.45
28.58	8406K-ND	5.54	47.05	8419K-ND	4.06	34.55
31.75	8407K-ND	5.60	47.60	8420K-ND	4.34	36.80
34.93	8408K-ND	6.56	56.50	8421K-ND	4.93	41.80
38.10	8409K-ND	6.72	57.80	8422K-ND	5.63	47.85
41.28	8410K-ND	6.91	59.50	8423K-ND	5.72	48.60
44.45	8411K-ND	7.06	60.80	8424K-ND	6.00	51.00
50.80	8412K-ND	7.29	62.75	8425K-ND	6.12	52.10

* Internal Thread 130/150 deep. † Internal Thread 250 deep.

Nylon 6/6

"L" Length (mm)	4-40 Thread Part No.	Pricing		6-32 Thread Part No.	Pricing	
		100	1000		100	1000
6.35	4800K-ND	2.86	22.90	4814K-ND*	2.86	22.90
9.52	4801K-ND	2.92	23.35	4815K-ND	2.92	23.35
12.70	4802K-ND	3.04	24.25	4816K-ND	3.04	24.25
15.88	4803K-ND	3.10	24.75	4817K-ND	3.10	24.75
19.05	4804K-ND	3.16	25.20	4818K-ND	3.16	25.20
22.23	4805K-ND	3.21	25.70	4819K-ND	3.21	25.70
25.40	4806K-ND	3.27	26.15	4820K-ND	3.27	26.15
28.58	4807K-ND	3.30	26.45	4821K-ND	3.30	26.45
31.75	4808K-ND	3.33	26.60	4822K-ND	3.33	26.60
34.93	4809K-ND	3.39	27.15	4823K-ND	3.39	27.15
38.10	4810K-ND	3.45	27.50	4824K-ND	3.45	27.50
41.28	4811K-ND	3.51	28.05	4825K-ND	3.51	28.05
44.45	4812K-ND	3.57	28.55	4826K-ND	3.57	28.55
50.80	4813K-ND	3.63	29.00	4827K-ND	3.63	29.00

* Internal Thread 130/150 deep.

Hex Aluminum Kit

Assortment of 1500 female to female threaded standoff pieces in 6.35mm, 9.52mm, 12.70mm, 19.05mm and 25.40mm lengths with thread sizes of 4-40, 6-32 and 8-32. 100 pieces of each size complete with cabinet.

STH-22KIT-ND \$266.64

Terminals

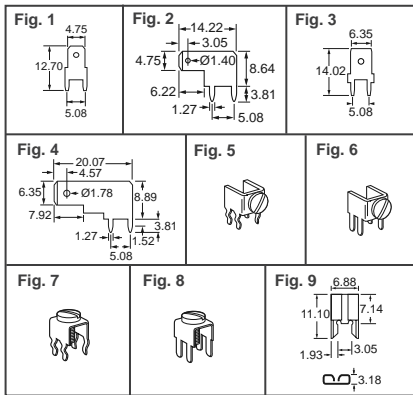
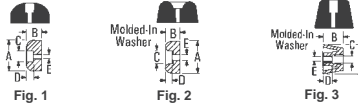


Fig.	Description	Digi-Key Part No.	Pricing	
			10	100
1	4.75mm PC Quick-Fit Tab Terminal	1285K-ND	5.8	4.60
2	4.75mm PC Quick-Fit Tab Terminal	4907K-ND	1.52	11.80
3	6.35mm PC Quick-Fit Tab Terminal	1287K-ND	1.71	5.65
4	6.35mm PC Quick-Fit Tab Terminal	1266K-ND	1.11	6.70
—	Terminal Hand Insertion Tool	1288K-ND	19.00	each
5	Snap-In PC Horiz MT Screw Terminal	7690K-ND	—	19.70
5	Snap-In PC Horiz MT Screw Terminal	7692K-ND*	—	20.60
6	PC Horiz MT Screw Terminal	8190K-ND	—	18.40
6	PC Horiz MT Screw Terminal	7700K-ND*	—	20.30
7	Snap-In PC Vert MT Screw Terminal	7691K-ND	—	19.30
7	Snap-In PC Vert MT Screw Terminal	7693K-ND*	—	19.55
8	PC Vert MT Screw Terminal	8191K-ND	—	18.10
8	PC Vert MT Screw Terminal	7701K-ND*	—	19.30
9	5.21mm Quick-Fit Vert Terminal	3522K-ND	1.41	8.60

* Screw Installed & Captivated

Recessed Bumpers



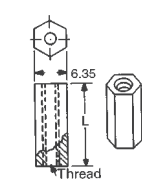
Provides excellent traction and shock absorbing qualities. Materials: Rubber, BUNA S, (fig. 1 & 2) Vinyl, (fig. 3).

Fig.	Dimensions (mm)				Screw Size	Digi-Key Part No.	Pricing		
	A	B	C	D			10	100	
1	12.70	6.35	6.35	3.18	1/8"	720K-ND	1.43	11.45	
1	15.88	7.92	6.35	4.75	3/16"	721K-ND	2.27	18.15	
2	18.24	11.10	6.35	5.54	3/16"	722K-ND	4.56	36.45	
2	23.80	9.52	9.52	4.75	4/75"	723K-ND	4.37	35.05	
3	17.45	6.35	8.71	3.18	3/94"	724K-ND*	3.36	26.95	
3	22.23	7.92	10.31	4.75	4/75"	725K-ND*	6.20	49.60	
3	26.97	11.10	11.89	5.94	5/08"	#10	726K-ND*	7.72	61.70
3	14.27	9.52	5.54	4.75	2/92"	#4	727K-ND	4.06	32.50
3	19.05	11.10	6.73	6.35	3/76"	#6	728K-ND	4.58	36.60
3	23.80	15.88	9.12	8.33	4/42"	#8	729K-ND	6.77	54.15

* Gray — all others black.

Nylon Spacers

Flame Retardant Hex Threaded Spacers — Material: Monsanto 340 FR UL 94V-0 rating



Economical for terminal or printed circuit board supports. Hex Threaded Spacers — Material: Nylon 6/6

"L" Length (mm)	4-40 Thread Part No.	6-32 Thread Part No.	Pricing	
			10	100
6.35	8440AK-ND	8441AK-ND	5.08	35.50
9.52	8440BK-ND	8441BK-ND	5.19	36.30
12.70	8440CK-ND	8441CK-ND	5.40	37.70
15.88	8440DK-ND	8441DK-ND	6.43	44.35
19.05	8440EK-ND	8441EK-ND	6.45	45.10
22.23	8440FK-ND	8441FK-ND	6.66	46.70
25.40	8440GK-ND	8441GK-ND	6.98	48.85

"L" Length (mm)	4-40 Thread Part No.	6-32 Thread Part No.	Pricing	
			10	100
6.35	1902AK-ND	1903AK-ND	4.59	23.60
9.52	1902BK-ND	1903BK-ND	4.70	24.10
12.70	1902CK-ND	1903CK-ND	4.89	25.20
15.88	1902DK-ND	1903DK-ND	4.26	29.85
19.05	1902EK-ND	1903EK-ND	6.29	32.30
22.23	1902FK-ND	1903FK-ND	4.80	33.65
25.40	1902EK-ND	1903EK-ND	6.32	32.40

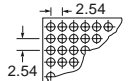
Flat Washers

Fibre: Commercial per MIL-F-1148A, Grade CH Nylon: Grade 6/6 per ASTM D4066



Material	Screw Size	Dimensions (mm)			Digi-Key Part No.	Pricing			
		O.D.	Thick.	I.D.		100	500	1,000	
Fibre	#4	6.35	.81	3.05	3116K-ND	2.55	11.00	9.45	
		7.92	.81	3.05	348K-ND	2.55	11.00	10.00	
		9.52	.81	3.05	3117K-ND	2.60	11.25	10.95	
		6.35	1.19	3.05	3154K-ND	2.55	11.00	10.40	
		7.92	1.19	3.05	3155K-ND	2.55	11.00	11.15	
		9.52	1.19	3.05	3156K-ND	2.75	12.00	12.65	
	Nylon	#4	6.35	1.57	3.05	3368K-ND	2.55	11.00	11.20
			7.92	1.57	3.05	3196K-ND	2.55	11.00	13.85
			9.52	1.57	3.05	3197K-ND	2.60	11.25	13.20
			6.35	.81	3.05	3348K-ND	2.45	10.50	10.60
			7.92	.81	3.05	3359K-ND	2.90	12.50	14.80
			9.52	.81	3.05	3118K-ND	3.10	13.25	15.90
Fibre		#6	6.35	1.19	3.56	3159K-ND	2.55	11.00	10.40
			7.92	1.19	3.56	3160K-ND	2.55	11.00	11.15
			9.52	1.19	3.56	3161K-ND	2.75	12.00	12.65
			6.35	1.57	3.56	3369K-ND	2.55	11.00	11.20
			7.92	1.57	3.56	3370K-ND	2.55	11.00	12.10
			9.52	1.57	3.56	3201K-ND	2.60	11.25	13.20
	Nylon	#6	6.35	.81	3.56	3122K-ND	2.45	10.50	10.60
			7.92	.81	3.56	3349K-ND	2.45	10.50	11.80
			9.52	.81	3.56	3123K-ND	3.10	13.25	15.90
			6.35	1.19	3.56	3162K-ND	2.45	10.50	11.45
			7.92	1.19	3.56	346K-ND	3.05	13.00	14.30
			9.52	1.19	3.56	3163K-ND	2.50	10.75	15.75
#6		6.35	1.57	3.56	3360K-ND	2.45	10.50	14.35	
		7.92	1.57	3.56	3361K-ND	2.90	12.50	18.90	
		9.52	1.57	3.56	3202K-ND	2.85	12.25	17.90	

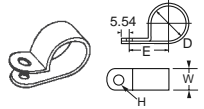
Prepunched Insulating Boards



Dim. (mm)	Width	Length	Digi-Key Part No.	Pricing		Mfg. Part No.
				1	10	
Perfboard — Holes 1.07mm Diameter, Glass Epoxy						
60.80	114.30		3405K-ND	2.52	20.92	3405
50.80	152.40		3406K-ND	3.26	27.06	3406
69.85	431.80		3407K-ND	9.82	81.51	3407
76.20	114.30		3408K-ND	3.42	28.39	3408
114.30	152.40		3409K-ND	4.80	39.84	3409
114.30	165.10		3410K-ND	5.56	46.15	3410
114.30	215.90		3411K-ND	6.92	57.44	3411
114.30	431.80		3412K-ND	13.50	112.05	3412
152.40	431.80		3413K-ND	18.18	150.89	3413

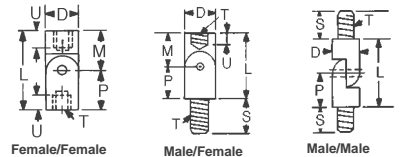
Cable Clamps

Ideal for securing, insulating and routing cable wiring, piping, tubing, components and fibre optics. Made of 1.27mm thick nylon 6/6, white.



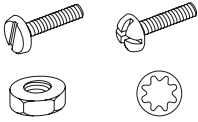
Dimensions (mm)	Digi-Key Part No.	Pricing					
		100	500	1,000			
3.18	8.25	9.52	3.56	7620K-ND	3.85	16.75	19.35
3.18	8.25	9.52	5.16	7621K-ND	3.85	16.75	19.35
4.75	9.65	9.52	3.56	7622K-ND	3.90	17.25	19.65
4.75	9.65	9.52	5.16	7623K-ND	3.90	17.25	19.65
6.35	10.41	9.52	3.56	7624K-ND	4.00	17.50	20.25
6.35	10.41	9.52	5.16	7625K-ND	4.00	17.50	20.25
7.92	11.30	9.52	3.56	7626K-ND	4.05	17.75	20.75
7.92	11.30	9.52	5.16	7627K-ND	4.05	17.75	20.75
9.52	12.06	9.52	3.56	7628K-ND	4.35	18.50	22.35
9.52	12.06	9.52	5.16	7629K-ND	4.35	18.50	22.35
11.10	13.33	9.52	3.56	7630K-ND	4.60	19.50	23.15
11.10	13.33	9.52	5.16	7631K-ND	4.60	19.50	23.15
12.70	13.97	9.52	3.56	7632K-ND	4.65	20.00	23.75
12.70	13.97	9.52	5.16	7633K-ND	4.65	20.00	23.75
14.27	15.88	12.70	5.16	7634K-ND	7.25	31.00	36.45
15.88	16.76	12.70	5.16	7635K-ND	7.65	32.25	38.30
19.05	19.94	12.70	5.16	7636K-ND	8.55	36.50	43.90
22.23	21.46	12.70	5.16	7637K-ND	9.30	39.25	46.85
25.40	23.11	12.70	5.16	7638K-ND	9.65	40.75	49.95
28.58	24.64	12.70	5.16	7639K-ND	13.75	58.25	68.95
28.58	26.92	12.70	5.16	7640K-ND	14.75	62.75	74.90

Hinged Standoffs



T Thread	D Dia. (mm)	Dimensions (mm)					Digi-Key Part No.	Pricing	
		L	S	U	M	P		10	

ELECTRONIC HARDWARE



Digi-Key® Electronic Hardware Kits come complete with a divided plastic box for easy storage.

Zinc Plated Nuts and Washers

Description	Digi-Key Part No.	Pricing 100	1,000
<i>Hex Nuts</i>			
No. 2 - 56 Hex Nut	H212-ND	1.31	10.51
No. 4 - 40 Hex Nut	H216-ND	.93	7.44
No. 6 - 32 Hex Nut	H220-ND	1.28	10.27
No. 8 - 32 Hex Nut	H224-ND	1.57	12.58
No. 10 - 32 Hex Nut	H228-ND	1.76	14.11
<i>Internal Tooth Lock Washers</i>			
No. 2 Lock Washer	H232-ND	3.65	29.23
No. 4 Lock Washer	H236-ND	1.07	8.59
No. 6 Lock Washer	H240-ND	1.13	9.07
No. 8 Lock Washer	H244-ND	1.20	9.60
No. 10 Lock Washer	H248-ND	1.47	11.76
<i>NEW! Flat Washers NEW!</i>			
No. 2 Flat Washer	H776-ND	1.62	12.96
No. 4 Flat Washer	H777-ND	2.81	22.46
No. 6 Flat Washer	H778-ND	.97	7.78
No. 8 Flat Washer	H779-ND	1.19	9.50
No. 10 Flat Washer	H780-ND	1.62	12.96

Phillips Panhead Machine Screws

Steel, Zinc Plated

Description	Digi-Key Part No.	Pricing 100	1,000
2-56 x 1/4 (6.35mm)	H330-ND	4.12	32.93
2-56 x 1/2 (12.70mm)	H334-ND	4.64	37.15
2-56 x 3/4 (19.05mm)	H338-ND	5.57	44.54
4-40 x 1/4 (6.35mm)	H342-ND	1.11	8.88
4-40 x 5/16 (7.94mm)	H343-ND	1.21	9.70
4-40 x 1/2 (12.70mm)	H346-ND	1.37	10.99
4-40 x 5/8 (15.88mm)	H348-ND	1.52	12.14
4-40 x 3/4 (19.05mm)	H350-ND	1.68	13.44
6-32 x 1/4 (6.35mm)	H354-ND	1.48	11.81
6-32 x 5/16 (7.94mm)	H355-ND	1.54	12.34
6-32 x 3/8 (9.52mm)	H356-ND	1.59	12.72
6-32 x 7/16 (11.11mm)	H357-ND	1.74	37.92
6-32 x 1/2 (12.70mm)	H360-ND	1.69	13.54
6-32 x 5/8 (15.88mm)	H364-ND	1.84	14.69
6-32 x 3/4 (19.05mm)	H368-ND	1.95	15.60
6-32 x 1 (25.40mm)	H372-ND	2.29	18.34
8-32 x 1/4 (6.35mm)	H376-ND	2.01	16.08
8-32 x 3/8 (9.52mm)	H380-ND	2.15	17.23
8-32 x 1/2 (12.70mm)	H384-ND	2.27	18.19
8-32 x 5/8 (15.88mm)	H388-ND	2.50	19.97
8-32 x 3/4 (19.05mm)	H392-ND	2.71	21.70
8-32 x 1 (25.40mm)	H396-ND	3.23	25.87
10-32 x 1/2 (12.70mm)	H400-ND	3.30	26.40
10-32 x 3/4 (19.05mm)	H404-ND	4.06	32.45
10-32 x 1 (25.40mm)	H408-ND	5.48	43.87

Slotted Panhead Machine Screws

Steel, Zinc Plated

Description	Digi-Key Part No.	Pricing 100	1,000
2-56 x 1/4 (6.35mm)	H130-ND	4.12	32.93
2-56 x 1/2 (12.70mm)	H134-ND	4.64	37.15
2-56 x 3/4 (19.05mm)	H138-ND	5.55	44.50
4-36 x 1/4 (12.70mm)	H140-ND	2.40	19.20
4-40 x 1/4 (6.35mm)	H142-ND	1.11	8.88
4-40 x 5/16 (7.94mm)	H143-ND	1.21	9.70
4-40 x 3/8 (9.52mm)	H781-ND <i>NEW!</i>	1.62	12.96
4-40 x 1/2 (12.70mm)	H146-ND	1.37	10.99
4-40 x 5/8 (15.88mm)	H148-ND	1.52	12.14
4-40 x 3/4 (19.05mm)	H150-ND	1.68	13.44
6-32 x 1/4 (6.35mm)	H154-ND	1.48	11.81
6-32 x 5/16 (7.94mm)	H155-ND	1.54	12.34
6-32 x 3/8 (9.52mm)	H156-ND	1.59	12.72
6-32 x 7/16 (11.11mm)	H157-ND	1.65	13.20
6-32 x 1/2 (12.70mm)	H160-ND	1.69	13.54
6-32 x 5/8 (15.88mm)	H164-ND	1.84	14.69
6-32 x 3/4 (19.05mm)	H168-ND	1.95	15.60
6-32 x 1 (25.40mm)	H172-ND	2.29	18.34
8-32 x 1/4 (6.35mm)	H176-ND	2.01	16.08
8-32 x 3/8 (9.52mm)	H180-ND	2.15	17.23
8-32 x 1/2 (12.70mm)	H184-ND	2.27	18.19
8-32 x 5/8 (15.88mm)	H188-ND	2.50	19.97
8-32 x 3/4 (19.05mm)	H192-ND	2.71	21.70
8-32 x 1 (25.40mm)	H196-ND	3.23	25.87
10-32 x 1/2 (12.70mm)	H200-ND	3.30	26.40
10-32 x 3/4 (19.05mm)	H204-ND	4.06	32.45
10-32 x 1 (25.40mm)	H208-ND	5.48	43.87

Phillips Nylon Machine Screws

Nylon 66 Melting Point is 500°F (260°C)

Description	Digi-Key Part No.	Pricing 100	1,000
2-56 x 1/4 (6.35mm)	H530-ND	8.86	70.90
2-56 x 1/2 (12.70mm)	H534-ND	9.10	72.82
2-56 x 3/4 (19.05mm)	H538-ND	9.26	74.11
4-40 x 1/4 (6.35mm)	H542-ND	8.86	70.90
4-40 x 3/8 (9.52mm)	H544-ND	9.00	72.00
4-40 x 1/2 (12.70mm)	H546-ND	9.10	72.82
4-40 x 5/8 (15.88mm)	H548-ND	9.19	73.54
4-40 x 3/4 (19.05mm)	H550-ND	9.26	74.11
6-32 x 1/4 (6.35mm)	H554-ND	9.26	74.11
6-32 x 3/8 (9.52mm)	H556-ND	9.43	75.46
6-32 x 1/2 (12.70mm)	H560-ND	9.51	76.08
6-32 x 5/8 (15.88mm)	H564-ND	9.57	76.56
6-32 x 3/4 (19.05mm)	H568-ND	9.59	76.75
6-32 x 1 (25.40mm)	H572-ND	9.66	77.28
8-32 x 1/4 (6.35mm)	H576-ND	9.17	73.28
8-32 x 3/8 (9.52mm)	H580-ND	9.24	73.92
8-32 x 1/2 (12.70mm)	H584-ND	9.04	72.34
8-32 x 5/8 (15.88mm)	H588-ND	9.46	75.70
8-32 x 3/4 (19.05mm)	H592-ND	9.42	75.36
8-32 x 1 (25.40mm)	H596-ND	9.46	75.65
10-32 x 1/2 (12.70mm)	H600-ND	10.19	81.56
10-32 x 3/4 (19.05mm)	H604-ND	10.20	81.60
10-32 x 1 (25.40mm)	H608-ND	10.38	83.04

Digi-Key® Zinc Plated Hardware Kits

Sizes #2, #4, #6, and #8.

1600 pieces total.
100 pieces each of the following:

Machine Screws	Hex Nuts	Lock Washers
2-56 x 1/4 (6.35mm)	No. 2 - 56	No. 2 Internal Tooth
2-56 x 1/2 (12.70mm)	No. 4 - 40	No. 4 Internal Tooth
4-40 x 1/4 (6.35mm)	No. 6 - 32	No. 6 Internal Tooth
4-40 x 1/2 (12.70mm)	No. 8 - 32	No. 8 Internal Tooth
6-32 x 1/4 (6.35mm)	No. 10 - 32	No. 10 Internal Tooth
6-32 x 1/2 (12.70mm)		
8-32 x 3/8 (9.52mm)		
8-32 x 5/8 (15.88mm)		

1600-KIT-ND (Slotted)\$17.95
1602-KIT-ND (Phillips)\$17.95

Sizes #6, #8, and #10.

1600 pieces total.
100 pieces each of the following:

Machine Screws	Hex Nuts	Lock Washers
10-32 x 3/4 (19.05mm)	10-32 x 1 (25.40mm)	No. 6 Internal Tooth
10-32 x 1 (25.40mm)		No. 8 Internal Tooth
		No. 10 Internal Tooth

1601-KIT-ND (Slotted)\$27.95
1603-KIT-ND (Phillips)\$27.78

Digi-Key® Nylon Hardware Kit

Sizes #2, #4, #6, #8 and #10.

1500 pieces total.
100 pieces each of the following:

Machine Screws	Hex Nuts	Lock Washers
2-56 x 1/2 (12.70mm)	8-32 x 1 (25.40mm)	No. 2 - 56
4-40 x 1/4 (6.35mm)	10-32 x 1 (25.40mm)	No. 4 - 40
4-40 x 3/8 (9.52mm)		No. 6 - 32
4-40 x 1/2 (12.70mm)		No. 8 - 32
4-40 x 3/4 (19.05mm)		No. 10 - 32
6-32 x 1/2 (12.70mm)		
8-32 x 1/4 (6.35mm)		
8-32 x 1/2 (12.70mm)		
8-32 x 1 (25.40mm)		

1604-KIT-ND (Phillips)\$53.94

NEW! Metric Phillips, Panhead Machine Screws

Zinc Plated

Description	Digi-Key Part No.	Pricing 100	1,000
No. 2 x 5mm	H738-ND	5.38	43.06
No. 2 x 8mm	H739-ND	5.76	46.08
No. 2 x 12mm	H740-ND	5.90	47.23
No. 2 x 18mm	H741-ND	11.94	95.52
No. 3 x 5mm	H742-ND	5.94	47.52
No. 3 x 8mm	H743-ND	6.60	52.80
No. 3 x 12mm	H744-ND	6.90	55.20
No. 3 x 20mm	H745-ND	8.40	67.20
No. 3 x 25mm	H746-ND	8.70	69.60
No. 4 x 5mm	H747-ND	7.20	57.60
No. 4 x 8mm	H748-ND	7.56	60.48
No. 4 x 12mm	H749-ND	8.76	70.08
No. 4 x 20mm	H750-ND	11.55	92.40
No. 4 x 25mm	H751-ND	12.60	100.80
No. 5 x 6mm	H752-ND	10.56	84.48
No. 5 x 8mm	H753-ND	10.80	86.40
No. 5 x 12mm	H754-ND	12.60	100.80
No. 5 x 20mm	H755-ND	17.70	141.60
No. 5 x 25mm	H756-ND	18.60	148.80
No. 6 x 8mm	H757-ND	20.40	163.20
No. 6 x 12mm	H758-ND	21.60	172.80
No. 6 x 20mm	H759-ND	25.80	206.40
No. 6 x 25mm	H760-ND	27.60	220.80

NEW! Metric Nuts and Washers

Zinc Plated

Description	Digi-Key Part No.	Pricing 100	1,000
<i>Hex Nuts</i>			
No. 2 Metric Hex Nut	H761-ND	3.60	28.80
No. 3 Metric Hex Nut	H762-ND	3.84	30.72
No. 4 Metric Hex Nut	H763-ND	4.20	33.60
No. 5 Metric Hex Nut	H764-ND	4.80	38.40
No. 6 Metric Hex Nut	H765-ND	5.34	42.72
<i>Internal Tooth Lock Washers</i>			
No. 2 Lock Washers	H771-ND	5.40	43.20
No. 3 Lock Washers	H772-ND	4.26	34.08
No. 4 Lock Washers	H773-ND	4.74	37.92
No. 5 Lock Washers	H774-ND	5.34	42.72
No. 6 Lock Washers	H775-ND	6.30	50.40
<i>Flat Washers</i>			
No. 2 Flat Washers	H766-ND	3.30	26.40
No. 3 Flat Washers	H767-ND	3.60	28.80
No. 4 Flat Washers	H768-ND	3.66	29.28
No. 5 Flat Washers	H769-ND	3.75	30.00
No. 6 Flat Washers	H770-ND	4.80	38.40

NEW! Phillips, Panhead Machine Screws

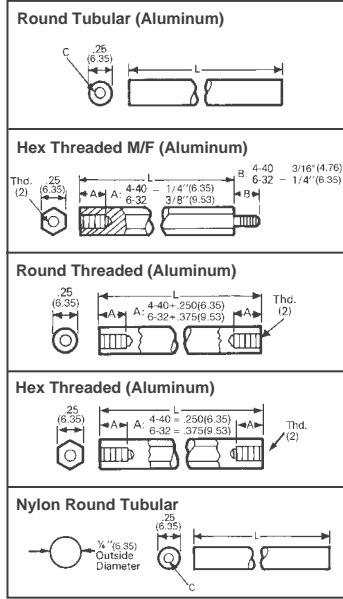
Stainless Steel

Description	Digi-Key Part No.	Pricing 100	1,000
2-56 x 1/4 (6.35mm)	H700-ND	2.64	21.12
2-56 x 1/2 (12.70mm)	H701-ND	3.84	30.72
2-56 x 3/4 (19.05mm)	H702-ND	4.98	39.84
4-40 x 1/4 (6.35mm)	H703-ND	2.88	23.04
4-40 x 5/16 (7.94mm)	H704-ND	3.34	26.74
4-40 x 1/2 (12.70mm)	H705-ND	3.79	30.34
4-40 x 5/8 (15.88mm)	H706-ND	4.16	33.31
4-40 x 3/4 (19.05mm)	H707-ND	6.36	50.88
6-32 x 1/4 (6.35mm)	H708-ND	4.08	32.64
6-32 x 5/16 (7.94mm)	H709-ND	4.39	35.09
6-32 x 3/8 (9.52mm)	H710-ND	4.51	36.10
6-32 x 1/2 (12.70mm)	H711-ND	4.56	36.48
6-32 x 5/8 (15.88mm)	H712-ND	5.52	44.16
6-32 x 3/4 (19.05mm)	H713-ND	5.38	43.01
6-32 x 1 (25.40mm)	H714-ND	6.64	53.09
8-32 x 3/8 (9.52mm)	H715-ND	6.16	49.25
8-32 x 1/2 (12.70mm)	H716-ND	6.70	53.62
8-32 x 5/8 (15.88mm)	H717-ND	7.33	58.66
8-32 x 3/4 (19.05mm)	H718-ND	8.54	68.35
8-32 x 1 (25.40mm)	H719-ND	9.94	79.49
10-32 x 1/2 (12.70mm)	H720-ND	9.31	74.50
10-32 x 3/4 (19.05mm)	H721-ND	11.68	93.46
10-32 x 1 (25.40mm)	H722-ND	14.74	117.89

NEW! Stainless Steel Nuts and Washers

Description	Digi-Key Part No.	Pricing 100	1,000
<i>Hex Nuts</i>			
No. 2 - 56 Hex Nut	H723-ND	4.99	39.94
No. 4 - 40 Hex Nut			

JOHNSON Components Spacers



Digi-Key® Spacer Kit

Components included are 10 each of part numbers marked with •. 150 components. Price includes convenient divided plastic box with bin guide for easy storage and quick access.



J200-KIT-ND Digi-Key® Spacer Kit \$29.95

Thread Size	Clearance	Dim. L Inch (mm)	Digi-Key Part No.	10	Pricing 100	250
Round Tubular Spacers						
—	4(.115" / 2.92mm)	.187 (4.75)	J166-ND	1.23	11.03	25.73
—	4(.115" / 2.92mm)	.250 (6.35)	J167-ND•	1.33	11.93	27.83
—	6(.140" / 3.56mm)	.125 (3.18)	J168-ND•	1.20	10.80	25.20
—	6(.140" / 3.56mm)	.250 (6.35)	J169-ND•	1.33	11.93	27.83
Hex Threaded Male/Female Spacers						
4-40	—	.250 (6.35)	J210-ND	3.68	33.08	77.18
4-40	—	.375 (9.52)	J211-ND	4.00	36.00	84.00
6-32	—	.500 (12.70)	J212-ND	4.00	36.00	84.00
6-32	—	.625 (15.88)	J213-ND	4.08	36.68	85.58
6-32	—	.750 (19.05)	J214-ND	4.15	37.35	87.15
6-32	—	.875 (22.23)	J215-ND	4.15	37.35	87.15
6-32	—	1.000 (25.40)	J216-ND	4.30	38.70	90.30
6-32	—	1.250 (31.75)	J217-ND	4.58	41.18	96.08
6-32	—	1.500 (38.10)	J218-ND	6.13	55.13	128.63
Round Threaded Spacers						
4-40	—	.375 (9.52)	J170-ND•	1.48	13.28	30.98
4-40	—	.500 (12.70)	J241-ND	2.28	20.48	47.78
4-40	—	.625 (15.88)	J242-ND	3.90	35.10	81.90
4-40	—	.750 (19.05)	J240-ND	3.50	31.50	73.50
4-40	—	.875 (22.23)	J171-ND	3.68	33.08	77.18
4-40	—	1.000 (25.40)	J243-ND	3.75	33.75	78.75
4-40	—	1.250 (31.75)	J172-ND•	3.33	29.93	69.83
6-32	—	.500 (12.70)	J244-ND	2.28	20.48	47.78
6-32	—	.625 (15.88)	J173-ND•	3.90	35.10	81.90
6-32	—	.750 (19.05)	J245-ND	3.50	31.50	73.50
6-32	—	.875 (22.23)	J246-ND	3.68	33.08	77.18
6-32	—	1.000 (25.40)	J247-ND	3.75	33.75	78.75
8-32	—	.500 (12.70)	J248-ND	1.85	16.65	38.85
8-32	—	.750 (19.05)	J249-ND	3.50	31.50	73.50
8-32	—	1.000 (25.40)	J250-ND	3.75	33.75	78.75
Hex Threaded Spacers						
4-40	—	.375 (9.52)	J174-ND•	1.85	16.65	38.85
4-40	—	.625 (15.88)	J175-ND•	3.50	31.50	73.50
4-40	—	.875 (22.23)	J176-ND•	3.63	32.63	76.13
6-32	—	.250 (6.35)	J177-ND•	1.63	14.63	34.13
6-32	—	.500 (12.70)	J178-ND•	2.13	19.13	44.63
6-32	—	.625 (15.88)	J179-ND•	3.50	31.50	73.50
6-32	—	.750 (19.05)	J180-ND•	3.55	31.95	74.55
6-32	—	1.000 (25.40)	J181-ND•	3.75	33.75	78.75
Nylon Round Tubular Spacers						
—	4 (.115" / 2.92mm)	.125 (3.18)	J230-ND	.65	5.85	13.65
—	4 (.115" / 2.92mm)	.187 (4.75)	J231-ND	.65	5.85	13.65
—	4 (.115" / 2.92mm)	.250 (6.35)	J232-ND	.65	5.85	13.65
—	6 (.140" / 3.56mm)	.312 (7.92)	J233-ND	.73	6.53	15.23
—	6 (.140" / 3.56mm)	.375 (9.52)	J234-ND	.98	8.78	20.48
—	6 (.140" / 3.56mm)	.500 (12.70)	J235-ND	1.13	10.13	23.63
—	6 (.140" / 3.56mm)	.625 (15.88)	J236-ND	1.33	11.93	27.83
—	6 (.140" / 3.56mm)	.750 (19.05)	J237-ND	1.48	13.28	30.98

3M brand Silicone Lubricant



In a palm-sized, spray pump which now makes your job that much easier.

This versatile spray:
 • Resists temperatures to 350°F (177°C) • Won't stain or become gummy • Helps prevent build-up of glues, waxes, inks and paints • Lubricates cutting tools and tables • **Contains no:** • Chlorofluorocarbons (CFCs) • 1,1,1-trichloroethane • methylene chloride • FDA acceptable; Conforms to FDA regulations for indirect food additives (21 CFR and 178.3570), surface lubricants (21 CFR and 178.3910), and release agents (21 CFR and 181.28)

Application Ideas:
 • Printing presses • Punch presses • Lab equipment • Oil field equipment • General plant maintenance • Locks and pulleys • Musical instruments • Doors/Windows • Air conditioner fans • Cutting blades • Die cutting equipment • Slitters • Collators • Air tools • General lube • You get two major benefits: • No aerosol propellant, so you're not paying for chemicals you don't need on the job or in the air • Helps put more chemical to work for your money

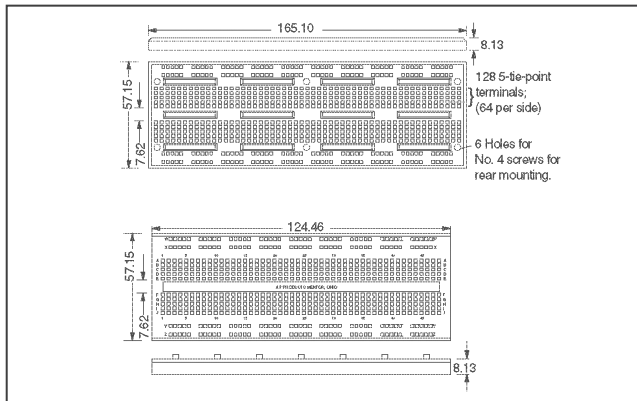
Features: At only 6 fluid ounces, you may think the pump won't take you far. It fits in your palm and tucks in a tool box for take-it-to-the-job convenience. But each pump holds enough active ingredients for two typical 16 fluid ounce aerosol cans. That means concentrated value and fewer cans for disposal. Contents are not under pressure. Spray pumps contain no chlorofluorocarbons (CFCs), 1,1,1-trichloroethane, or methylene chloride.

Description	Digi-Key Part No.	Price Each
Silicone Lubricant	3M624678-ND	6.42

3M Super Strips and Circuit Strips

Universal Breadboarding Elements with Solderless Plug-In Tie Points

As with all solderless breadboarding units from 3M, components simply plug-in and are interconnected with ordinary solid hook-up wire; #22 AWG is recommended. All sizes of DIPs and discrete components with lead diameters up to .032" (.82mm) can be accommodated. These handy strips may be permanently mounted with the integral non-shorting instant-mounting backing, or for quick removal, they may be mounted with screws on panels up to 1/8" (3.18mm) thick. Hardware and mounting templates are provided with every strip.

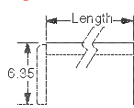


SPECIFICATIONS

	SUPER-STRIP	CIRCUIT-STRIP
Size:	2.25" x 6.50" x .32" (57.15mm x 165.10mm x 8.13mm)	2.25" x 4.90" x .32" (57.15mm x 124.46mm x 8.13mm)
Plug-In Tie-Points:	840	610
Materials: Body	Acetal Copolymer	Acetal Copolymer

SUPER-STRIP			CIRCUIT-STRIP		
Terminals	Part No.	Price Each	Terminals	Part No.	Price Each
Alloy 770	923252-ND	19.25	Alloy	923253-ND	12.80
Gold (10m)	923748-ND	63.38	Gold (10m)	923749-ND	52.59

3M Breadboard Jumper Wire Kit



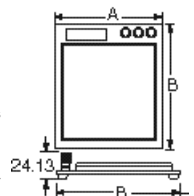
• 350 wires • 14 different lengths • Wire is stripped • Leads bent 90° • Length is classified by color coding • Wire is solid tinned 22 gauge • PVC insulation. Kit contains 25 each of 14 different lengths.
 923351-ND \$21.18

Length In. (mm)	Qty./Pkg.	Color	Digi-Key Part No.	Price/Pkg.
0.1 (2.54)	200	(No Insulation)	923345-01-ND	
0.2 (5.08)	200	Red	923345-02-ND	
0.3 (7.62)	200	Orange	923345-03-ND	
0.4 (10.16)	200	Yellow	923345-04-ND	
0.5 (12.70)	200	Green	923345-05-ND	\$5.50
0.6 (15.24)	150	Blue	923345-06-ND	per Pkg.
0.7 (17.78)	150	Violet	923345-07-ND	
0.8 (20.32)	150	Gray	923345-08-ND	
0.9 (22.86)	150	White	923345-09-ND	
1.0 (25.40)	100	Brown	923345-10-ND	
2.0 (50.80)	100	Red	923345-20-ND	
3.0 (76.20)	75	Orange	923345-30-ND	
4.0 (101.60)	75	Yellow	923345-40-ND	
5.0 (127.00)	75	Green	923345-50-ND	

3M AOC•E Board™ Solderless Breadboards

FEATURES:

• 0.1" x 0.1" (2.54mm) solderless tie point matrix accepts all DIP sizes and a wide variety of discrete components with lead diameters up to .032" (.81mm) • Capacities range from 610 to 5424 tie points
 • Accommodate from 6 to 54, 14 pin DIPs • Separate distribution bases for power, ground and signal lines • Molded alphanumeric grid for faster, easier tie point identification • Circuit elements are easily connected with #22 AWG solid wire • Strip bodies are constructed of durable Acetal Copolymer with Alloy 688 terminals • Durable baseplates keep boards stationary during use and help to minimize noise and voltage spikes in today's high speed circuits.



AxCxE Model	DIP Capacity (Size)	Base Dim. Inch (cm)		Total Tie Points	5-Tie Point Term.	Binding Posts	Digi-Key Part No.	Price Each
		A	B					
354	54(14-Pin)	14.69 (37.31)	9.75 (24.77)	5424	768	4	922354-ND	106.24
345	45(14-Pin)	12.44 (31.60)	9.75 (24.77)	4520	640	4	922345-ND	86.73
336	36 (14-Pin)	10.25 (26.04)	9.25 (23.50)	3648	512	4	922336-ND	69.18
327	27 (14-Pin)	8.0 (20.32)	9.25 (23.50)	2712	384	4	922327-ND	53.21
318	18 (14-Pin)	7.75 (19.69)	6.25 (15.88)	1824	256	3	922318-ND	41.62
309	9 (14-Pin)	7.0 (17.78)	4.0 (10.16)	840	128	3	922309-ND	20.84
306	6 (14-Pin)	5.4 (13.72)	4.0 (10.16)	610	94	2	922306-ND	18.59

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

General Board Specifications: • Board type: Epoxy glass • Max. working temperature: 155°C • Nom. board thickness (inc. copper): 1.6mm • Copper thickness: 35µm

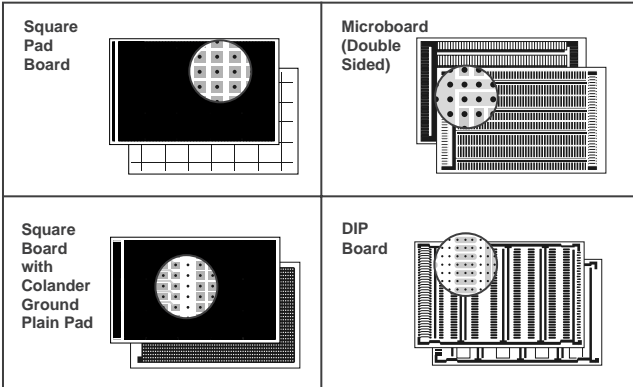
Square Pad Board: • DIN 41494 (KM6-II) compatible • DIN 41612 connector pattern up to 96/96 ways • Grid references to both sides of board to aid component layout and to assist wiring • Microbus backplane compatible • Vcc and 0V rails can be daisy chained from post to post around board

Square Pad Board with Colander Ground Plain: • Colander ground plane for maximum screening • Connector Pattern up to 96/96 ways • Grid references to both sides of board to assist in PCB layout • Microbus compatible

Microboard: • DIN 41494 (KM6-II) compatible • Medium packing density • DIN 41612 connector pattern, up to 64/96 ways, front and rear • Grid print to aid component layout • Microbus backplane compatible • 0V ground plane screen on double-sided board only

Plain Board: • Compatible with KM6 cardframes • For use with solder pins or wirewrap DIP sockets • DIN 41612 connector compatible • Grid printed for component reference

DIP Board: 0V and Vcc rail patterns duplicated on component side of board • DIN 41612 or 41617 connector patterns • Grid print to aid component layout • Microbus backplane compatible • 100 x 160 Board material is SRBP



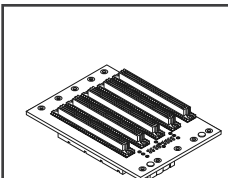
VME Universal Mating Code	Board Dim. (mm)	No. of Pads Width	No. of Pads Length	Digi-Key Part No.	Price Each	APW Part No.
<i>Square Pad Board</i>						
3U	100 x 160	34	54	233-1040-ND	20.80	03-0026J
6U	233.4 x 160	85	52	233-1041-ND	38.90	03-0111L
3U	100 x 160	34	54	233-1042-ND*	24.50	03-2989L

* Colander Ground Plane included.

VME Universal Mating Code	Board Dim. (mm)	7.62 Pitch IC DIP rows/pads	15.24 Pitch IC DIP rows/pads	Digi-Key Part No.	Price Each	APW Part No.
<i>Microboard, Double-Sided</i>						
3U	100 x 160	4/46	4/46	233-1043-ND	25.90	10-2845B
6U	233.4 x 160	11/46	7/46	233-1044-ND	59.00	10-2846H
<i>Microboard, Single-Sided</i>						
3U	100 x 160	4/46	4/46	233-1045-ND	21.60	10-27563H
6U	233.4 x 160	11/69	7/60	233-1046-ND	56.00	10-27564D
<i>DIP Board</i>						
3U	100 x 160	4/32	3/32	233-1048-ND	16.30	10-1041J
6U	233.4 x 160	7/47	6/47	233-1049-ND	53.50	10-3183G

VME Universal Mating Code	Description	Board Dim. (mm)	Row of Holes Width	Row of Holes Length	Digi-Key Part No.	Price Each	APW Part No.
3U	Plain Board, Imperial Pitch	100 x 160	39	60	233-1047-ND	12.60	09-19082K

VMExcel Backplanes



VMExcel offers excellent performance characteristics in the key areas of controlled impedance, power distribution and termination design. **Features:** • 6 layer stripline construction – J1 • 4 layer stripline construction – J2 • 57Ω characteristic impedance control • Patented earth guard track design • Excellent crosstalk performance • Low ground shift • Termination design features short stubs, decoupling capacitors and anti-crosstalk layout • Power connector: Mate 'N' Lok • A decoupling capacitor position is provided for each slot position permitting fine tuning of the backplane to match system parameters • Mate 'N' Lok connectors supplied (including mating connector) • On-board termination • With the exception of the following additional feature, the Monolithic enjoys the same construction and performance features as the J1 and J2 backplanes: • Power Bug on J1 backplane • Exception 5 slot has Faston Power Terminals on J1 backplane. **Material Specifications:** Board: Epoxyglass fibre - FR4, Material thickness - 2.7mm nominal, Bare boards are UL94V-0 rated. File number E. 116551. **Connectors - Standard DIN 41612:** IEC 603-2 (DIN 41612) 96 way, Body material: glass filled polyester, UL94V-0 rated. **Temperature Range Working:** -20°C to +85°C. **MTBF to MIL-HBK-217E:** >225,000 hours

VME Universal Mating Code	Description	No. of Slots	Digi-Key Part No.	Price Each	APW Part No.
6U	VME J1/J2 Monolithic Backplanes	5	233-1007-ND	347.00	243-431305B

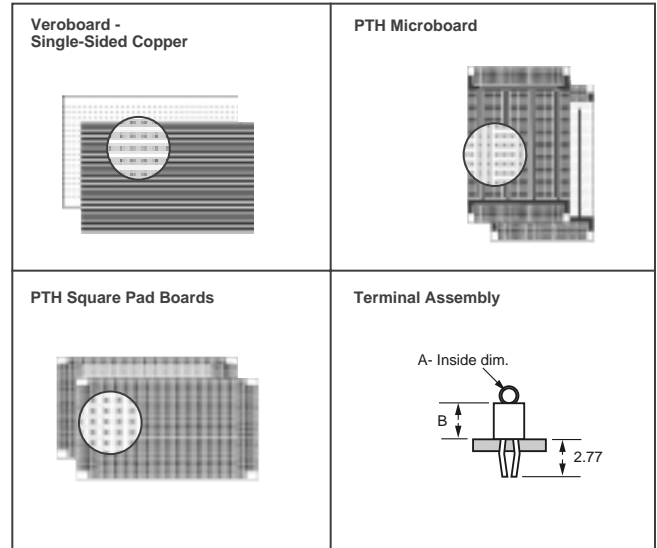
Prototyping Boards

General Board Specifications: • Board Type: Epoxy glass (233-1051-ND and 233-1050-ND are SRBP) • Nom. Board Thickness (inc. copper): 1.6mm • Copper Thickness: 35µm • Hole Grid: 2.54mm x 2.54mm • Hole Diameter: 1.02mm

Veroboard - Single-Sided Copper: Veroboard is designed for hard wiring of discrete components, typically in analogue circuits, but is equally useful where a number of common bus or signal lines are required.

PTH Microboard: • DIN 41494 (KM6-II) compatible • DIN 41612 connector position, up to 96/96 ways, front and rear • Two Vcc power rails and a 0V ground plane • Grid print to aid component layout • Microbus backplane compatible • Equally suited to soldered or wirewrapped interconnections.

PTH Square Pad Boards: • DIN 41494 (KM6-II) compatible • DIN 41612 connector pattern up to 96/96 ways, front and rear • Solder resist protection to component side of board • Power rails are provided along the length of the board and a colander ground plane affords maximum screening to the component side of the board.



Board Dimensions (mm)	No. of Pierced Copper Tracks	Holes/Track	Digi-Key Part No.	Price Each	APW Part No.
<i>Single Sided Copper</i>					
95.10 x 454.66	34	179	233-1052-ND	30.50	01-0112B
119.38 x 454.66	38	179	233-1051-ND	17.90	01-0043H
179.07 x 454.66	60	179	233-1050-ND	24.20	01-0042B

Board Dimensions (mm)	7.62 Pitch IC DIP Rows/Pads	15.24 Pitch IC DIP Rows/Pads	Digi-Key Part No.	Price Each	APW Part No.
<i>PTH Microboard</i>					
100 x 160	4/44	4/44	233-1058-ND	56.50	222-2991F
100 x 220	4/67	4/67	233-1059-ND	79.50	222-2992B
233.4 x 160	11/44	17/44	233-1060-ND	124.00	222-2993J

Board Dimensions (mm)	No. of Pads		Digi-Key Part No.	Price Each	APW Part No.
	Width	Length			
<i>PTH Square Pad Boards</i>					
100 x 160	32	48	233-1055-ND	43.50	222-26492L
100 x 220	32	71	233-1056-ND	71.00	222-53134H
233.4 x 160	70	48	233-1057-ND	95.50	222-53135E

Color	Nom. Hole Dia. (mm)	Dim. A (mm)	Dim. B (mm)	Digi-Key Part No.	Pricing		APW Part No.
					10	100	
<i>Terminal Assembly</i>							
Black	1.4 ±0.2	2.0-2.2	2.9-3.1	233-1054-ND	2.59	21.60	20-002136J
Black	1.0 ±0.1	1.1-1.3	3.1-3.3	233-1053-ND	2.59	21.60	20-002137D

NOTE: PTH = Plated Through Holes

VMEbus Extender Boards

- Full ground plane plus individual signal track screening
- Facility for logic analyser or terminator module connection
- Signal pin-out identification silk screened onto outer layers
- Card eject/support mechanism provided
- Jumper links provided to allow signal line interrogation
- Suitable for use in 160mm and 220mm depth systems and have been designed for card frame systems up to 280mm depth.

VME Universal Mating Code	Description	Back Plane Compatibility	Digi-Key Part No.	Price Each	APW Part No.
3U	VMEJ2 Extender Card	J2	233-1013-ND	275.00	243-26499H

Vector Prototyping Boards with punched holes are convenient economical tools for assembling circuit components and cost effective alternatives to custom designs. Use general purpose Plugboards and Bus specific for edgeboard connection prototyping, while Circboards are ideal for cutting down to smaller board sizes.

• Holes on 0.1" (2.54mm) grid .042" (1.07mm) dia. (.043" [1.09mm] on V1018 and V1029) • Ejector Hole • Plating: Gold/Nickel • Board Material: Epoxy Glass Composite.

IBM PC, XT and AT Expansion Units. • Marked edge contact

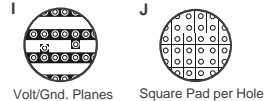
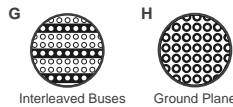
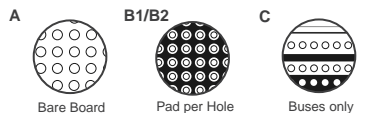
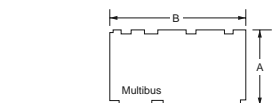
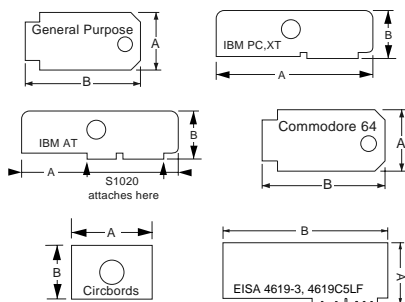
identification • Gold plated edge contacts on 0.1" centers • Power & ground buses terminate to connectors • Pads on board & bracket accepts DB9-, 15-, 25- or 37-Pin I/O connector • Accepts Vector's press-terminals for wiring & soldering • Holes are .042" (1.07mm) dia. or 0.1" (2.54mm) grid • 1/16" (1.59mm) thick epoxy glass material, gold/nickel contacts • Universal mounting bracket and card guide incl. • Layout planning sheets & instructions incl. • Plugs into any IBM AT slot with dual connectors (AT unit only) • Pads for mounting dual, row 0.1" (2.54mm) spaced header (AT unit only).

Circboards™

• .042" (1.07mm) dia. holes on 0.1" (2.54mm) grid • 1/16" (1.59mm) thick, epoxy glass composite boards • Flame retardant • Etched copper patterns are solder plated.

EISA

• Accepts DIPs, PGAs, PLCC, most component geometries • Multilayer design ensures signal handling integrity • Mounting area for D-sub and ribbon header connectors • On-board I/O break out field at connector for circuit analysis • Solder coated



PC BOARD PATTERNS

A.	Edgeboard Contacts Only
B1.	Pad Per Hole W/ Buses
B2.	Pad Per Hole Only
C.	Buses Only Around Bare Board
D.	3-Hole Solder Pad W/Buses
E.	3-Hole Solder Pad, Zig-Zag Buses & Ground Plane
F.	Voltage/Gnd. Planes
G.	Interleaved Buses
H.	Clearance-Hole Ground Plane
I.	Voltage/Ground Planes
J.	Pad-Per-Hole Only

PCB Pattern	Edge Contacts No.	Spacing In. (mm)	Dimensions Inch (cm)		16-Pin Dip Cap.	Digi-Key Part No.	Pricing			Accessories				Vector Part No.	
			A	B			1	10	25	Connectors		Card Extender	Card Racks		
											Solder Tail	Wire Wrap			
General Purpose Plugboards															
A			4.50 (11.43)	4.50 (11.43)	40	V1017-ND	16.47	156.60	370.25	V1062	V1063	V1024	V1050-52	3662-5	
A			4.50 (11.43)	6.50 (16.51)	50	V1016-ND	19.59	186.20	440.25	V1062	V1063	V1024	V1050-52	3662	
A			4.50 (11.43)	9.60 (24.38)	90	V1129-ND	24.52	233.10	551.25	V1062	V1063	V1024	V1050	3662-2	
B1/B1			4.50 (11.43)	6.50 (16.51)	45	V1018-ND	38.21	363.30	859.00	V1062	V1063	V1024	V1050-52	3662-9	
G			4.50 (11.43)	6.50 (16.51)	24	V1023-ND	25.25	240.10	567.75	V1062	V1063	V1024	V1050-52	3682-2	
D			4.50 (11.43)	6.50 (16.51)	12	V1020-ND	22.41	213.10	503.75	V1062	V1063	V1024	V1050-52	3677-2	
E	44	.156" (3.96)	4.50 (11.43)	9.60 (24.38)	40	V1128-ND	36.10	343.20	811.50	V1062	V1063	V1024	V1050	4112	
E			4.50 (11.43)	6.50 (16.51)	25	V1031-ND	28.76	273.40	646.50	V1062	V1063	V1024	V1050-52	4112-4	
E			4.50 (11.43)	4.50 (11.43)	8	V1032-ND	26.67	253.60	599.50	V1062	V1063	—	—	4112-5	
D			4.50 (11.43)	9.60 (24.38)	21	V1019-ND	25.25	240.10	567.75	V1062	V1063	V1080	V1053	3677	
G			4.50 (11.43)	9.60 (24.38)	48	V1022-ND	34.91	332.00	785.00	V1062	V1063	V1080	V1053	3682	
—			4.50 (11.43)	6.50 (16.51)	24	V1130-ND	35.05	333.20	788.00	V1062	V1063	V1024	V1050	3682-4	
H			4.50 (11.43)	6.50 (16.51)	90	V1131-ND	31.79	302.30	714.75	V1062	V1063	V1024	V1050	3662A6	
A			4.50 (11.43)	6.50 (16.51)	50	V1027-ND	22.66	215.40	509.25	S1364	V1061	V1079	V1050-52	3719-1	
B1			4.50 (11.43)	6.50 (16.51)	40	V1029-ND	41.67	396.20	936.75	S1364	V1061	V1079	V1050-52	3719-6	
—			4.50 (11.43)	6.50 (16.51)	34	V1132-ND	28.99	275.63	651.67	S1364	V1061	V1024	V1050	4066-4	
A			4.50 (11.43)	9.60 (24.38)	90	V1028-ND	25.25	240.10	567.75	S1364	V1061	V1079	V1053	3719-4	
STD Bus															
D		.125 (3.18)	4.50 (11.43)	6.50 (16.51)	20	V1111-ND	31.79	302.30	714.75	S2284	—	V1115	V1050-52	4610V	
A			4.50 (11.43)	6.50 (16.51)	55	V1112-ND	33.38	317.40	750.50	S2284	—	V1115	V1050-52	4610-1	
G			4.50 (11.43)	6.50 (16.51)	35	V1113-ND	33.38	317.40	750.50	S2284	—	V1115	V1050-52	4610-2	
B1/B2			4.50 (11.43)	6.50 (16.51)	52	V1114-ND	47.07	447.50	1058.25	S2284	—	V1115	V1050-52	4610-3	
IBM* AT/ISA Expansion Units															
C	62	.100 (2.54)	13.23 (33.60)	4.20 (10.67)	84	V1036-ND	49.42	469.90	1111.00	S1314	—	V1025	—	4613-1	
I			13.23 (33.60)	4.20 (10.67)	55	V1037-ND	63.60	604.80	1429.75	S1314	—	V1025	—	4613-2	
B1	(XT)		13.23 (33.60)	4.20 (10.67)	91	V1038-ND	49.95	474.90	1122.75	S1314	—	V1025	—	4613-3	
D	62/36	.100 (2.54)	13.25 (33.66)	4.80 (12.19)	87	V1039-ND	63.60	604.80	1429.75	—	—	V1026	—	4617	
B1	(AT)		13.25 (33.66)	4.80 (12.19)	108	V1040-ND	51.90	493.50	1166.75	—	—	V1026	—	4617-1	
—			13.25 (33.66)	4.80 (12.19)	—	V1041-ND	63.60	604.80	1429.75	—	—	V1026	—	4617-3	
H	98	.100 (2.54)	13.25 (33.66)	4.80 (12.19)	140	V1137-ND	63.60	604.80	1429.75	—	—	—	—	4617-4	
—			13.25 (33.66)	4.80 (12.19)	140	V1138-ND	72.79	692.10	1636.50	—	—	—	—	4617-5	
—	49/98	.1 (2.54)	—	—	—	S1020-ND	2.23	18.81	—	—	—	—	—	PCB Expansion Port Edge Card	
COMMODORE 64 Expansion Unit															
D	44	.1 (2.54)	2.73 (6.93)	4.50 (11.43)	4	V1030-ND	21.43	203.80	481.75	S1224	—	—	—	3795-1	
CIRCBORDS (Plugboard Patterns Without The Expense Of Edgeboard Connectors)															
D	—	—	4.50 (11.43)	6.50 (16.51)	20	V1044-ND	21.81	207.40	490.50	—	—	—	—	8001	
J	—	—	4.50 (11.43)	6.50 (16.51)	35	V1045-ND	24.19	230.00	543.75	—	—	—	—	8002	
G	—	—	4.50 (11.43)	6.50 (16.51)	60	V1046-ND	20.76	197.40	466.75	—	—	—	—	8003	
H	—	—	4.50 (11.43)	6.50 (16.51)	50	V1047-ND	22.88	217.60	514.50	—	—	—	—	8004	
B2/B2	—	—	5.00 (12.70)	13.25 (33.66)	154	V1048-ND	40.12	381.40	901.75	—	—	—	—	8006	
B2/I	—	—	4.50 (11.43)	6.50 (16.51)	60	V1049-ND	23.24	221.00	522.50	—	—	—	—	8007	
D	—	—	4.50 (11.43)	8.08 (20.52)	21	V1021-ND	16.81	159.80	378.00	—	—	—	—	3677-6	
J/J	—	—	4.50 (11.43)	8.08 (20.52)	80	V1034-ND	25.36	241.20	570.25	—	—	—	—	45P80-1	
B2/B2	—	—	10.60 (26.92)	10.60 (26.92)	275	V1001-ND	62.55	594.70	1406.00	—	—	—	—	106P106-1	
—	—	—	18.00 (45.72)	10.69 (27.15)	—	V1116-ND†	129.31	1229.50	2907.00	—	—	—	—	106P180-4	
B2/B2	—	—	12.86 (32.66)	4.00 (10.16)	124	V1117-ND	70.42	669.60	1583.25	—	—	—	—	8010	
B2/B2	—	—	11.00 (27.94)	9.20 (23.37)	283	V1118-ND	60.16	572.00	1352.50	—	—	—	—	8012	
EISA Prototyping Boards															
B1	188	.050 (1.27)	4.50 (11.43)	13.25 (33.66)	—	V1107-ND	168.69	1603.90	3792.25	—	—	V1108	—	4619-3	
—			13.25 (33.66)	4.50 (11.43)	140	V1139-ND	168.69	1603.90	3792.25	—	—	—	—	4619-5	
S-100, Multibus (Plugboard)															
B2	50/100	.125 (3.18)	10.00 (25.40)	5.30 (13.46)	80	V1134-ND	56.12	533.60	1261.75	—	—	—	—	8801-6	
A	50/100		10.00 (25.40)	5.30 (13.46)	110	V1135-ND	46.16	438.90	1037.75	—	—	—	—	8801-1	
F/F	50/100		10.00 (25.40)	5.30 (13.46)	—	V1136-ND	55.98	532.20	1258.25	—	—	—	—	8804	

* IBM is a registered trademark of International Business Machines. Apple II & IIe are trademarks of Apple Computer, Inc

† Designates part is a Sullins product.

† V1116-ND has pad per hole with PTH, GND plane both sides.

For fast development of adapter card to PCI bus.

P/N V1163-ND Features:

- Multilayer board contains pad per hole patterns.
- Power and ground accessible throughout the board.
- For use in 5 Volt or 3.3 Volt applications.
- For use with Vector prototype accessories.

Description	Digi-Key Part No.	1	10	25	Vector Part No.
PCI BUS, PCMCIA Prototype Kits					
PCI Plugboard +5V or 3.3V, Pad Per Hole, PTH	V1163-ND	171.55	1631.10	3856.50	4624-3
PCI Extender Test Card 5V for 32 or 64 Bit	V1166-ND	250.00	2403.81	5751.52	3690-34-5V
PCI Extender Test Card 3.3V for 32 or 64 Bit	V1167-ND	250.00	2403.81	5751.52	3690-34-3V
PCMCIA Adapter Board Assembly	V1168-ND	108.62	1032.80	2441.75	4625-1
PCMCIA Proto Board Kit 10" x 7" (25.4cm x 17.78cm) Pad Per Hole	V1169-ND	131.25	1262.00	3019.50	4625-3
PCMCIA Extender Test Card Type I and II	V1170-ND	141.75	1290.40	3221.49	3690-35

VECTOR Circuit Board Accessories

Contacts slip on .025" (.64mm) squared wrap or pins. Contacts are tin plated, and offered in a reel of contacts wired together, "daisy-chain" style, to 28 gauge blue insulated wire. Each contact is spaced 5" (127mm) apart. Sold in reels of 50.

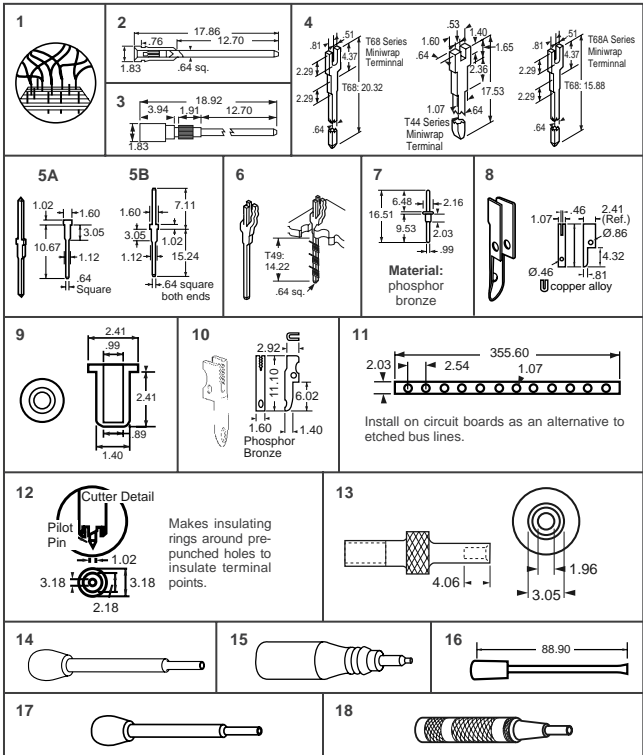


Fig.	Description	Pkg. Qty.	Digi-Key Part No.	Pricing 10 25	Vector Part No.
1	Slip-On contacts for Tab-To-Wire Connection	50	V1065-ND	132.67 1261.50	T120-1/50
2	Lo-Profile IC Socket Pins for .055" (1.40mm) Dia. Holes, Wrap Post	1000	V1058-ND	23.77 226.00	R31/C
3	Lo-Profile IC Socket Pins for .042" (1.07mm) Dia. Holes, Wrap Post	1000	V1059-ND	28.45 270.50	R32/C
3	Lo-Profile IC Socket Pins for .042" (1.07mm) Dia. Holes, Wrap Post	1000	V1060-ND	193.97 1844.30	R32/M
4	T44 Series Bifurcated Miniwrap Term. with .025" (.64mm) Sq. Posts	1000	V1071-ND	6.34 60.30	T44/C
4	T44 Series Bifurcated Miniwrap Term. with .025" (.64mm) Sq. Posts	1000	V1072-ND	38.10 362.30	T44/M
4	T68 Series Bifurcated Miniwrap Term. with .025" (.64mm) Sq. Posts	1000	V1077-ND	7.76 73.80	T68/C
4	T68 Series Bifurcated Miniwrap Term. with .025" (.64mm) Sq. Posts	1000	V1078-ND	45.69 434.40	T68/M
4	T68A Series Miniwrap Terminal	1000	V1110-ND	85.34 811.50	T68A/M
5A	Press-In Terminals with .025" (.64mm) Sq. Posts	1000	V1073-ND	50.94 484.40	T46-4-9/M
5B	Press-In Terminals with .025" (.64mm) Sq. Posts	1000	V1074-ND	11.31 107.50	T46-5-9/C
6	Trifurcated Klipwrap Terminals with .025" (.64mm) Sq. Posts	1000	V1075-ND	11.64 110.70	T49/C
6	Trifurcated Klipwrap Terminals with .025" (.64mm) Sq. Posts	1000	V1076-ND	102.76 977.00	T49/M
7	Inboard Pins for 1/16" (1.60mm) Boards w/ .042" (1.07mm) Dia. Holes, Gold	1000	V1054-ND	89.34 849.50	K24A/M
7	Inboard Pins for 1/16" (1.60mm) Boards w/ .042" (1.07mm) Dia. Holes, Tin	1000	V1055-ND	49.14 467.20	K24C/M
8	Micro-Klip Term. for 1/16" (1.60mm) Boards, .042" (1.07mm) Dia. Holes, Tin	1000	V1069-ND	5.32 50.60	T42-1/C
8	Micro-Klip Term. for 1/16" (1.60mm) Boards, .042" (1.07mm) Dia. Holes, Tin	1000	V1070-ND	37.07 352.50	T42-1/M
—	J-Pin Terminals for .042" (1.07mm) Dia. Holes (use with Micro-Klip)	1000	V1171-ND	12.93 123.00	K32/C
—	J-Pin Terminals for .042" (1.07mm) Dia. Holes (use with Micro-Klip)	1000	V1172-ND	107.76 1024.60	K32/M
9	Rolled Flange Eylet	500	V1066-ND	26.45 251.50	T123/500
10	Mini-Klip Term. for 1/16" (1.60mm) Bds. w/ .062" (1.574mm) Dia. Holes, Tin	1000	V1067-ND	6.55 62.30	T28/C
10	Mini-Klip Term. for 1/16" (1.60mm) Bds. w/ .062" (1.574mm) Dia. Holes, Tin	1000	V1068-ND	36.50 347.00	T28/M
11	Bus Strips With Round Punched Holes	10	V1064-ND	7.88 74.93	T107/10
12	Pad Cutter Tool for Copper Clad Bds. w/Handle, .040" (1.02mm) Holes	1	V1056-ND	20.90 198.70	P138A
12	Pad Cutter Tool for Copper Clad Bds. Shank only, .040" (1.02mm) Holes	1	V1057-ND	17.11 162.70	P138C
14	Hand Insertion Tool for T44	1	V1098-ND	19.48 185.20	A13
14	Hand Insertion Tool for T68	1	V1099-ND	19.97 189.90	A13-1
15	Hand Insertion Tool for T49	1	V1100-ND	18.87 180.30	P156V
16	Hand Insertion Tool for T42-1	1	V1101-ND	18.10 172.10	P149V
17	Hand Insertion Tool for K24A, T46	1	V1103-ND	18.10 172.10	P133A
18	Hand Insertion Tool for R31, R32	1	V1104-ND	92.07 875.40	P158V
13	Die for R32 Socket Pins	1	V1106-ND	18.24 173.40	D9
—	Die for R31 Socket Pins	1	V1173-ND	17.21 163.60	D10

KEYSTONE PC Test Points

- Features**
- Color keyed for visibility and quick identification
 - Economical choice for PC test point terminations
 - Snap-fit mounting provides positive retention for wave soldering
 - Wire form loop for safe, non-slip testing
 - Space saving, ultra low and low profile designs
 - High profile for difficult to reach applications
 - Suitable for high density packaging on .062" (1.57mm) & .093" (2.36mm) PC boards
 - Practical replacement for wire-wrap posts and turrets
 - Secure grip for J hooks, EZ hooks, grabbers, alligator clips, tips or probes
 - Plastic base strengthens terminal for positive holding power
 - Ideal for reliable production testing and field service troubleshooting

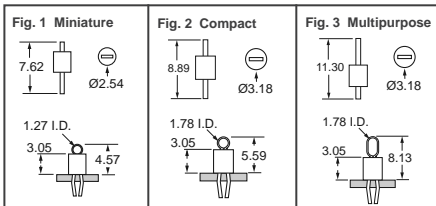
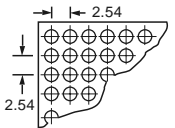


Fig.	Base Color	Digi-Key Part No.	Price Each 10 100 500
1	Red	5000K-ND	.21 .16 .15
	Black	5001K-ND	.21 .16 .15
	White	5002K-ND	.21 .16 .15
2	Red	5005K-ND	.21 .17 .15
	Black	5006K-ND	.21 .17 .15
	White	5007K-ND	.21 .17 .15
3	Red	5010K-ND	.21 .17 .15
	Black	5011K-ND	.21 .17 .15
	White	5012K-ND	.21 .17 .15
	Orange	5013K-ND	.21 .17 .15
	Yellow	5014K-ND	.21 .17 .15

VECTOR ELECTRONIC COMPANY

Prepunched Insulating Boards

- Epoxy glass, except as noted
- .062" (1.57mm) thick except
- ‡ V1122-ND .047" (1.19mm) thick
- ‡ V1123-ND .031" (.79mm) thick



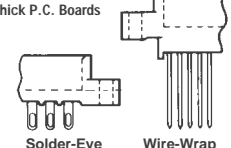
Dimensions - Inch (cm) Width x Length	Digi-Key Part No.	1	10	25	Vector Part No.
Micro-Vectorboards — Holes .042" (1.07mm) Diameter; .100" (2.54mm) grid					
4.5 x 17 (11.43 x 43.18)	V1005-ND#	7.68	73.00	172.50	169P44XXXP
4.5 x 6.5 (11.43 x 16.51)	V1043-ND#	5.43	51.60	122.00	64P44XXXP
4.5 x 17 (11.43 x 43.18)	V1004-ND	10.28	97.80	231.25	169P44WE
8 x 17 (20.32 x 43.18)	V1007-ND	16.09	153.00	361.75	169P79WE
8.5 x 17 (21.59 x 43.18)	V1011-ND	19.59	186.20	440.25	169P84WE
8.5 x 17 (21.59 x 43.18)	V1012-ND*	25.25	240.10	567.75	169P84WEC1
4.5 x 6.5 (11.43 x 16.51)	V1042-ND	5.43	51.60	122.00	64P44WE
4.5 x 17 (11.43 x 43.18)	V1002-ND†	9.79	93.10	220.25	169P44
4.5 x 17 (11.43 x 43.18)	V1003-ND†	11.89	113.10	267.50	169P44C1
8 x 17 (20.32 x 43.18)	V1006-ND	16.81	159.80	378.00	169P79
8.5 x 17 (21.59 x 43.18)	V1008-ND*	17.22	163.70	387.00	169P84
8.5 x 17 (21.59 x 43.18)	V1009-ND†	23.81	226.40	535.25	169P84C1
10 x 17 (25.40 x 43.18)	V1013-ND†	23.17	220.30	521.00	169P99
6.5 x 4.5 (16.51 x 11.43)	V1119-ND †	5.43	51.60	122.00	64P44
4.5 x 8.5 (11.43 x 21.59)	V1120-ND	6.17	58.70	138.75	84P44WE
6 x 17 (15.24 x 43.18)	V1122-ND‡	14.66	138.55	329.75	169P58-047
6 x 17 (15.24 x 43.18)	V1123-ND‡	14.66	139.40	329.75	169P58-032
6 x 17 (15.24 x 43.18)	V1124-ND#	20.07	190.90	451.37	169P59XXXP
4.5 x 17 (11.43 x 43.18)	V1126-ND*	14.66	139.40	329.75	169P44WEC1
4.5 x 17 (11.43 x 43.18)	V1127-ND**	15.37	146.10	345.50	169P44C2
Vectorboard® — Holes .062" (1.57mm) Diameter; .100" (2.54mm) grid					
4.8 x 17 (12.19 x 43.18)	V1014-ND	14.78	140.50	332.50	170H48WE
8.51 x 17 (21.62 x 43.18)	V1015-ND	24.18	229.90	543.50	170H85WE
8.5 x 8.5 (21.59 x 21.59)	V1121-ND	14.74	140.20	331.50	85H85WE
4.8 x 8.5 (12.19 x 21.59)	V1125-ND	13.14	124.90	295.25	85H48WE
Vectorboard® — Holes .025" (.64mm) Diameter; .050" (1.27mm) grid					
4 x 6.5 (10.16 x 16.51)	V1140-ND	43.45	413.10	976.75	126M76-032
4 x 17 (10.16 x 43.18)	V1141-ND	57.03	542.20	1282.00	336M76-032
4 x 17 (10.16 x 43.18)	V1142-ND*	44.53	423.40	1001.25	336M76-032C1

Material: Phenolic. * Copper clad, 1 side. ** Copper clad, 2 side. WE = Epoxy Glass. † Epoxy Glass Composite

Edgeboard Connectors

For 1/16" (1.60mm) Thick P.C. Boards

Solder Eylet Type Insulator Material: Phenolic, UL-94V-0 or Glass filled diallyl; Phthalate UL-94V-1 or Rylon R10. **Wrap Tail Type Insulator Material:** Phenolic, UL-94V-0 or Glass filled diallyl; Phthalate UL-94V-1 or Polyester (VALOX) UL-94V-0. **Contact Material:** Phosphor bronze QQ-B-750 or Beryllium copper. **Contact Plating:** .000010" gold over .000050" nickel. **Test Voltage:** 650 VAC. **Rated Current:** 3 Amps. **Contact Res. Drop:** 30 mV Max @ rated current. **Insulation Resistance:** 5000 megohms, min. @ 50 VDC.

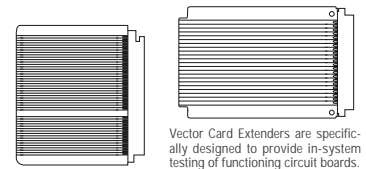


Ctrs. In. (mm)	No. Of Contacts	Termination Type	Mounting Ears	Digi-Key Part No.	1	10	25	Vector Part No.
.100 (2.54)	72	Wrap Tail	Center	V1061-ND†	13.25	126.00	298.00	R636-1
.156 (3.96)	44	Solder Eye	Flush	V1062-ND††	9.48	90.20	213.25	R644
.156 (3.96)	44	Wrap Tail	Center	V1063-ND†	8.29	78.80	186.50	R644-3

† Supplied with between-contact polarizing key. * Wrap Tail; 3-level, .025" (.64mm) Sq. †† Supplied with between-contact polarizing key and in-contact polarizing key.

Card Extenders

Current rating: 5A @ 108°F temp. rise: Voltage rating: 200 RMS or 300 VDC. Circuit contacts are gold/nickel plated .000110" gold over .000050" nickel. Connector contacts: Gold inlay .000030" thick, on CA725 copper/nickel alloy base. Board: epoxy glass composite - 2 oz. copperclad or FR4 per MIL-P-13949.



Vector Card Extenders are specifically designed to provide in-system testing of functioning circuit boards.

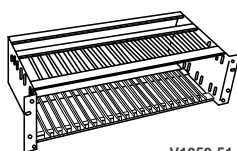
Total	Each Side	Contacts		Dimensions Width x Height Inch (cm)	Bus System Application	Digi-Key Part No.	Pricing		Vector Part No.
		Ctrs. In. (mm)	10				100		
44	22	.156 (3.96)	4.5 x 6.5 (11.43 x 16.51)	—	V1024-ND	34.91	332.00	3690	
44	22	.156 (3.96)	4.5 x 11 (11.43 x 27.94)	RCA Consoc	V1080-ND	41.06	390.10	3690-6	
36/62	18/31	.100 (2.54)	6.7 x 5.6 (17.02 x 14.22)	IBM AT	V1025-ND	66.38	639.10	3690-26	
62	31	.100 (2.54)	3.18 x 5.7 (8.08 x 14.48)	IBM PC	V1025-ND	57.76	549.20	3690-22	
72	36	.100 (2.54)	4.5 x 11.5 (11.43 x 29.21)	—	V1143-ND	55.60	528.60	3690-2	
60/86	30/43	.1156 (2.94/3.96)	12 x 7.65 (30.48 x 19.43)	Multibus I	V1095-ND	95.00	903.30	3690-18	
188	94	.050 (1.27)	6.7 x 5.6 (17.02 x 14.22)	EISA	V1108-ND	258.19	2454.90	3690-32	
56	28	.125 (3.18)	4.5 x 6.5 (11.43 x 16.51)	SDTI	V1115-ND	43.23	411.00	3690-16	
100	50	—	Hgt. 7.5 (19.05)	S-100	V1144-ND	66.38	631.10	3690-12	

1-800-344-4539

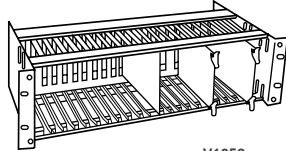
218-681-6674 • FAX: 218-681-3380 • www.digikey.com

Card Racks

Designed in accordance with EIA standard, these 19" (48.26cm) subracks are compatible with Vector prototyping boards. All racks are adjustable in both height and depth and can be used with snap-in, plastic or metal card guides. Available in kit form (CCK) or fully assembled (CCA) all models feature brushed aluminum construction with a full line of prototyping boards, extenders and backplanes available. Card racks include nylon snap-in card guides.



V1050-51-53



V1052

Card Size Range Inch (cm) Width x Height	Size Inch (cm) Width x Depth	Height*	Guide Mounting Method	Material	Digi-Key Part No.	Pricing 1 10	Vector Part No.
3.00-5.00 x 4.5 (7.62-12.70 x 11.43)	19.00 x 9.00 (48.26 x 22.86)	3U	Snap-In	Nylon	V1145-ND	102.59 975.50	CCK12S/90
5.50-7.00 x 4.5 (13.97-17.78 x 11.43)	19.00 x 9.00 (48.26 x 22.86)	3U	Snap-In	Nylon	V1052-ND	103.08 980.10	CCK13S/90
5.50-7.00 x 4.5 (13.97-17.78 x 11.43)	19.00 x 9.00 (48.26 x 22.86)	3U	Snap-In	Nylon	V1051-ND	126.47 1202.50	CCA13S/90
5.50-7.00 x 4.5 (13.97-17.78 x 11.43)	19.00 x 9.00 (48.26 x 22.86)	3U	Riveted	Zinc	V1050-ND	148.62 1413.10	CCA13M/90
5.50-7.00 x 4.5 (13.97-17.78 x 11.43)	19.00 x 9.00 (48.26 x 22.86)	3U	Snap-In	Nylon	V1146-ND	82.70 786.30	CCA13S-H/90
5.50-7.00 x 4.5 (13.97-17.78 x 11.43)	19.00 x 9.00 (48.26 x 22.86)	3U	Snap-In	Nylon	V1147-ND	341.60 3248.00	CCK13S-16/90
8.60-10.1 x 4.5 (21.84-25.65 x 11.43)	19.00 x 12.00 (48.26 x 30.48)	3U	Snap-In	Nylon	V1053-ND	131.76 1252.80	CCA14S/90
8.60-10.1 x 8 (21.84-25.65 x 20.32)	19.00 x 12.00 (48.26 x 30.48)	5U	Snap-In	Nylon	V1148-ND	165.38 1572.40	CCA17S/90
4.0-8.50 x 10.0 (10.16-21.59 x 25.40)	19.00 x 9.00 (48.26 x 22.86)	7U	Snap-In	Nylon	V1149-ND	133.13 1264.80	CCK100S/90

* 3U = 5.25" (13.34cm); 5U = 8.75U (22.23cm); 7U = 12.25" (31.12cm)

EIA Backplanes

Description	Width x Length Inch (cm)	Plug-board Series	Digi-Key Part No.	Pricing 1 10	Vector Part No.
8 Slot CCK13 Series Backplane	4.35 x 7.00 (11.05 x 17.78)	4610	V1096-ND	190.34 1809.80	4610-8-1A
16 Slot CCK13 Series Backplane	4.35 x 13.00 (11.05 x 33.02)	4610	V1097-ND	254.68 2421.50	4610-16-1A

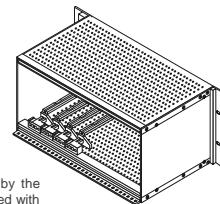
Card Rack Accessories

Accessories for card rack enclosures for customizing your application. Card guides are tapered slides for PCB cards to slide along. Snap-In versions provide easy installation without the need for tools. Screw mount versions (comes with hardware) allow card placement anywhere within .25" (6.35mm) spacing.

Description	Length Inch (cm)	Digi-Key Part No.	Pricing 1 10	Vector Part No.
<i>Handles</i>				
Grab Handle with Hardware for Card Racks 5.25" (13.34cm) and 8.75" (22.23cm) height	—	V1161-ND	11.73 111.50	HA12
Ejector Handle with Hardware for Cards (4 pcs bag)	—	V1162-ND	7.67 73.00	HA9/4
<i>Card Guides — Plastic Screw Mount</i>				
Plastic Screw Mount (Pkg. of 12)*	2.89 (7.34)	V1151-ND	18.99 180.60	CG2-45P
Plastic Screw Mount (Pkg. of 12)*	5.42 (13.77)	V1153-ND	17.83 169.50	CG2-65P
Plastic Screw Mount (Pkg. of 12)*	6.93 (17.60)	V1156-ND	25.29 240.50	CG2-80P
Plastic Screw Mount (Pkg. of 12)*	8.14 (20.68)	V1160-ND	19.66 186.90	CG2-95P
<i>Card Guides — Nylon Snap-In Mount</i>				
Nylon Snap-In Mount (Pkg. of 12)*	3.17 (8.05)	V1150-ND	11.51 109.50	CG2-45S
Nylon Snap-In Mount (Pkg. of 12)*	5.42 (13.77)	V1152-ND	10.16 96.60	CG2-65S
Nylon Snap-In Mount (Pkg. of 12)*	6.93 (17.60)	V1155-ND	14.94 142.00	CG2-80S
Nylon Snap-In Mount (Pkg. of 12)*	8.43 (21.41)	V1158-ND	12.94 123.10	CG2-95S
<i>Card Guides — Metal Screw Mount</i>				
Metal Screw Mount (Pkg. of 12)*	5.42 (13.77)	V1154-ND	23.00 218.70	CG2-65M
Metal Screw Mount (Pkg. of 12)*	6.93 (17.60)	V1157-ND	28.49 270.90	CG2-90M

* Note: 1 pkg = 12 pieces.

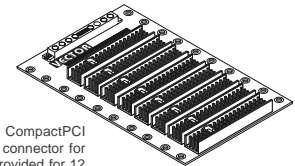
NEW! CompactPCI® Card Racks



The newest specification for PCI-based computers is CompactPCI. It is electrically a superset of desktop PCI with a different physical form factor. CompactPCI utilizes the Eurocard form factor popularized by the VME bus. Card racks for CompactPCI Bus come completely assembled with card guides. Plug-in power supply and backplane are ordered separately. Standard 3U and 6U heights available with 4 or 8 slot card configurations.

Description	Dim. - Inch (cm)		Hgt	Digi-Key Part No.	Pricing			Vector Part No.
	Width	Depth			1	10	25	
Card Rack cPCI	7.4 (18.80)	8.5 (21.59)	3U	V1176-ND	150.00	—	—	CCA26-36
Card Rack cPCI	9.0 (22.86)	8.5 (21.59)	3U	V1177-ND	160.00	—	—	CCA26-44
Card Rack cPCI	7.4 (18.80)	12 (30.48)	3U	V1174-ND	175.00	—	—	CCA27-36
Card Rack cPCI	9.0 (22.86)	12 (30.48)	3U	V1175-ND	195.00	1891.49	4634.24	CCA27-44
Card Rack cPCI	19 (48.26)	10 (25.40)	6U	V1178-ND	215.00	2085.49	5109.49	CCA28-84-00

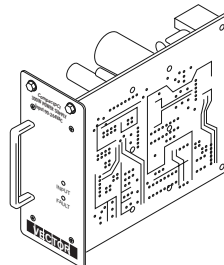
NEW! CompactPCI® Backplane



Features: • Backplane design is compliant with the CompactPCI specification 1.0 • CPU slot is on the right • A Drive connector for Peripheral Power is provided • A 4-pin Connector is provided for 12 VDC fan connection

Description	Digi-Key Part No.	Price Each	Vector Part No.
Backplane for CompactPCI, 8 Slot, 3U	V1185-ND	486.67	CPCIBP8-3-1
Backplane for CompactPCI, 8 Slot, 6U	V1184-ND	600.00	CPCIBP8-6

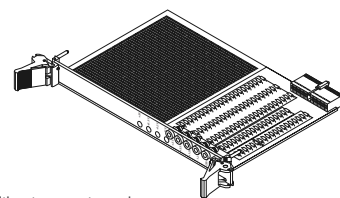
NEW! CompactPCI® Power Supply



Available in 2 wattage outputs (100 and 300) and 4 voltage outputs (5V, 3.3V, +12V, and -12V), these cPCI power supplies plug directly into the CompactPCI card rack and connect to the backplane to supply system voltages to all slots on backplane connectors. Supplies are hot swappable and redundant sharing with Overvoltage/Overtemperature/Short circuit protection on all outputs and inputs. Input voltage is 90-264VAC (47Hz to 440Hz)

Description	Digi-Key Part No.	Price Each	Vector Part No.
100 Watt cPCI Power Supply, Quad Output	V1179-ND	410.25	2600-100
300 Watt cPCI Power Supply, Quad Output	V1180-ND	595.00	2600-300
Adapter Board for Auxiliary Power Supply	V1181-ND	201.57	4626-2

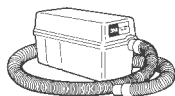
NEW! CompactPCI® Test Load Boards



For enclosure and backplane monitoring without separate probes. Gives test loading for power supply for remote voltage calibration. Mount-in card slot and is fully assembled and tested.

Description	Digi-Key Part No.	Pricing 1 10 25	Vector Part No.
Resistive Load Board for 3U Systems	V1182-ND	225.00 2167.89 5223.25	CPCI-3U-25-L
Resistive Load Board for 6U Systems	V1183-ND	250.00 2425.39 5803.48	CPCI-6U-25-L

3M Electronics Vacuum & Accessories



Vacuum comes complete with Hose, 32' - 10 ft. (81.28cm - 3.05 meters), Wand, Crevice Tool, Crevice Tool Brush, Dusting Brush, Needle Nozzle, 3 year warranty.

OPTIONS: Shoulder strap with shoulder pad.

SPECIFICATIONS:

Electrical: 115 VAC, 50/60Hz, 5.0 amps. Dimensions: Length: 17.80" (45.21cm). Width: 7.75" (19.69cm). Height: 9.25" (23.50cm). Weight: 9 lbs. 14 oz. (4.48kg). Motor: 1HP, continuous duty, thermally protected with automatic reset. Conducted RFI filtered (reduces EMI to be below FCC requirements).

Filter:

Type 1, Small Particle: For trapping extremely fine particles. Typical applications color laser printers, color copiers and highly sensitive equipment.

Type 2, Medium Particle: Designed to trap unwanted toner from copiers and laser printers, cleaning typewriters and data processing equipment.

Description	Digi-Key Part No.	Pricing 1 10	3M Part No.
Electronic Vacuum Cleaner 115 Vac	SCP148-ND	220.88 2061.50	78923652750
Carrying Strap with Shoulder Pad	SCP149-ND	9.98 93.10	78805770449
Type 1 Filter, Small Particle	SCP150-ND	22.79 212.67	78696962113
Type 2 Filter, Medium Particle	SCP151-ND	12.81 119.57	78800553501

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

3M Terminal and Distribution Strips

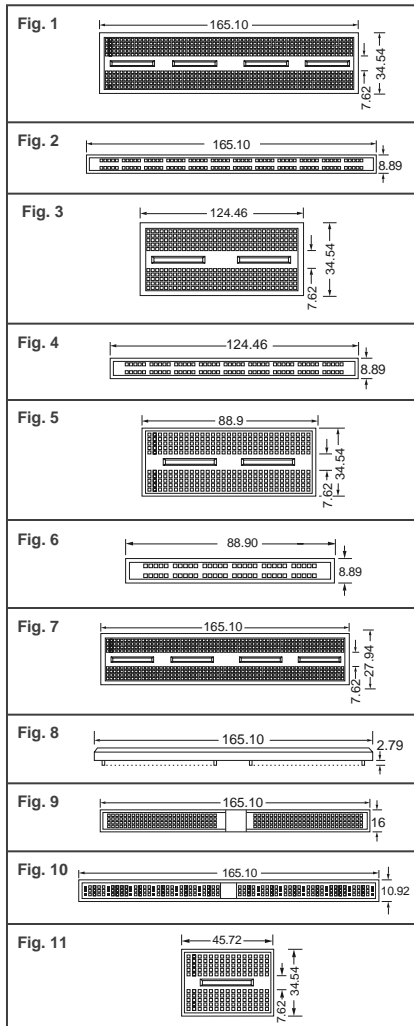
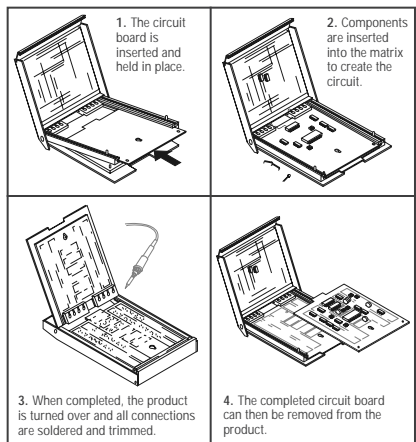


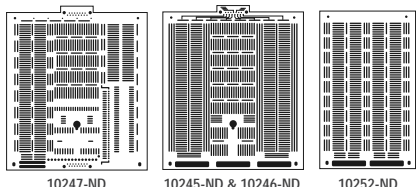
Fig.	Description	Digi-Key Part No.	Price Each
1	Terminal Strip, 128 five-tie-point terminals	923261-ND	13.57
2	Distribution Strip, 24 four-tie-point terminals	923277-ND	4.00
3	Terminal Strip, 96 five-tie-point terminals	923265-ND	10.79
4	Distribution Strip, 18 four-tie-point terminals	923281-ND	3.72
5	Terminal Strip, 68 five-tie-point terminals	923269-ND	7.90
6	Distribution Strip, 24 four-tie-point terminals	923285-ND	3.38
7	Terminal Strip, 128 four-tie-point terminals	923289-ND	12.44
8	Terminal Strip, 54 four-tie-point terminals w/solder tails, vinyl backed, mounting screws provided	923292-ND	9.65
9	Terminal Strip, 54 four-tie-point terminals	923291-ND	7.08
10	Distribution Strip, 36 four-tie-point terminals	923293-ND	6.08
11	Terminal Strip, 34 five-tie-point terminals	923273-ND	4.48

HOYME MANUFACTURING INC. Ultimate Prototyping Tool

The Electronic Network Designer is a tool for the prototyping of electronic circuits. It is composed of a base matrix of high quality nickel silver connector clips, over which a printed circuit board is aligned. The designer prototypes the circuit through the board, using the clips to make the connections until the circuit is tested and ready for soldering. The circuit is soldered before being removed from the unit, and the painstaking process of transposing to a hard wired system is eliminated.



PRODUCT FEATURES:
Compact Functional Design: • Unit can be closed (with the circuit in process) for storage or transport • Fits in a briefcase • Conductive foam inside cover for safe storage of components • All-metal chassis construction for durability. **Improved Layout of Working Area:** 10244-ND — • Three separate working areas, two vertical, on horizontal • Connection strips in rows of six (conventionally five) • 3,400 connection points • 14 vertical buses • 8 binding posts, accepts banana plug connectors. **Dimensions:** 7.75" x 11.00" x 1.25" (19.69cm x 27.94cm x 3.18cm); Circuit Board: 6.875" x 8.00" x 0.031" (17.46cm x 20.32cm x 0.08cm). 10251-ND — • Two vertical working areas • Connection strips in rows of 6 (conventionally 5) • 2,154 connection points • 11 vertical buses • 4 binding posts, accepts banana plug connectors. **Dimensions:** 5.00" x 10.00" x 1.30" (12.70cm x 25.40cm x 3.30cm); Circuit Board: 4.06" x 6.840" x 0.031" (10.31cm x 17.37cm x 0.08cm). **Time Saving:** • The E.N.D. patented system can save hours in the production of prototypes and short run or custom circuits.



Description	Digi-Key Part No.	Price Each	Mfg. Part No.
Electronic Network Designer with 3,400 connection points (Includes CB01AYF)	10244-ND	144.99	ED01NAA
Double sided, gold plated replacement circuit board for ED01NAA	10245-ND	35.00	CB01AYF
Single sided, solder plated replacement circuit board for ED01NAA	10246-ND	19.50	CB02BYE
Double sided, gold plated replacement circuit board for ED01NAA (with 31 position card edge connector)	10247-ND	48.00	CB01AYG
Electronic Network Designer with 2,154 connection points. (Includes CB22BYH)	10251-ND	114.99	ED22NDC
Single sided, solder plated replacement circuit board for ED22NDC	10252-ND	14.90	CB22BYH

Injectoral Electronics Copper Clad Boards

Note: All boards are made from FR4 material

Dimensions Inch (cm)	Digi-Key Part No.	Price Each	Injectoral Part No.
<i>1/16" (1.59mm) Thick Single sided, 1 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC5-ND	3.10	PC5
4 x 6 (10.16 x 15.24)	PC6-ND	4.85	PC6
6 x 6 (15.24 x 15.24)	PC6-S-ND	6.20	PC6-S
6 x 9 (15.24 x 22.86)	PC7-ND	9.30	PC7
12 x 12 (30.48 x 30.48)	PC7-T-ND	19.58	PC7-T
12 x 18 (30.48 x 45.72)	PC8-ND	29.32	PC8
18 x 18 (45.72 x 45.72)	PC8-E-ND	37.85	PC8-E
<i>1/16" (1.59mm) Thick Single sided, 2 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC9-ND	3.13	PC9
4 x 6 (10.16 x 15.24)	PC10-ND	4.98	PC10
6 x 6 (15.24 x 15.24)	PC10-S-ND	6.65	PC10-S
6 x 9 (15.24 x 22.86)	PC11-ND	9.95	PC11
12 x 12 (30.48 x 30.48)	PC11-T-ND	22.12	PC11-T
12 x 18 (30.48 x 45.72)	PC12-ND	33.17	PC12
18 x 18 (45.72 x 45.72)	PC12-E-ND	42.13	PC12-E
<i>1/16" (1.59mm) Thick Double sided, 1 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC40-ND	4.26	PC40
4 x 6 (10.16 x 15.24)	PC41-ND	6.73	PC41
6 x 6 (15.24 x 15.24)	PC41-S-ND	9.06	PC41-S
6 x 9 (15.24 x 22.86)	PC42-ND	14.31	PC42
12 x 12 (30.48 x 30.48)	PC42-T-ND	24.34	PC42-T
12 x 18 (30.48 x 45.72)	PC43-ND	36.50	PC43
18 x 18 (45.72 x 45.72)	PC43-E-ND	45.68	PC43-E
<i>1/16" (1.59mm) Thick Double sided, 2 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC51-ND	4.66	PC51
4 x 6 (10.16 x 15.24)	PC52-ND	7.45	PC52
6 x 6 (15.24 x 15.24)	PC52-S-ND	10.08	PC52-S
6 x 9 (15.24 x 22.86)	PC53-ND	15.11	PC53
12 x 12 (30.48 x 30.48)	PC53-T-ND	28.46	PC53-T
12 x 18 (30.48 x 45.72)	PC54-ND	42.67	PC54
18 x 18 (45.72 x 45.72)	PC54-E-ND	54.64	PC54-E
<i>1/32" (.79mm) Thick Single sided, 1 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC56-ND	3.33	PC56
4 x 6 (10.16 x 15.24)	PC56-ND	4.35	PC56
6 x 6 (15.24 x 15.24)	PC56-S-ND	5.18	PC56-S
6 x 9 (15.24 x 22.86)	PC57-ND	7.78	PC57
12 x 12 (30.48 x 30.48)	PC57-T-ND	15.59	PC57-T
12 x 18 (30.48 x 45.72)	PC58-ND	23.37	PC58
18 x 18 (45.72 x 45.72)	PC58-E-ND	29.34	PC58-E
<i>1/32" (.79mm) Thick Double sided, 1 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC44-ND	3.23	PC44
4 x 6 (10.16 x 15.24)	PC45-ND	5.10	PC45
6 x 6 (15.24 x 15.24)	PC45-S-ND	6.93	PC45-S
6 x 9 (15.24 x 22.86)	PC46-ND	10.36	PC46
12 x 12 (30.48 x 30.48)	PC46-T-ND	17.31	PC46-T
12 x 18 (30.48 x 45.72)	PC47-ND	25.97	PC47
18 x 18 (45.72 x 45.72)	PC47-E-ND	32.47	PC47-E
<i>1/32" (.79mm) Thick Double sided, 2 oz</i>			
3 x 4.5 (7.62 x 11.43)	PC64-ND	4.66	PC64
4 x 6 (10.16 x 15.24)	PC65-ND	7.45	PC65
6 x 6 (15.24 x 15.24)	PC65-S-ND	10.08	PC65-S
6 x 9 (15.24 x 22.86)	PC66-ND	14.11	PC66
12 x 12 (30.48 x 30.48)	PC66-T-ND	28.46	PC66-T
12 x 18 (30.48 x 45.72)	PC67-ND	42.67	PC67
18 x 18 (45.72 x 45.72)	PC67-E-ND	54.64	PC67-E

Drill Bits

Diameter Inch (mm)	Digi-Key Part No.	Pricing 10	Injectoral Part No.
<i>High Speed Steel</i>			
.062" (1.57)	PC300-52-ND	1.77 12.86	PC300-52
.052" (1.32)	PC300-55-ND	1.96 14.24	PC300-55
.040" (1.02)	PC300-60-ND	1.96 14.24	PC300-60
.033" (.84)	PC300-66-ND	2.23 16.23	PC300-66
.029" (.74)	PC300-69-ND	2.51 18.23	PC300-69
.021" (.53)	PC300-75-ND	2.51 18.23	PC300-75
.0135" (.34)	PC300-80-ND	2.51 18.23	PC300-80
<i>Carbide - *All carbide bits have 1/8" (3.18mm) shank</i>			
.062" (1.57)	PC300C-52-ND*	9.26 81.03	PC300C-52
.040" (1.02)	PC300C-60-ND*	7.55 66.06	PC300C-60
.033" (.84)	PC300C-66-ND*	7.55 66.06	PC300C-66
.031" (.79)	PC300C-68-ND*	7.55 66.06	PC300C-68
.029" (.74)	PC300C-69-ND*	7.55 66.06	PC300C-69
.021" (.53)	PC300C-75-ND*	12.01 105.09	PC300C-75
.0135" (.34)	PC300C-80-ND*	12.01 105.09	PC300C-80

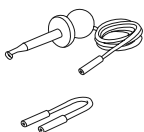
3M Patch Cords and Accessories

Compatible with 3M breadboards, terminal strips, super-strips, distribution strips, test clips, miniature 8-pin connectors and .64mm square wrap posts.

- Ideal for breadboarding and troubleshooting • Incorporate #26 AWG stranded wire with PVC insulation • Rugged, integral strain relief • Choices of two pin sizes (.48mm and .76mm), and two socket sizes (.48mm-.71mm and .71mm-.89mm) and E-Z Hook terminations

ASSORTMENT A (20 Pieces) — 9 pieces 2" (50.80mm) long yellow, 6 pieces 4" (101.60mm) long blue, 3 pieces 6" (152.40mm) long red, 2 pieces 9" (228.60mm) long black.

ASSORTMENT B (10 Pieces) — 5 pieces 15" (381mm) long red, 5 pieces 15" (381mm) long black.



Pin/Socket Size (mm)	Color/Length Assortment	Pieces /Pak	Recommended Applications	Digi-Key Part No.	Price Per Pak
.48	Assortment A	20	IC Sockets	924961-ND	36.64
.76	Assortment A	20	A P Hardware	924962-ND	35.70
<i>Socket to Socket</i>					
.48 / .71	Assortment A	20	Extension for 48mm Pin Plug TC to TC, TC to .64mm Square Post	924963-ND	81.96
.71 / .89	Assortment A	20		924964-ND	95.86
<i>Pin Plug to Socket</i>					
.48 (.48 / .71)	Assortment A	20	IC Socket to 48mm Pin Plug	924965-ND	62.60
.76 (.71 / .89)	Assortment A	20	A P Hardware to TC, .64mm Sq. Post	924966-ND	63.34
<i>Pin Plug to E-Z Hook</i>					
.48	Assortment B	10	IC Socket to TC, .64mm Sq. Post, etc.	924967-ND	37.94
.76	Assortment B	10	A P Hardware to TC, .64mm Post, etc.	924968-ND	37.94
<i>Socket to E-Z Hook</i>					
.48 / .71	Assortment B	10	.019 Pin Plug to TC, .64mm Sq. Post, etc.	924969-ND	42.28
.71 / .89	Assortment B	10	TC, .025 Post to TC, .64mm Post, etc.	924970-ND	44.34

1-800-344-4539

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TONER TRANSFER SYSTEM

Make instant circuit boards using any laser printer or photocopier!

NO DARKROOM!
NO NEGATIVES!
NO CHEMICALS!
NO LOST TIME!

Simple 3-Step Process . . .

- 1) Print circuit layout directly to TTS paper.
- 2) Iron the image to copper-clad board.
- 3) Soak in water to remove paper

. . . now ready to etch!

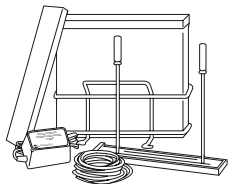
- Detailed instructions included for making single & double sided pcb's
- Also shows how to make custom full color decals for any application
- Available in 5 and 10 sheet packs — sheet size: 8-1/2" x 11" (21.59cm x 27.94cm)

TTS-5-ND (5 sheet pack) \$14.95

TTS-10-ND (10 sheet pack) \$27.95



Professional PC Board Power Etching System



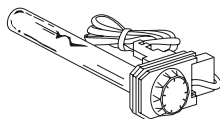
A semi-automatic etching device for use in labs, schools, prototype shops and for limited PC board production. Air pump agitates etching solution for fast, very even etches. Handles up to two 8" x 10" (20.32cm x 25.40cm) PC boards at a time, either single or double sided.

Kit contains:

- 1 Etching Tank and Reservoir Lid, 12"H x 2 1/2"W x 10 1/2"L (30.48cm x 6.35cm x 26.67cm) (Molded Polyethylene — ABS PC Board Holder) Capacity — 1.25 Gallons (4.73 Liters) of Etching Solution
- 1 Etch-O-Matic Power Agitating Pump, 120V AC Operation
- 1 Permanent or Portable Tip-Free Base
- 1 PC Board Holder and Handle
- 4 Feet (1.22 Meters) of Supply Hose

GC394-ND \$106.70

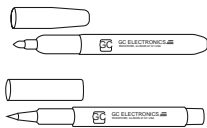
Etching Solution Heater



Fits in tank and heats solution up to 38°C (100°F). Used to further reduce etching time. Built-in adjustable thermostat controls temperature continuously to 100°F (38°C). 120V AC/100 W Max.

GC392-ND \$22.75

Etch Resist Ink Pens



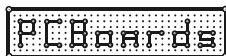
Black felt tip pen for making resist circuits directly on PC boards. Dries instantly for neat, easy application.

GC220-ND Standard Size - draws lines approximately 1/32" (.79mm) wide \$3.63

GC222-ND Fine Line - draws lines as thin as 1/64" (.40mm) wide \$4.53

DATAK Corporation Direct Etch Transfer

Description	Digi-Key Part No.	Price Each	Datak Part No.
15 Pin D-Sub (12), 25 Pin D-Sub (12)	DE-51-ND	2.00	DE-51
37 Pin D-Sub (8), 50 Pin D-Sub (6)	DE-52-ND	2.00	DE-52
.125 edge card (62), .156 edge card (50)	DE-54-ND	2.00	DE-54
TO-99 (20), TO-100 (18), TO-77 (20)	DE-58-ND	2.00	DE-58
Ball Stylus and Burnisher	04158-ND	4.30	04158



Board Layout Software

An Effective and Low-Cost Software Tool for Creating Printed Circuit Artwork

PCBoards printed circuit layout software is ideal for creating high quality pcb artwork for your electronic projects. Its low cost and ease-of-use make it perfect for professional and hobbyist applications.

- Supports EGA, VGA, and Super VGA
- Copper flooding for building ground planes
- Gerber and Excellon output
- Mirror imaging for laser and deskjet printers
- Positive and negative artwork printouts
- Single or double-sided boards up to 6" x 13" (15.24cm x 33.02cm) or 8" x 16" (20.32cm x 40.64cm) for Windows version
- .005" (1.27mm) Grid/Snap; 0.001" to 0.05" (.03mm to 1.27mm) for Windows version
- 1X Laser output - ideal for use with Toner Transfer System
- Menu driven
- Help screens
- Silk screen layer
- Parts library
- Point A-B routing in Windows version

System Requirements: DOS: IBM PC or Compatible • DOS 3.0 or later • 640K minimum RAM. Windows: Windows version 3.0 or later • 1Meg Memory

PCBL-ND (3.5" disk; supports only orthogonal traces) \$49.95

PCWN-ND (3.5" disk) \$198.00

SuperTools and SuperTools Plus for Windows™ 16-Bit Version

System Requirements: • Microsoft™ Windows: Version 3.1 or greater, Windows 95 • Graphics: EGA, VGA, SVGA • Printers: Any printer supported with Windows™ driver • Memory: 4M or greater • Mouse: Windows™ compatible required

Microsoft and Windows are trademarks of Microsoft Corporation

SuperTools for Windows™

- Schematic Capture: SuperCad schematic program and autorouter included
- Visually Cued Command Entry: Pull-down menus, dialog boxes, toolbar buttons
- On-Line Help Manual: Pull-down HELP menu, corresponding help topic selection
- Draw-to-Fit and Zoom Operations: Display entire layout, zoom any portion to normal size
- Object Entry Commands: Entry of traces, pads, rectangles, ellipses, text
- Graphics Edit Commands: Copy, move, rotate, stretch, erase, single and group edits
- Advanced Editing Features: Rubberbanding, snap modes, auto-increment text
- Routing: Point to point and incremental
- Board Layers: Single and double sided boards with solder mask and silk screen
- Board Size/Resolution: 8" x 16" (20.32cm x 40.64cm) boards, specify dimensions/traces down to 1 mil
- Flexible Artwork Output: Dot-matrix, laser, postscript, plotter, Gerber file format output
- Library Support: Dip, PGA, surface mount, discrete, format library parts from drawings
- Library: 1500 schematic/component library parts with parts editor/build utility

PCBD1-ND \$399.00

SuperTools Plus for Windows™

Includes all the features of the PCBoards SuperTools with the following additions:

- SuperCad Schematic Plus: Schematic layout/capture, netlist conversion, autowire and autoplacement utilities
- Built-In Autorouter: Point to point, incremental, batch routing (1-16 layers)
- Large Boards/High Resolution: 32" x 32" (81.28cm x 81.28cm) boards, specify dimensions/traces to 1 mil
- Multiple Circuit Layers: Up to 16 layers plus silk screen and solder mask layers
- Library: 5000 schematic/component library parts with parts editor/build utility

PCBD2-ND \$649.00

NEW! SuperTools and SuperTools Plus for Windows™ 32-Bit Version

SuperTools and SuperTools Plus 32-bit versions offer all the features of the 16-bit versions plus improved toolbars, improved data handling capacity, long file names, better operation in 32-bit Windows™ environments, and additional Gerber capabilities.

System Requirements: Windows™ 95, 98, or NT

PCBD3-ND SuperTools for Windows™ \$399.00

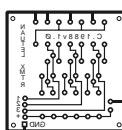
PCBD4-ND SuperTools Plus for Windows™ \$699.00

NEW! MentalMAX Plus 32-Bit Version

- Contains:
- SuperTools Plus, 32-bit version.
- SuperSIM, a digital simulation program which works directly with SuperTools Plus. Includes a library of TTL and CMOS part models. Up to 500 signal capacity.
- MentalSPICE, an analog simulator program which works directly with SuperTools Plus. 350 discrete part models, 500 op amp-comparator models, and 30 mixed mode digital models. 30 ready-to-use examples.

System Requirements: Windows™ 95, 98, or NT

PCBD5-ND \$1099.00



Single-In-Line Universal Boards for Thru-Hole Components

Miniature Breadboard Modules feature pins on .1" (2.54mm) Centers

Often useful hole patterns and pad designs • Greatly increase packaging density • Compatible with standard breadboards, sockets, and solderless breadboards using .1" (2.54mm) centerlines

From simple networks and component arrays to IC circuits using up to 600 wide Dips, UNI-SIP breadboards offer the perfect packaging solution for building both prototype and production thru-hole circuit modules. Use a solderless breadboard to test your idea, use a UNI-SIP breadboard to "KEEP IT". Specifications: • Board Material: G-10 FR-4 Glass Epoxy • Thickness: .032" (.81mm) • Foils: Solder coated 1 oz. copper 1-side • Holes: .036" (.91mm) Diameter • Pins: .1" (2.54mm) centers • Pin Length: .130" (3.30mm). Pins are soldered in position • Board Tolerances: ±.015" (.38mm) Typ. Overall

Fig. 1 - Series 1000

For basic networks and component arrays

Available in 6, 7, 8, 9, and 10 pin models. Excellent for prototype or production circuits.

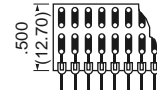


Fig. 2 - Series 2000

Accepts components on .1" (2.54mm), .2" (5.08mm), .3" (7.62mm), or .4" (10.16mm) centers

Available in 6, 7, 8, 10, and 12 pin models. Foil modifications expand layout options.

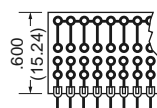


Fig. 3 - Series 3000

For Higher Density General Purpose Applications

Available in 8, 10, 12, and 14 pin models. For general use applications where compatibility with a large number of device sizes is desirable. Features 2 holes per pad on a .100" (2.54mm) matrix.

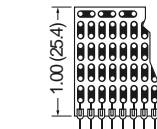


Fig. 4 - Series 4000

Accepts Dips on Standard .300" (7.62mm) Centerline

Available in 7, 8, 10, 12, 14, and 16 pin models. Make selection based on signal connections required. Example: 8 pin model can support 1-16 pin Dip, with 8 signal lines (pins).

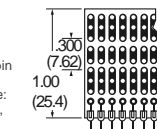


Fig. 5 - Series 5000

Accepts Standard .300" (7.62mm) or .600" (15.24mm) Centerline Dips

Available in 8, 10, 12, 14, 16, and 20 pin models. 20 pin model can hold 1-40 pin Dip with 20 signal lines to input/output pins.

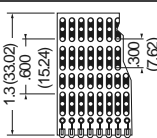


Fig.	No. of Pins	Board Width Inch (mm)	Digi-Key Part No.	Pricing 1	10	Mfg. Part No.
1000 Series						
1	6	.6 (15.24)	1006CA-ND	.92	7.02	US-1006
	7	.7 (17.78)	1007CA-ND	1.03	7.92	US-1007
	8	.8 (20.32)	1008CA-ND	1.15	8.82	US-1008
	9	.9 (22.86)	1009CA-ND	1.27	9.72	US-1009
10	1.0 (25.40)	1010CA-ND	1.39	10.62	US-1010	
2000 Series						
2	6	.6 (15.24)	2006CA-ND	1.03	7.92	US-2006
	7	.7 (17.78)	2007CA-ND	1.15	8.82	US-2007
	8	.8 (20.32)	2008CA-ND	1.27	9.72	US-2008
	10	1.0 (25.40)	2010CA-ND	1.62	12.42	US-2010
12	1.2 (30.48)	2012CA-ND	1.86	14.22	US-2012	
3000 Series						
3	8	.8 (20.32)	3008CA-ND	1.74	13.32	US-3008
	10	1.0 (25.40)	3010CA-ND	2.09	16.02	US-3010
	12	1.2 (30.48)	3012CA-ND	2.44	18.72	US-3012
	14	1.4 (35.56)	3014CA-ND	2.80	21.42	US-3014
4000 Series						
4	7	.7 (17.78)	4007CA-ND	1.50	11.52	US-4007
	8	.8 (20.32)	4008CA-ND	1.74	13.32	US-4008
	10	1.0 (25.40)	4010CA-ND	2.09	16.02	US-4010
	12	1.2 (30.48)	4012CA-ND	2.44	18.72	US-4012
14	1.4 (35.56)	4014CA-ND	2.80	21.42	US-4014	
16	1.6 (40.64)	4016CA-ND	3.15	24.12	US-4016	
5000 Series						
5	8	.8 (20.32)	5008CA-ND	1.97	15.12	US-5008
	10	1.0 (25.40)	5010CA-ND	2.33	17.82	US-5010
	12	1.2 (30.48)	5012CA-ND	2.80	21.42	US-5012
	14	1.4 (35.56)	5014CA-ND	3.15	24.12	US-5014
	16	1.6 (40.64)	5016CA-ND	3.50	26.82	US-5016
	20	2.0 (50.80)	5020CA-ND	4.32	33.12	US-5020

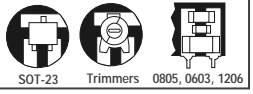
Master Assortment Kit for UNI-SIP: The MK260CA Assortment contains 2 each of all 26 types in the UNI-SIP Series, packaged in re closable bags grouped by series number.

MK260CA-ND \$79.00

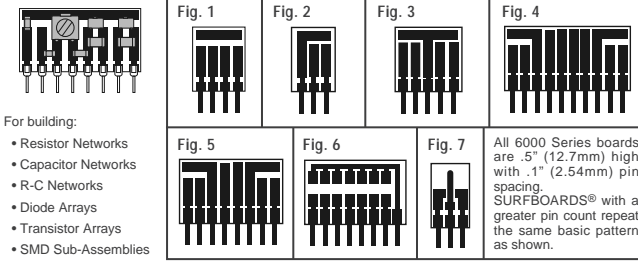
The Surfboard Concept: The concept behind SURFBOARDS is elegantly simple. Many models incorporate foil patterns that are designed to accommodate a wide variety of component mounting footprints. SURFBOARD® models for SOICs and PLCCs provide standard mounting footprints for the IC and depending on the model chosen, will include a prototyping area for additional components or provide a direct pin-out. Most SURFBOARD® models feature SIP (single in line) pins that

make prototyping and interfacing with other circuits easy.
Specifications: • Material: G-10 FR-4 Fiberglass laminate, 1oz. Cu. .032" (.81mm). Thickness ±.005" (±.13mm) • Finish: Level 60/40 Solder alloy • S.I.P. Pins: On applicable models. Soldered on .100" (2.54mm) centers. SURFBOARDS® can be hand soldered and are compatible with most industrial soldering processes. (Suggested soldering and assembly guidelines included).

The universal circuit patterns allow for the mounting of 0603, 0805, 1206 and mini-melf packages as well as a wide variety of 3 terminal devices.



6000 Series for Discrete Devices — .1" (2.54mm) Pin Spacing



For building:

- Resistor Networks
- Capacitor Networks
- R-C Networks
- Diode Arrays
- Transistor Arrays
- SMD Sub-Assemblies

All 6000 Series boards are .5" (12.7mm) high with .1" (2.54mm) pin spacing. SURFBOARDS® with a greater pin count repeat the same basic pattern as shown.

Fig.	No. of Pins	Digi-Key Part No.	Pricing	
			1	10
SURFBOARDS® for Discrete Components				
1	4	6004CA-ND	1.72	13.14
	6	6006CA-ND	2.04	15.66
	7	6007CA-ND	2.28	17.46
	8	6008CA-ND	2.51	19.26
	10	6010CA-ND	3.08	23.58
	12	6012CA-ND	3.67	28.08
2	3	6103CA-ND	1.48	11.34
	6	6106CA-ND	2.04	15.66
	9	6109CA-ND	2.63	20.16
	12	6112CA-ND	3.67	28.08
	15	6115CA-ND	4.23	32.40

Fig.	No. of Pins	Digi-Key Part No.	Pricing		
			1	10	
3	5	6405CA-ND	1.93	14.76	
	10	6410CA-ND	3.08	23.58	
	15	6415CA-ND	4.23	32.40	
	4	10	6510CA-ND	3.08	23.58
		20	6520CA-ND	5.17	39.60
		8	6808CA-ND	2.51	19.26
5	16	6816CA-ND	4.11	31.50	
	8	6908CA-ND	2.51	19.26	
	16	6916CA-ND	4.11	31.50	
SURFBOARDS® for SOT-89					
7	3	6303CA-ND	1.48	11.34	
	6	6306CA-ND	2.04	15.66	
	9	6309CA-ND	2.63	20.16	

Master Assortment Kit for Discretes: The MK-6000 assortment contains 2 each of all 23 models in the 6000 series of SURFBOARDS® for discrete components.
MK-6000CA-ND \$99.00

9000 Series for ICs

Build • prototype circuits • Evaluate ICs easily • Build circuit upgrades
 • Adapt SMD to thru-hole

Fig.	Digi-Key Part No.	Pricing	
		1	10
8 Pin SOIC			
1	9081CA-ND	1.60	12.24
2	9082CA-ND	4.11	31.50
16 Pin SOIC			
3	9161CA-ND	2.04	15.66
4	9162CA-ND	2.16	16.56
5	9163CA-ND	6.32	48.42
6	9164CA-ND	6.53	50.04
7	9165CA-ND	6.89	52.74
20 Pin .3" (7.62mm) Wide			
8	9210CA-ND	7.47	57.24
20 Pin PLCC			
9	9301CA-ND	7.47	57.24
10	9302CA-ND	7.47	57.24

Master Assmt. Kit for ICs:
 32 pcs total (5 each of 9081, 9082, 9161, 9162, and 2 each of 9163, 9164, 9165, 9210, 9301, 9302)
MK-9000CA-ND \$99.00

NEW! Application-Specific Adapters

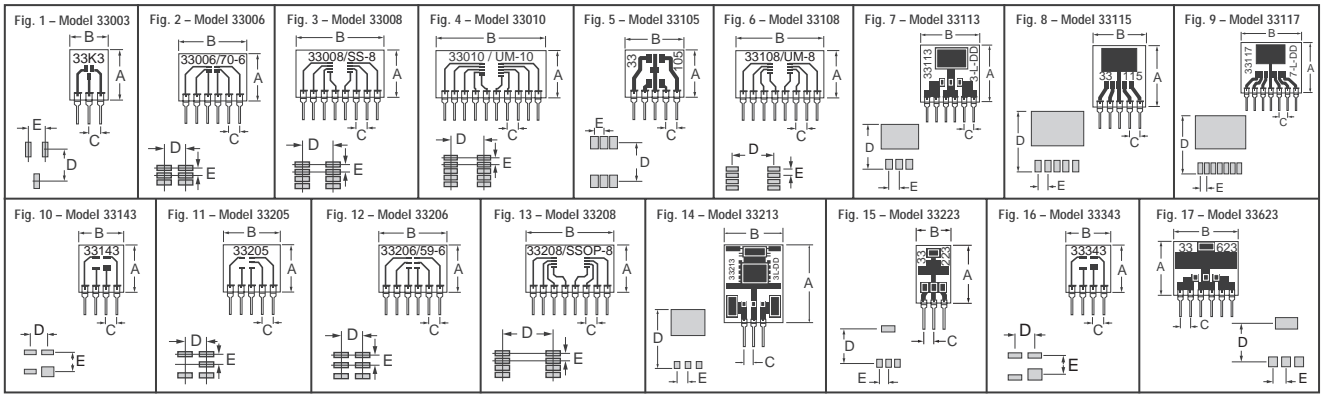
- Accept Wide Range of Surface Mount Discrete Semiconductors and ICs
- Provide Convenient Medium for Prototyping, Test, and Development

The 33000 Series of Surfboards® are application-specific adapters that convert surface mount component footprints to Single-In-Line (SIP) format. The boards feature pre-installed pins on .100" (2.54mm) centers making them compatible with conventional breadboards, solderless breadboards, and sockets. The SIP format provides ease of signal probing as well as higher densities when prototyping. Models are available to accept a wide range of surface mount semiconductors and integrated circuits.

Models 33113 and 33623 feature two SIP pins for each pad for higher current applications. Model 33213 features large soldering pads as connection points and SIP pins for measuring purposes. Boards are .031" ± .005" (.79mm ± .13mm) thick FR-4 and feature solder-coated 1-oz. Circuit Foils that can be hand-soldered or soldered by most conventional processes. SIP pins are soldered in place on .100" (2.54mm) centers. All boards feature solder mask to limit flow of solder to pad area and aid assembly. Just add parts and plug in.

Fig.	Dimensions — Inch (mm)						SIP Pins	Accepts These Devices	Digi-Key Part No.		Pricing	
	A	B	C	D	E	F			1	10	1	10
1	.400 (10.16)	.300 (7.62)	.100 (2.54)	.080 (2.03)	.0512 (1.30)		3 SC-70-3, SOT-23, NEC Pkg-30	33003CA-ND	1.01	7.74		
2	.400 (10.16)	.600 (15.24)	.100 (2.54)	.090 (2.28)	.0256 (6.50)		6 SC-70-6, SOT-363	33006CA-ND	2.07	15.84		
3	.400 (10.16)	.800 (20.32)	.100 (2.54)	.180 (4.57)	.0375 (.9530)		8 SuperSOT-8™ (Fairchild)	33008CA-ND	2.80	21.42		
4	.400 (10.16)	1.0 (25.4)	.100 (2.54)	.200 (5.08)	.0197 (.500)		10 Micromax-10 (Maxim)	33010CA-ND	3.22	24.66		
5	.400 (10.16)	.500 (12.7)	.100 (2.54)	.165 (4.19)	.0660 (1.50)		5 SOT-89-5	33105CA-ND	1.81	13.86		
6	.400 (10.16)	.800 (20.32)	.100 (2.54)	.200 (5.08)	.0256 (6.50)		8 MSOP-8, TSSOP-8, Micromax-8 (Maxim), Micro-8 (Int'l Rect.), Mini SO-8 (Burr-Brown)	33108CA-ND	2.80	21.42		
7	.800 (20.32)	.600 (15.24)	.100 (2.54)	.625 (15.87)	.100 (2.54)		6 TO-263AB, 3-Lead D-Pkg	33113CA-ND*	2.84	21.78		
8	.800 (20.32)	.500 (12.70)	.100 (2.54)	.625 (15.87)	.067 (1.70)		5-Lead DD Pkg., Surface Mount Device	33115CA-ND	2.37	18.18		
9	.800 (20.32)	.700 (17.78)	.100 (2.54)	.625 (15.87)	.050 (1.27)		7-Lead DD Pkg., Surface Mount Device	33117CA-ND	3.22	24.66		
10	.400 (10.16)	.400 (10.16)	.100 (2.54)	.100 (2.54)	.078 (1.99)		4 SOT-143, Surface Mount Device	33143CA-ND	1.53	11.70		
11	.400 (10.16)	.500 (12.7)	.100 (2.54)	.110 (2.79)	.0375 (.953)		5 SOT-23-5, SC59-5, Burr-Brown Pkg. 331, Tnylogic™ (Fairchild), Microgate (Texas Inst.)	33205CA-ND	1.86	14.22		
12	.400 (10.16)	.600 (15.24)	.100 (2.54)	.110 (2.79)	.0375 (.953)		6 SOT-23-6, SOT-23-L, SC59-6, TSSOP-6, SuperSot-6™ (Fairchild), Micro-6™ (Int'l Rect.)	33206CA-ND	2.07	15.84		
13	.400 (10.16)	.800 (20.32)	.100 (2.54)	.300 (7.62)	.025 (.650)		8 SSOP-8	33208CA-ND	2.80	21.42		
14	1.125 (28.57)	.850 (21.59)	.100 (2.54)	.625 (15.87)	.100 (2.54)		3 TO-263AB, 3-Lead D-Pkg.	33213CA-ND*	3.45	26.46		
15	.500 (12.70)	.300 (7.62)	.100 (2.54)	.275 (6.98)	.090 (2.28)		3 SOT-223, Surface Mount Device	33223CA-ND	1.27	9.72		
16	.400 (10.16)	.400 (10.16)	.100 (2.54)	.080 (2.03)	.051 (1.3)		4 SOT-343	33343CA-ND	1.53	11.70		
17	.500 (12.70)	.600 (15.24)	.100 (2.54)	.275 (6.98)	.090 (2.28)		6 SOT-223	33623CA-ND*	2.30	17.64		

* Higher Current Applications † Not exact device/pad match





Slit-N-Wrap Tools & Wire

No Pre-cutting or Pre-stripping. Fast, reliable, spool fed wire. Slits and opens insulation exposing bare wire before wire is wrapped on post, forming actual wire wrapped gas tight joint as tool is rotated.

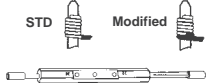


Description	Digi-Key Part No.	Price Each
Manual Slit-N-Wrap Tool(#28), includes bit, 50' (15.24m) roll of green wire Replacement Wirewrap Bit #28	V1081-ND	140.03
	V1083-ND	52.76
Manual Slit-N-Wrap Tool(#30), includes bit, 200' (60.96m) roll of blue wire Replacement Wirewrap Bit #30	V1082-ND	130.78
	V1084-ND	48.26
150' (45.72m) 28 AWG Tefzel Wire Green	V1085-ND	16.64
150' (45.72m) 28 AWG Tefzel Wire Red	V1086-ND	16.64
150' (45.72m) 28 AWG Tefzel Wire Blue	V1087-ND	16.42
150' (45.72m) 28 AWG Tefzel Wire White	V1088-ND	16.42
150' (45.72m) 28 AWG Tefzel Wire Yellow	V1089-ND	16.42
200' (60.96m) 30 AWG Tefzel Wire White	V1090-ND	20.38
200' (60.96m) 30 AWG Tefzel Wire Blue	V1091-ND	18.72
200' (60.96m) 30 AWG Tefzel Wire Orange	V1092-ND	19.86
200' (60.96m) 30 AWG Tefzel Wire Yellow	V1093-ND	20.11



Hobby Wrap Hand Tools

Wire-wrapping, stripping, unwrapping tool for AWG 30 on .025" (0.63mm) Square Post



K104-ND	Regular Wrap	\$21.00
K105-ND	Modified Wrap	\$22.00

Precision Hand Wrapping and Unwrapping Tools

K463-ND	Combination Hand Wrap-Unwrap Tool, 30AWG	\$84.50
K464-ND	Combination Hand Wrap-Unwrap Tool, 22-24AWG	\$41.54
K465-ND	Hand Unwrap Tool, 20-26AWG	\$22.25
K330-ND	Universal Wire Unwrap Hand Tool 24-32 AWG	\$13.50

Hobby Wrap Battery Tool

For .025" (0.63mm) sq. post "MODIFIED" wrap, positive indexing, anti-overwrapping device.

USE "C" SIZE NICAD BATTERIES. BATTERIES & BIT NOT INCLUDED.

Description	Digi-Key Part No.	Price Each
Battery Wrap Tool (BW2630)	K106-ND	85.00
Bit For AWG 30	K102-ND	22.00

Wire Wrap Wire

30-AWG. Pre-Cut/Pre-Stripped — 50 Wires/Pkg. 1" (2.54cm) Stripped Ends

Description	Digi-Key Part No.	Price Each
Blue Wire, 3" (7.62cm) Overall Length	B3-ND	4.19
Yellow Wire, 3" (7.62cm) Overall Length	Y3-ND	4.19
White Wire, 3" (7.62cm) Overall Length	W3-ND	4.19
Red Wire, 3" (7.62cm) Overall Length	R3-ND	4.19
Blue Wire, 4" (10.16cm) Overall Length	B4-ND	4.62
Yellow Wire, 4" (10.16cm) Overall Length	Y4-ND	4.62
White Wire, 4" (10.16cm) Overall Length	W4-ND	4.62
Red Wire, 4" (10.16cm) Overall Length	R4-ND	4.62
Blue Wire, 5" (12.70cm) Overall Length	B5-ND	4.97
Yellow Wire, 5" (12.70cm) Overall Length	Y5-ND	4.97
White Wire, 5" (12.70cm) Overall Length	W5-ND	4.97
Red Wire, 5" (12.70cm) Overall Length	R5-ND	4.97
Blue Wire, 6" (15.24cm) Overall Length	B6-ND	4.44
Yellow Wire, 6" (15.24cm) Overall Length	Y6-ND	4.44
White Wire, 6" (15.24cm) Overall Length	W6-ND	4.44
Red Wire, 6" (15.24cm) Overall Length	R6-ND	4.44
Blue Wire, 7" (17.78cm) Overall Length	B7-ND	5.68
Yellow Wire, 7" (17.78cm) Overall Length	Y7-ND	5.68
White Wire, 7" (17.78cm) Overall Length	W7-ND	5.68
Red Wire, 7" (17.78cm) Overall Length	R7-ND	5.68
Blue Wire, 8" (20.32cm) Overall Length	B8-ND	5.03
Yellow Wire, 8" (20.32cm) Overall Length	Y8-ND	5.03
White Wire, 8" (20.32cm) Overall Length	W8-ND	5.03
Red Wire, 8" (20.32cm) Overall Length	R8-ND	5.03

Digi-Key® Pre-Cut / Pre-Stripped Wire Assortment Kits

Wire Assortment No. WK1-ND 600 pre-cut/pre-stripped No. 3 wire wrap wire. Assortment contains 1 each of the following parts described above: R3-ND, W3-ND, Y3-ND, R3-ND, B4-ND, Y4-ND, W4-ND, R4-ND, B5-ND, Y5-ND, W5-ND, R5-ND, B6-ND, Y6-ND, W6-ND, R6-ND, B7-ND, Y7-ND, W7-ND, R7-ND, B8-ND, Y8-ND, W8-ND.

WK1-ND \$32.57

Wire Assortment No. WK2-ND 1200 pre-cut/pre-stripped No. 30 wire wrap wire. Assortment contains 1 each of the following parts described above: B3-ND, Y3-ND, W3-ND, R3-ND, B4-ND, Y4-ND, W4-ND, R4-ND, B5-ND, Y5-ND, W5-ND, R5-ND, B6-ND, Y6-ND, W6-ND, R6-ND, B7-ND, Y7-ND, W7-ND, R7-ND, B8-ND, Y8-ND, W8-ND, and R8-ND.

WK2-ND \$65.12



Wire Wrap Gun & Bits

OK-20 WW Gun: The OK-20's ergonomic design has features such as two-finger trigger control, lightweight ABS housing and extended handle to reduce operator fatigue. The high torque gear drive and high speed will wrap 18-30 AWG wire. The ideal tool for prototyping up thru high volume applications. Available in 115V or 230V versions. Backforce version prevents overwrapping.

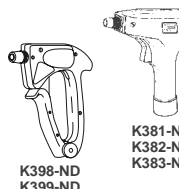


Cut/Strip/Wrap Bit: Make connections directly from cable, wire harness or reel. Cuts off excess wire, strips insulation and wraps correct number of turns automatically.

Description	Digi-Key Part No.	Price Each
Wire Wrap Gun 115V Ergonomic handle	K319-ND	205.00
Wire Wrap Gun 115V w/ Backforce	K378-ND	215.00
Wire Wrap-Unwrap Gun 115V	K379-ND	220.00
Wire Wrap Gun 230V Ergonomic Handle	K380-ND	225.00
Wire Wrap Bit 30 AWG	K320-ND	39.75
Wire Wrap Bit 28 AWG	K321-ND	41.12
Wire Wrap Sleeve for 28 & 30 AWG Bit	K322-ND	24.50
Wire Wrap Bit 26 AWG	K323-ND	41.12
Wire Wrap Sleeve for 26 AWG Bit	K324-ND	24.50
Wire Wrap Wire 30 AWG 100' (30.48m) Blue	K325-ND	9.17
Wire Wrap Wire 30 AWG 100' (30.48m) Black	K394-ND	9.17
Wire Wrap Wire 30 AWG 100' (30.48m) Red	K395-ND	9.17
Wire Wrap Wire 30 AWG 100' (30.48m) Yellow	K396-ND	9.17
Wire Wrap Wire 30 AWG 100' (30.48m) White	K397-ND	9.17
Wire Wrap Wire 28 AWG 100' (30.48m) Blue	K326-ND	10.35
Wire Wrap Wire 28 AWG 100' (30.48m) Black	K390-ND	10.35
Wire Wrap Wire 28 AWG 100' (30.48m) Red	K391-ND	10.35
Wire Wrap Wire 28 AWG 100' (30.48m) Yellow	K392-ND	10.35
Wire Wrap Wire 28 AWG 100' (30.48m) White	K393-ND	10.35
Wire Wrap Wire 26 AWG 100' (30.48m) Blue	K327-ND	11.83
Wire Wrap Wire 26 AWG 100' (30.48m) Black	K386-ND	11.83
Wire Wrap Wire 26 AWG 100' (30.48m) Red	K387-ND	11.83
Wire Wrap Wire 26 AWG 100' (30.48m) Yellow	K388-ND	11.83
Wire Wrap Wire 26 AWG 100' (30.48m) White	K389-ND	11.83
Cut/Strip/Wrap Bit 30 AWG (Modified wrap) (for use with K319-ND WW Gun Only)	K328-ND	235.47
Kynar Wire Blue 30 AWG for Cut/Strip/Wrap Bit	K329-ND	11.83
Kynar Wire White 30 AWG for Cut/Strip/Wrap Bit	K443-ND	11.83
Kynar Wire Red 30 AWG for Cut/Strip/Wrap Bit	K444-ND	11.83
Kynar Wire Black 30 AWG for Cut/Strip/Wrap Bit	K445-ND	11.83
Power Unwrap Bit/Sleeve for 20-26 AWG	K384-ND	45.00
Power Unwrap Bit/Sleeve for 26-32 AWG	K385-ND	45.00

Battery Powered and Manual Wire Wrap Tools

Model BW-520 is a heavy duty battery operated wire wrapping tool, also available in a reversible model, for wrapping and unwrapping operations.



Useful for field service work as well as small production job's.

Available with backforce to prevent overwrapping.

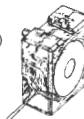
Batteries Included.

Uses bits and sleeves above.

Description	Digi-Key Part No.	Price Each
Heavy Duty Battery Wrap Gun (includes batteries)	K381-ND	205.00
Battery Wrap/Unwrap Gun (includes batteries)	K382-ND	215.00
Battery Wrap Gun w/ Backforce (includes batteries)	K383-ND	215.00
Manual Wrap Tool Hexan for use w/ bits and sleeves above	K398-ND	93.50
Manual Wrap Tool Aluminum for use w/ bits and sleeves above	K399-ND	129.00

Tri-Color Dispenser

- 3 Rolls of Wire in one dispenser
- 3 Colors: Blue, White, Red; 50 feet (15.24 meters) of each color
- AWG 30 (0.25 mm) KYNAR insulated Wire.
- Built-In Plunger cuts wire to desired length.
- Built-In Stripper strips 1" (25.40mm) of insulation.
- Refillable (for refills, see below).



Description	Digi-Key Part No.	Price Each
Tri-Color Dispenser	K227-ND	19.75
Replacement Rolls	K228-ND	14.95



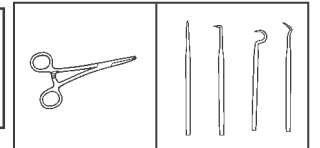
Single Wire Dispenser

- With 50 Ft. (15.24 meter) roll of AWG 30 KYNAR wire-wrapping wire.
- Built-in Plunger cuts wire to desired length.
- Built-In Stripper strips 1" (2.54cm) of insulation.
- Refillable (for refills, see below).

Description	Digi-Key Part No.	Price Each
Blue Wire	K223-ND	11.75
Yellow Wire	K224-ND	11.75
White Wire	K225-ND	11.75
Red Wire	K226-ND	11.75
<i>Dispenser Replacement Rolls</i>		
30-AWG Blue 50 Ft. (15.24 meter) Roll	K229-ND	7.50
30-AWG Yellow 50 Ft. (15.24 meter) Roll	K230-ND	7.50

Surface Mount - Prototype Tools

	Fine Flush Cutter suitable for up to a maximum of 20 AWG copper wire. Size: 4.5" (11.43cm) K403-ND \$21.95
	50° Angle Flush Cutter enabling access in most difficult areas. Size: 4.5" (11.43cm) K404-ND \$21.95
	Reversed Cutting Tool a finely machined tool ideal for cutting the leads of flat pack components on SMT Boards. Size: 4.5" (11.43cm) K405-ND \$27.95
	30° Angle Head Cutter with small profile cutting jaws, providing good access to component leads and wires. Size: 4.5" (11.43cm) K406-ND \$25.95
	Micro Nose Plier with finely ground jaws, ideal for handling small components. K407-ND \$21.95
	Fine Round Nose Plier with 45° angle jaws, enabling easy reach into difficult work areas. Size: 4.5" (11.43cm) K408-ND \$25.95



5 1/2" (13.97cm) Straight-Tip Hemoclamp/Hemostat

Professional grade hemo made of 410 A.I.S.I. stain-less steel. Hand finished and polished. Hand serrated for extra gripping power. Has 3, not 2 locking positions.

ATM01-ND \$4.95

Curved-Tip Hemoclamp/Hemostat

Professional grade hemo made of 410 A.I.S.I. stainless steel. Hand finished and polished. Hand serrated for extra gripping power. Has 3, not 2 locking positions.

ATM02-ND \$4.95

4-Piece Probe Set

Forged from 420 A.I.S.I. stainless steel. Set includes four probes and a plastic (vinyl) pouch.

ATM03-ND \$7.88

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

Xcelite® Cordless Rechargeable Screwdriver Kit

Kit contains: Driver • Battery • Charger • 99PA adapter • 1 slotted, 2 Phillips bits

Features: • 3.6V power • 2 speeds • 1 hour full recharge • 8 stage torque adjustable • Easily converts from in-line to pistol form • Replaceable battery pack • 99PA adapter enables use with all Xcelite Series 99 blades

XP1-ND \$112.20
XP1B-ND Replacement Battery \$24.23



Xcelite® COPALLOY® Electronic Pliers

All Copaloy® pliers are furnished with coil spring and ESD safe cushioned grip handles.

The copper alloy rivet distinguishes the Copaloy® line of miniature electronic pliers. Like a precision bearing, Copaloy® eliminates steel-against-steel friction in a permanent, corrosion-proof joint that will wear longer and smoother ... and maintain perfect alignment of tips and cutting edges. Each plier is manufactured from extreme toughness and rigidity. Cutting edges are electronically hardened. Machining is to close tolerances, with individual finishing and testing for exact fit of jaws. All have polished heads with gun metal handles.

Full Flushed Relieved Tapered Cutter



Diagonal flush cutter, ground down on back side for reaching into confined places. Size: 4" (102.00mm).

MS54-3-ND \$18.80

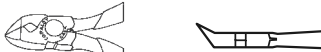
Semi-Flush Diagonal Cutter



Diagonal cutter with flush ground cutting edges. Size: 4". (102.00mm).

MS54-ND \$16.52

Angled Flush Cutter



Cutting blade is flush ground and angled at 29°. Cutting plier is designed to give long wear for cutting soft wire. Size: 4" (102.00mm).

GA54-ND \$29.54

Long Nose Pliers



Miniature very fine point for delicate work in very confined areas. Has scored jaws. Size: 4" (102.00mm).

L4-ND \$16.46

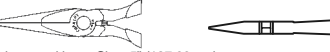
Curved Long Nose Pliers



For reaching into confined places. Nose bent approximately 60°. Smooth jaws. Size: 5" (127.00mm).

CN54-ND \$20.32

Long Nose Pliers



Has finely scored jaws. Size: 5" (127.00mm).

COO-LN54-ND \$18.08

Needle Nose Pliers



Has scoring on jaws. Size: 5" (127.00mm).

NN54-2-ND \$21.42

Duck Bill Pliers



Flat nose duck bill pliers with smooth jaws. Size: 5" (127.00mm).

DN54-G-ND \$16.52

Long Nose Side Cutter



Similar to long nose pliers but with 7/32" (5.56mm) cutter near joint. Size: 5" (127.00mm).

SN54-ND \$20.32

Xcelite® 4-in-1 Screwdriver



4 bits in one compact tool. Changes in seconds: pull out, reverse, snap back, 2 Phillips bits and 2 slotted bits are always ready. Alloy steel, heat treated for maximum strength, precision ground and polished. Large, 6-spline, easy-to-grip red Tenite handle.

FSD-1V-ND \$12.48

Round Blade Screwdriver Set

Description	Digi-Key Part No.	Price Each	Xcelite Part No.
5 Round Blade Screwdrivers For Slotted Screws, Packed In Pouch	SDR-11-ND	20.63	SDR-11

99PS-50 Screwdriver & Nutdriver Set - Inch Sizes

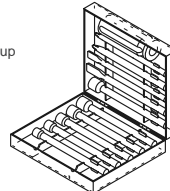
13-Piece Set with see through stand-up plastic case.

INCLUDES:

Regular Nutdrivers: 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8".

Slotted Screwdriver: 3/16", 1/4".

Phillips Screwdriver: No. 1, No. 2. Extension. Regular Handle.



Description	Digi-Key Part No.	Price Each	Xcelite Part No.
Screwdriver and Nutdriver Set - Inch Sizes	99PS50-ND	47.96	99PS-50

Screwdrivers

5 Piece Set Includes:

all Phillips, Point #0, 1, 2, 3 & Short #2, Packed in Pouch

6 Piece Set Includes:

4 Round Blade for Slotted Screws & 2 Phillips Types, Slotted: 1/8", 3/16", 1/4", & 5/16", Phillips: 1 & 2 Pt. Size, Packed In Pouch

Description	Digi-Key Part No.	Price Each	Xcelite Part No.
5 Piece Screwdriver Set	SDX-22-ND	22.44	SDX-22
6 Piece Screwdriver Set	SRX-33-ND	27.98	SRX-33

Precision Electronic Screwdriver Set

- Chrome-molybdenum vanadium steel blades.
- Fast-turning swivel caps with cavity for precise centering.
- Precision tolerance black tips.
- No-roll handle design.

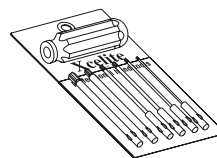
XP400-ND Includes: 1.5mm x 50mm Slotted Screwdriver, 2.5mm x 75mm Slotted Screwdriver, 3.0mm x 100mm Slotted Screwdriver, #0 Point Size Phillips Screwdriver.

XP700-ND Includes: 1.5" x 50mm Slotted Screwdriver, 2.0" x 65mm Slotted Screwdriver, 2.5" x 75mm Slotted Screwdriver, 3.0" x 100mm Slotted Screwdriver, #00 Point Size Phillips Screwdriver, #0 Point Size Phillips Screwdriver, #1 Point Size Phillips Screwdriver.

Description	Digi-Key Part No.	Price Each	Xcelite Part No.
4 Piece Screwdriver Set	XP400-ND	13.59	XP400
7 Piece Screwdriver Set	XP700-ND	24.50	XP700



99-XTD7 Torx® Screwdriver Blade Kit



• Interchangeable blades

• Contains 6 blades (#10, 15, 20, 25, 27, 30), 4" (102.00mm) long and regular 99-1 handle

• 4" (102.00mm) approximate working length

Description	Digi-Key Part No.	Price Each	Xcelite Part No.
Torx Screwdriver Blade Kit - 7 PC	99-XTD7-ND	26.43	99-XTD7

EREM® Tweezers

Straight Tapered Tip Tweezers



EROP 4.5" (114.30mm). Straight, round, tapered tip tweezers. Provide larger, flat gripping surface for handling a variety of small components.

EROP2A-SA-ND \$7.34

Straight Precision Tip Tweezers



EROP 4.25" (107.95mm). Straight Point Tweezers. For general use.

EROP3C-SA-ND \$7.40

Curved Precision Tip Tweezers



EROP 4.5" (114.30mm). Curved precision tip tweezers improve visibility when used under magnification.

EROP7-SA-ND \$7.40

Straight Fine Tip Tweezers



EROP 5" (127.00mm). General use straight point tweezers with hardened tips.

EROPAA-SA-ND \$7.34

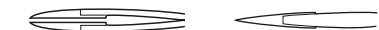
Angled Cutting Tip Tweezers



EREM 4.5" (114.30mm). Angled cutting tweezers. Tempered carbon steel, hard but low rust resistance.

15A-GW-ND \$50.58

Straight Soft Carbon Tip Tweezers



EREM 5" (127.00mm). 304/305 stainless steel. Soft carbon tipped handling tweezers. Soft tips minimize scratching or nicking of fragile wires and parts. Temperature range is 250° to 300°F (121° to 149°C). Nonmagnetic and noncorrosive. Resistant to hydrochloric and nitric acids.

249-SA-ND \$52.84

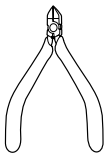
"N" Series Diagonal Cutters

EREM - Magic Springs

- Superior to Leaf Springs
- Invisible, internal EREM-Magic springs provide uniform, constant tension and ultimate performance
- Linear closing and opening force
- Guaranteed for over 1 million openings

High Precision Inter-Lock Screw Joint System

- Surfaces between the two halves are machine faced to provide smooth, wobble free operation with no blade overlap
- Tested for over 1 million operations

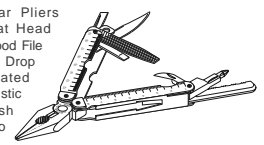


Description	Digi-Key Part No.	Price Each	EREM Part No.
4" (101.60mm) Diagonal Cutter, Oval, Semi-Flush	612N-ND	46.68	612N
4" (101.60mm) Diagonal Cutter, Oval, Full-Flush	622N-ND	48.41	622N
5" (127.00mm) Diagonal Cutter, Oval, Semi-Flush	512N-ND	49.35	512N
5" (127.00mm) Diagonal Cutter, Oval, Full-Flush	522N-ND	51.57	522N

Crescent® ToolZall Pro Multi-Purpose Tool

Tools included in the ToolZall Pro:

- Needle-Nose/Regular Pliers
- Wire Cutter
- 2 Flat Head Screwdrivers
- Metal/Wood File
- Phillips Screwdriver
- Drop Point Blade
- Serrated Sheepfoot Blade
- Ballistic Sheath
- Metric/English Ruler (measures up to 8"/20cm)
- Lanyard Ring
- Can/Bottle Opener. Comes with its own carrying sheath.



TZ2-ND \$51.71

1-800-344-4539

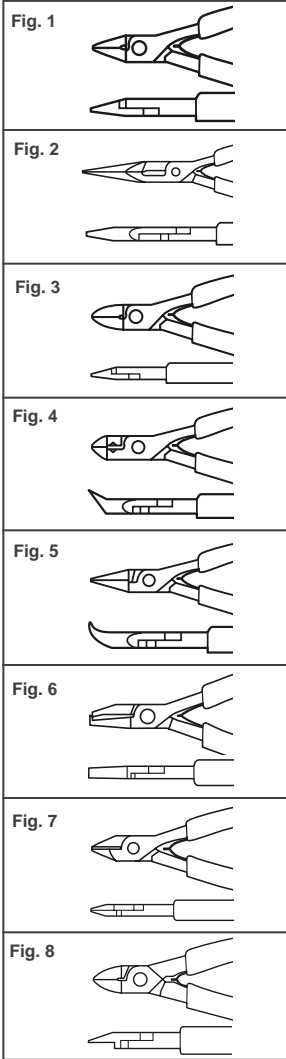
218-681-6674 • FAX: 218-681-3380 • www.digikey.com



Swanstrom Tools USA

Cutters and Pliers

Standard or Ergonomic Handles



Spartan Standard:

• High carbon, alloy forged American steel—for long tool life. • Alloy steel rivets—for smooth action. • Machined and lapped joints—for better jaw alignment. • Polished finish—for cleanliness and rust prevention. • Double stainless steel leaf spring—for quick action. • Soft touch static dissipative foam grips—to minimize ESD & CTS.



Fig. No.	Description	Digi-Key Part No.	Price Each	Mfg. Part. #
<i>Cutter Tapered</i>				
1	Flush Standard. Size: 4" (101.60mm)	10312-ND	23.00	415
1	Flush Standard. Size: 5" (127.00mm)	10318-ND	25.00	515
<i>Long Nose Serrated Shear Cut</i>				
2	Standard. Size: 6" (152.40mm)	10314-ND	29.00	351
<i>Long Slim Nose Smooth Jaw</i>				
2	Standard. Size: 5" (127.00mm)	10319-ND	21.00	324
<i>Long Slim Nose Serrated Jaw</i>				
2	Standard. Size: 5" (127.00mm)	10315-ND	21.00	325
2	Standard. HD. Size: 6" (152.40mm)	11029-ND	23.00	631
<i>Cutter Oval</i>				
3	Flush Standard. Size: 4" (101.60mm)	10311-ND	23.00	411
3	Flush Standard. Size: 5" (127.00mm)	10317-ND	26.00	511
3	Flush Standard. Size: 6" (152.40mm)	11028-ND	27.00	611
<i>Angle End Nipper</i>				
4	Standard. Size: 4" (101.60mm) Flush	10313-ND	33.00	491
<i>Curved Needle Nose</i>				
5	Smooth Standard. Size: 5" (127.00mm)	10316-ND	27.00	240

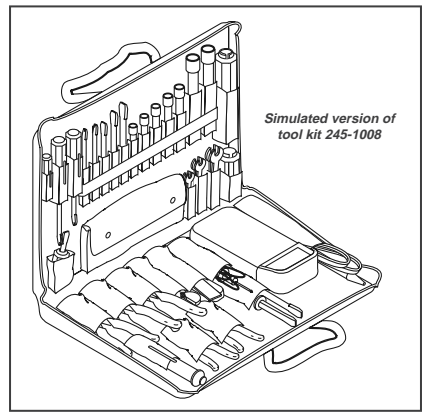
Super Ergonomic:

• Swedish American high chromium, alloy forged steel—for maximum tool life. • Electronic induction hardening—for maximum cutter life. • Hard alloy self-lubricating bearings—for perfect jaw alignment. • Precision machined and lapped joints—for perfect jaw alignment. • Beautiful black anti-glare finish—to minimize visual fatigue. • Soft touch double stainless steel leaf springs—for smooth minimum effort. • Soft touch static dissipative foam grips—to minimize ESD & CTS.



Fig. No.	Description	Digi-Key Part No.	Price Each	Mfg. Part. #
<i>Cutter Tapered</i>				
1	Flush Ergonomic. Size: 4" (101.60mm)	10303-ND	49.00	S415E
1	Flush Ergonomic. Size: 5" (127.00mm)	10309-ND	49.00	S515E
<i>Long Nose Serrated Shear Cut</i>				
2	Ergonomic. Size: 6" (152.40mm)	10305-ND	40.00	S351E
<i>Long Slim Nose Smooth Jaw</i>				
2	Ergonomic. Size: 5" (127.00mm)	10306-ND	29.00	S324E
<i>Long Slim Nose Serrated Jaw</i>				
2	Micro. Needle Nose. Size: 4" (101.60mm)	11031-ND	24.00	S109
2	Ergonomic. Size: 5" (127.00mm)	10310-ND	29.00	S325E
<i>Cutter Oval</i>				
3	Flush Ergonomic. Size: 4" (101.60mm)	10302-ND	49.00	S411E
3	Flush Ergonomic. Size: 5" (127.00mm)	10308-ND	49.00	S511E
<i>Angle End Nipper</i>				
4	Ergonomic. Size: 4" (101.60mm) Flush	10304-ND	53.00	S491E
<i>Curved Needle Nose</i>				
5	Smooth Ergonomic. Size: 5" (127.00mm)	10307-ND	34.00	S240E
5	Smooth. Size: 5" (127.00mm)	11030-ND	31.00	S340
<i>Crimp & Bend Cutter</i>				
6	Anti-shock shear cut. .040" (1.02mm)	11032-ND	50.00	S205B
<i>Short Nose Cutter</i>				
7	Taper shear. Size: 5" (127.00mm)	11033-ND	38.00	SC15E
<i>Oval Short Nose Cutter</i>				
8	Slim, FF, w/stop for cir. boards. 6" (152.40mm)	11034-ND	46.00	S63E

Tools Kits



Simulated version of tool kit 245-1008

Beginners Electronic Tool Kit

10 hand tools, cutters, screwdrivers and flashlight all in a blue canvas zipper case. 9" x 7.5" x 2" (228.60mm x 190.50mm x 50.80mm)

- 245-1001-ND (Basic Kit) \$80.00
- 245-1011-ND (With Soldering Iron*) \$99.00
- 245-1006-ND (With Soldering Iron* and Multimeter) \$199.00

Basic Technicians Tool Kit

Includes all necessary tools for soldering, desoldering and making typical adjustments. Tools included are alignment tools, nutdrivers, screwdrivers, cutters and pliers in a canvas case. 12.5" x 10.5" x 2" (317.50mm x 266.70mm x 50.80mm)

- 245-1002-ND (Basic Kit) \$175.00
- 245-1012-ND (With Soldering Iron*) \$199.00
- 245-1007-ND (With Soldering Iron* and Multimeter) \$299.00

Customer Service Tool Kit

A canvas, double-sided zipper tool kit. Tools and equipment on one side, opposite side has document pouch 9" x 11" (228.60mm x 279.40mm) and various size smaller pockets. Tools include pliers, screwdrivers, cutters, nutdrivers, flashlight and ESD wrist strap (41 items in all). 18" x 11" x 5" (457.20mm x 279.40mm x 127.00mm)

- 245-1003-ND (Basic Kit) \$365.00
- 245-1013-ND (With Soldering Iron*) \$399.00
- 245-1008-ND (With Soldering Iron* and Multimeter) \$499.00

Complete Service Technicians Tool Kit

71 tools in an ABS injected molded case. Tools included are slot and phillips screwdrivers, wire strippers, crimp tool, flashlight, allen hex sets, adjustable wrenches, punches, hammer, pliers, cutters, scissors and knife. All tools have manufacturers lifetime warranty. 17.5" x 12.5" x 6" (444.50mm x 317.50mm x 152.40mm)

- 245-1004-ND (Basic Kit) \$575.00
- 245-1014-ND (With Soldering Iron*) \$599.00
- 245-1009-ND (With Soldering Iron* and Multimeter) \$699.00

Deluxe Technicians Tool Kit

Heavy duty polyethylene wing case with foam inserts. Kit contains both metric and standard size nutdrivers, combination wrenches, torque drivers, cutters, pliers, punches and screwdrivers. 79 tools in all with lifetime manufacturers warranty. 19" x 15" x 9" (482.60mm x 381.00mm x 228.60mm)

- 245-1005-ND (Basic Kit) \$775.00
- 245-1015-ND (With Soldering Iron*) \$799.00
- 245-1010-ND (With Soldering Iron* and Multimeter) \$899.00

For complete tool listing for each kit, call 1-800-DIGI-KEY



* Soldering Iron (WP25-ND)

• Fixed temperature unit • Ideal for a wide variety of electronic tasks. • Interchangeable heater elements - Single handle plus three different heating elements gives the user a trio of irons for different jobs. • Quick change knurled collar makes changing heater simple. • Lightweight handle with cushioned grip. • For additional safety, iron come with 3-wire power cord. • Irons use ST series iron plated tips for long life and greater soldering efficiency. • Important: Use only Weller tips. • ST series tips. • UL Listed.

BK PRECISION +Multimeter (BK388A)

High quality, ruggedized, multi-function DMM's in a drop resistant case. Resistance and frequency measurement. Diode check. Auto power off. All current ranges fused. Power Requirements: Single 9V battery. Digi-Key Part No P104-ND. Dimensions: 7.5" x 3.4" x 1.5" (190.50mm x 86.36mm x 38.10mm). Accessories Supplied: 9 Volt Battery, Test Leads, Instruction Manual, Rubber Boot. Three year warranty.

3-3/4" (95.25mm) Digit .6" (15.24mm) LCD Display. 41 ranges. DC and AC current. Drop resistant to 4 feet (1.22 meters). 0.5% DCV accuracy. Resistance: 0.1Ω to 4MΩΩ. Frequency: 1Hz to 4MHz. Capacitance: to 40μF. Logic level measure (TTL). Transistor gain (hFE) and peak hold.

AVEN Ceramic Tuning Tools, Tweezers, Knives and Blades

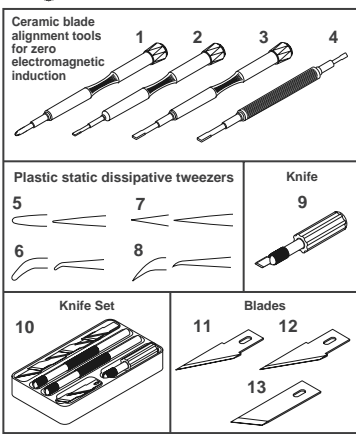


Fig.	Description	Digi-Key Part No.	Price Each
1	1.7 mm Phillips Blade	243-1011-ND	8.69
2	1.3 mm Flat Blade	243-1012-ND	8.69
3	2.6 mm Flat Blade	243-1013-ND	8.69
4	4 in 1 Reversible, (#0 & #1 Phillips, .9 mm & 1.8 mm Flat Blade)	243-1014-ND	28.97
5	Straight, Flat, Rounded Tips	243-1001-ND	5.50
6	Curved, Rounded Tips	243-1002-ND	5.50
7	Very Fine, Straight Tips	243-1003-ND	5.50
8	Very Fine, Curved Tips	243-1004-ND	5.50
—	Utility Knife with Rubber Grip	243-1005-ND	2.95
9	Heavy Duty Utility Knife	243-1006-ND	2.70
10	3-Piece Knife Set (Light, Med. & Hvy. Duty, 10 Asst. Blades)	243-1010-ND	9.50
11	No. 2 Med. to Heavy Blade, 5 Pc.	243-1007-ND	1.55
12	No. 11 Precision Blade, Stainless Steel, 5 Pc.	243-1015-ND	1.55
13	No. 24 Deburring Blade, 5 Pc.	243-1009-ND	1.45

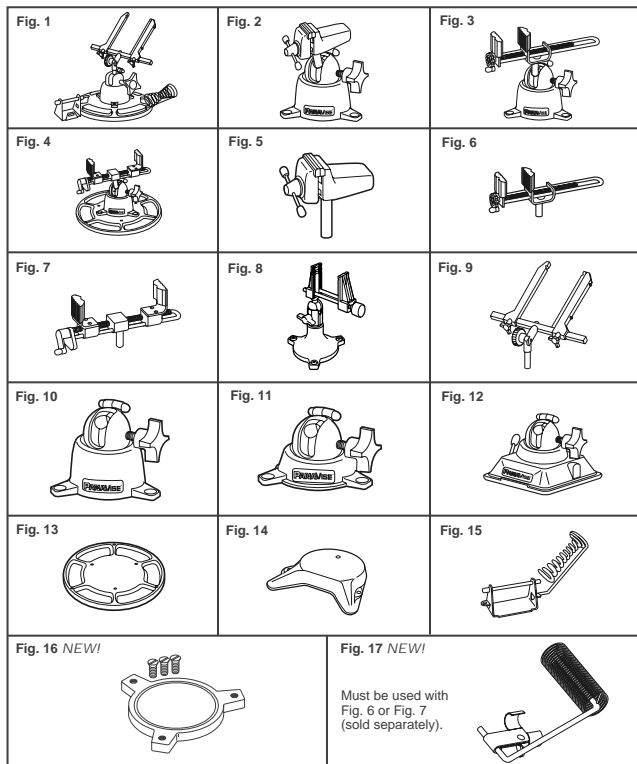


Fig.	Description	Digi-Key Part No.	Price Each
1	PanaVise Deluxe Electronic Work Center - Solder wire & soldering station not included.....	324PV-ND	76.99
2	Standard PanaVise Station (303 head/300 base).....	301PV-ND	42.99
3	Wide Opening PanaVise Station (366 head/300 base).....	396PV-ND	45.99
4	Wide Opening-Self Centering PanaVise Work Station (376 head/300 base/312 tray base mount).....	350PV-ND	74.99
5	Standard Head - 2 1/2" (63.50mm) wide, opens to 2 1/4" (57.15mm).....	303PV-ND	23.99
6	Wide Opening Head - 1 3/4" (44.45mm) wide, opens to 6" (152.40mm).....	366PV-ND	30.99
7	Wide Opening-Self Centering Head - 1 3/4" (44.45mm) wide, opens to 6" (152.40mm).....	376PV-ND	41.99
8	PanaVise Junior Universal Vise.....	201PV-ND	21.95
9	Circuit-Board Holder - 6" (152.40mm) arms, extends to 12" (304.80mm) wide.....	315SPV-ND	29.99
10	Standard Base 3 3/4" (95.25mm) high.....	300PV-ND	19.99
11	Low-Profile Base - Only 2 1/2" (63.50mm) high.....	305PV-ND	19.99
12	Vacuum Base.....	380PV-ND	31.99
13	Tray Base Mount - 8 1/2" (215.90mm) dia., base mount only.....	312PV-ND	19.99
14	Weighted Base Mount.....	308PV-ND	27.99
15	Solder Station - Solder iron holder, wire holder & 2 slit sponges, can be used for left or right hand use.....	371PV-ND	10.99
16	Magnetic Base - Adapts to 201, 300 & 305 bases.....	335PV-ND NEW!	17.40
17	Universal Wire Holder for 366 & 376 jaws.....	358PV-ND NEW!	21.33

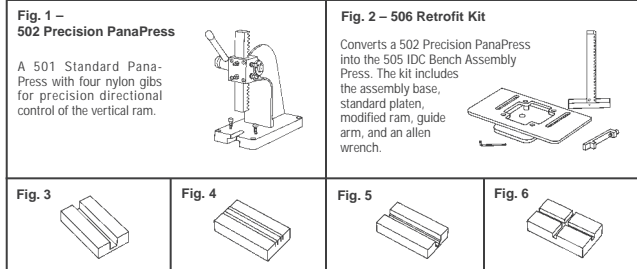


Fig.	Description	Digi-Key Part No.	Price Each
1	Hand Press Bench Mount.....	502PV-ND	109.99
2	Hand Press IDC Conversion Kit.....	506PV-ND	90.00
3	Standard IDC Card Edge Connector Base Plate.....	511PV-ND	26.99
4	Standard IDC Dip Plugs Base Plate.....	512PV-ND	26.99
5	Standard IDC D-Sub Connector Base Plate.....	513PV-ND*	26.99
6	Standard Female IDC Socket Base Plate.....	510PV-ND	26.99

* Do not use with CW Industries all plastic D-sub connectors.

EMI Shielding Bags - Moisture Vapor Barrier

This bag combines the properties of MOISTURE-VAPOR-BARRIER with EMI-RFI-ESD shielding. Manufactured from a Type 1 Class N652-260M film which is qualified to MIL-B-81705-C.



Size (inch cm)	Digi-Key Part No.	Pricing		Charleswater Part No.
		25	100	
5 x 8 (12.70 x 20.32)	10388-ND	6.79	17.85	13806
6 x 10 (15.24 x 25.40)	10389-ND	9.65	25.24	13808
8 x 10 (20.32 x 25.40)	10390-ND	12.19	31.98	13812
10 x 12 (25.40 x 30.48)	10391-ND	18.88	49.47	13816
12 x 16 (30.48 x 40.64)	10392-ND	28.93	75.84	13824
18 x 24 (45.72 x 60.96)	10393-ND	57.49	150.71	13832

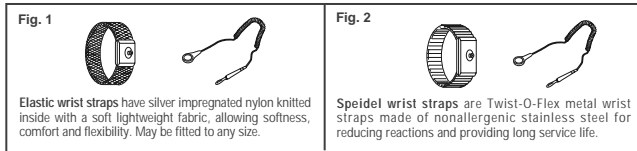
BenchTop Grounding Mats

ESD Grounding Mats for use along benchtops and shelving. These 24" (60.96cm) wide by 40" (12.2 meters) long bench mats are reversible single layer vinyl and can be easily cut to dimension — .100" (2.54mm) thick. Their durability and general purpose construction make them ideal for benchtops, shelving and floor mats.



Description	Digi-Key Part No.	Price Each	Charleswater Part No.
<i>24" x 40" (60.96cm x 12.2 M) ESD Bench Mat</i>			
Blue, Lightly Textured.....	16-1009-ND	338.98	16350
Grey, Lightly Textured.....	16-1010-ND	338.98	16352
Green, Lightly Textured.....	16-1011-ND	338.98	16353
Universal Snap Kit for Mats, 6 pc. (connects wrist strap to mat).....	16-1012-ND	2.03	14988

Adjustable Wrist Straps



Description	Digi-Key Part No.	Price Each	Charleswater Part No.
<i>Fig. 1 — Elastic Band Wrist Strap</i>			
With 6' (1.8M) Coiled Cord (blue).....	16-1003-ND	24.05	14810
With 10' (3.0M) Coiled Cord (blue).....	16-1004-ND	25.20	14830
Strap Only (no cord).....	16-1005-ND	9.45	14840
<i>Fig. 2 — Speidel Metal Band Wrist Strap</i>			
With 6' (1.8M) Coiled Cord (black).....	16-1006-ND	24.65	14905
With 10' (3.0M) Coiled Cord (black).....	16-1007-ND	25.38	14922
Strap Only (extra large, no cord).....	16-1008-ND	17.94	14955

Static Label for Packaging

Static Attention labels used for sealing Shielding Bags and marking ESD Containers. Color: Yellow/Black.



Description	Digi-Key Part No.	Price Each	Mfg. Part No.
2" x 2" (50.8mm x 50.8mm), 500 pcs	16-1001-ND	13.78	12910
4" x 4" (101.6mm x 101.6mm), 250 pcs	16-1002-ND	25.83	12914

Field Service Kits:

Field service kits provide a static safe workstation for the field technician during service calls. The wrist strap provides an effective and safe means of draining static charges from personnel. The grounded vinyl mat provides a static safe work surface.

Field Service Pocket Kit: • Multi-layer red vinyl .018" (.46mm) thick • Size: 15" x 20" (38.1cm x 50.8cm) with one pocket 4.5" x 5.25" (11.43cm x 13.34cm) • RTG = 10⁶ - 10⁷ ohms. This kit is designed to be folded to fit into a shirt or pants pocket. The kit includes one ground snap, adjustable wrist strap and common point ground cord.

ESD Awareness Guide - Booklet: An introduction to ESD. This booklet uses easy-to-understand language and drawings to describe the causes of static electricity and the importance of an ESD program. Ideal for training personnel who handle static sensitive components.

ESD Guidelines For Employees - Video: 12-minute training session which teaches employees and equipment operators the causes of static electricity and describes how to prevent static in their own work areas. An overview of various ESD control techniques and products available from Charleswater is provided.

Description	Digi-Key Part No.	Price Each	Charleswater Part No.
Field Service Kit Pocket Size	10387-ND	30.60	16590
ESD Awareness Guide - English	10398-ND	2.24	10140
ESD Guidelines Video	10399-ND	15.54	10120

Chemtronics ESD Hand Lotion

Non-contaminating hand lotion for electronics. Contains no silicon. Non-greasy formula with a fresh natural fragrance in an 8 oz. (.24 liter) pump. Minimizes potential for static damage and build-up. Won't affect the solderability of components or PCBs.



Digi-Key Part No.	1	25	100	500	Chemtronics Part No.
C805-ND	6.04	5.46	5.10	4.65	C805

3M Static Control Products

Reusable Transparent Static-Shielding Bags (2100 Series Metal-Out)

3M 2100R bags are produced with a proprietary "metal-out" construction in which the shielding layer is very near the exterior surface. A thin abrasion-resistant coating protects this metal surface from scratches, but still permits measurement of electrical continuity with common volt-ohm-meters for easy verification of shielding performance prior to reuse.



Economy Static-Shielding Bags (1900 Series Metal-In)

Use these more economical Static Shielding Bags for less demanding applications where reuse and high durability are not a prime consideration. The metal-in aluminum vapor coating is on a thinner 0.48 mil polyester as opposed to the 0.92 mil polyester in the 2100 series.

Economy ZipBag Static-Shielding Bags (1910 Series Metal-In)

The 1910 features a dual track closure for easy opening and closing.

Size Inch (cm)	Digi-Key Part No.	Pricing 25	100	3M Part No.
2100R Series Metal-Out Transparent Shielding Bags, 3 mil				
3 x 5 (7.62 x 12.70)	SCP193-ND	4.88	17.55	98079826065
4 x 6 (10.16 x 15.24)	SCP194-ND	6.36	22.88	98079826081
5 x 8 (12.70 x 20.32)	SCP195-ND	10.51	37.82	98079826123
6 x 10 (15.24 x 25.40)	SCP196-ND	12.16	43.76	98079826156
7 x 15 (17.78 x 38.10)	SCP200-ND	16.90	60.84	98079826164
8 x 10 (20.32 x 25.40)	SCP201-ND	13.36	48.08	98079826180
1900 Series Metal-In Transparent Shielding Bags, 3.1 mil				
3 x 5 (7.62 x 12.70)	SCP153-ND	2.29	8.24	98079821702
4 x 6 (10.16 x 15.24)	SCP154-ND	2.65	9.54	98079821728
4 x 24 (10.16 x 60.96)	SCP155-ND	7.17	25.79	98079821892
4 x 30 (10.16 x 76.20)	SCP156-ND	8.96	32.24	98079821942
5 x 8 (12.70 x 20.32)	SCP157-ND	3.76	13.52	98079821736
6 x 10 (15.24 x 25.40)	SCP158-ND	4.91	17.68	98079821769
8 x 10 (20.32 x 25.40)	SCP159-ND	6.05	21.78	98079821793
8 x 12 (20.32 x 30.48)	SCP160-ND	6.64	23.89	98079821801
10 x 14 (25.40 x 35.56)	SCP161-ND	9.47	34.07	98079821827
12 x 16 (30.48 x 40.64)	SCP162-ND	12.82	46.15	98079821843
1910 Series Metal-In Shielding ZipBags, 3.1 mil				
3 x 5 (7.62 x 12.70)	SCP165-ND	3.13	11.25	98079821967
4 x 6 (10.16 x 15.24)	SCP166-ND	3.62	13.01	98079821983
5 x 8 (12.70 x 20.32)	SCP167-ND	5.13	18.45	98079821991
6 x 10 (15.24 x 25.40)	SCP168-ND	6.71	24.14	98079822015
8 x 10 (20.32 x 25.40)	SCP169-ND	8.26	29.74	98079822031
10 x 12 (25.40 x 30.48)	SCP170-ND	11.14	40.09	98079822056
12 x 16 (30.48 x 40.64)	SCP171-ND	17.36	62.48	98079822098

Labels

Fig. 1



Fig. 2



Fig.	Digi-Key Part No.	Size Inch (mm)	Quantities (per roll)
1	SCP129-ND	1.75 x 2.5 (44.45 x 63.5)	500
1	SCP128-ND	1.75 x 2.5 (44.45 x 63.5)	500
2	SCP127-ND	2 x 2 (50.80 x 50.80)	500
2	SCP126-ND	2 x 2 (50.80 x 50.80)	500
2	SCP130-ND	4 x 4 (101.60 x 101.60)	250

Description	Digi-Key Part No.	Price Each	3M Part No.
(JEDEC-14) Orange†	SCP129-ND	14.65	98079805200
(JEDEC-14) Yellow†	SCP128-ND	16.28	98079805218
(Mil. Std. 129J) Yellow†	SCP127-ND	18.52	98079805226
(Mil. Std. 129J) Yellow†	SCP126-ND	18.52	98079805234
(Mil. Std. 129J) Yellow†	SCP130-ND	30.23	98079807420

† With Black type • Reusable * Destructible

Corrosion Control Absorber Patches

The 3M Model 2101 Corrosion Control Absorber Patch inhibits corrosion by absorbing harmful chemicals from the air before corrosion can occur. Simply place the protective patches inside an enclosed package with the item to be protected. The patches will immediately go to work scavenging corrosive agents such as hydrogen sulfide, sulfur dioxide and organic carboxylic acid. Depending on the type of container used, products can be protected for up to two years.

SCP202-ND 2" x 2" (50.8mm x 50.8mm)..... \$3.76/25; \$13.53/100

Electrically Conductive Bags and Liners

3M 2014 Velostat drum liner bags are made of opaque, volume conductive, carbon impregnated polyolefin. They are easily grounded, and the electrical characteristics are not affected by age or humidity. A common application in the electronic industry is as a waste container liner. Velostat drum liners are simple large conductive bags, 4.0 mil.



Size Inch (cm)	Digi-Key Part No.	Pricing 25	100	3M Part No.
18 x 24 (45.72 x 60.96)	SCP197-ND	42.34	150.17	2014 18x24
24 x 36 (60.96 x 91.44)	SCP198-ND	66.88	237.21	2014 24x36
30 x 36 (76.20 x 91.44)	SCP199-ND	83.77	297.10	2014 30x36

Velostat™ Pin Insertion Grade Foam

Velostat™ 28 x 3 is approx. 3 lb. density and is primarily a cushioning foam, but can be used for pin insertion application with sturdier device leads.

Thickness In. (mm)	Size Inch (cm)	Digi-Key Part No.	Price Each	3M Part No.
1/8 (3.18)	12 x 12 (30.48 x 30.48)	SCP146-ND	5.41	—
1/4 (6.35)	12 x 12 (30.48 x 30.48)	SCP147-ND	9.45	—
1/8 (3.18)	24 x 36 (60.96 x 91.44)	SCP118-ND	20.95	98079812438
1/4 (6.35)	24 x 36 (60.96 x 91.44)	SCP119-ND	36.67	98079812446
1/8 (3.18)	24 x 50 (60.96 x 127.00)	SCP112-ND	310.61	98079812461
1/4 (6.35)	24 x 50 (60.96 x 127.00)	SCP113-ND	621.18	98079812479

Velostat™ Single Device Carrier

The rugged Velostat™ Single Device Carrier provides cost-effective physical and static protection for DIPs.

Dimensions (L x W x D): 1.55" x 1.01" x 0.46" (39.37mm x 25.65mm x 11.68mm)



Digi-Key Part No.	Pricing	3M Part No.
SCP131-ND	5.00/10	98079816108

Highland Model™ 2272 Adjustable Static Control Wrist Strap

Flex life 350,000. Conductive comfort band — Silver-plated, continuous monofilament threads establish a 360° contact zone and a reliable path to ground. The banding gently contacts the skin and allows it to breathe for extreme comfort. The stainless steel backplate secures the end of the band in the clasp and ensures reliable electrical bond.

Highland Model™ 2259 Lay-In/Adjustable Static Control Wrist Strap

Flex life 600,000. Unique lay-in adjustable design. The 2259 features a unique clasp that can be adjusted to fit your wrist.

Description	Digi-Key Part No.	Price Each	3M Part No.
Adjustable Wrist Strap, 5 ft. (1.52 meter) Coiled Grounding Cord and Alligator Clip	SCP172-ND	7.67	98079825240
Adjustable Wrist Strap, 5 ft. (1.52 meter) Coiled Grounding Cord and Alligator Clip	SCP173-ND	3.49	98079825224
Adjustable Lay-in Wrist Strap, 5 ft. (1.52 meter) Coiled Grounding Cord and Alligator Clip	SCP174-ND	4.96	98079825232
Lay-in Adjustable Wrist Strap, 5 ft. (1.52 meter) Coiled Cord & Alligator Clip	SCP191-ND	11.63	98079836882
Lay-in Adjustable Wrist Strap, 5 ft. (1.52 meter) Coiled Cord & Alligator Clip	SCP176-ND	3.90	98079819961
Lay-in Adjustable Wrist Strap, 5 ft. (1.52 meter) Coiled Cord & Alligator Clip	SCP192-ND	7.13	98079824284

Wrist Strap Grounding System

Wrist Strap Grounding System with two banana jacks and one 10 ft. (3.0m) grounding cord.



SCP115-ND \$20.13 each

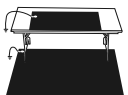
Velostat™ Table Mat

Velostat Table Mat. Conductive 1/15 in. (1.5mm) thick, 2 ft. x 4 ft. (0.6mm x 1.2 mm), with two female snap connectors installed, and one Table Mat Grounding System.

SCP102-ND..... \$69.81 each

Workstation Grounding Kits

Grounding Kits provide the basic items needed to create a static safe work environment for fabrication, assembly, storage, kitting, testing and repair operations. Table and floor mats connect to building ground using components included in the kit, two Wrist Straps can be connected to the Wrist Strap/Table Mat Grounding System which grounds the wrist straps and table mat. Wrist strap features a one megohm resistor to protect personnel from electrical shock through cord.



Kit includes: • Table Mat, 2' x 4' (61cm x 1.22m) • Floor Mat, 4' x 6' (1.22m x 1.82m) • Ground Cord, 15' (4.57m) • Wrist Strap/Table Mat grounding system • Charge Guard™ Wrist Strap. Both the floor and table mats are made from our soft three layer static dissipative material.

Velostat Floor Mats: These kits contain two different types of static control mats. The table mat is made of the soft three-layered, static-dissipative 8200 material, while the floor mat is of the more rigid, conductive Velostat™ material.

Description	Digi-Key Part No.	Price Each	3M Part No.
Table and Floor Mats			
Brown, 3 Layer Construction	SCP121-ND	259.01	98079811893
Beige, 3 Layer Construction	SCP122-ND	259.01	98079811901
Gray, 3 Layer Construction	SCP123-ND	259.01	98079811919
Granite, 3 Layer Construction	SCP178-ND	259.01	98079825158
Black, Velostat	SCP120-ND	215.78	98079811877
With Black Velostat Floor Mat			
Brown, 3 Layer Table Mat	SCP179-ND	247.91	98079811943
Gray, 3 Layer Table Mat	SCP180-ND	247.91	98079811968
Granite, 3 Layer Table Mat	SCP181-ND	247.91	98079825141

Charge-Guard™ Adjustable Regular Strap

Flex life 1,000,000. Wrist straps are the front line of defense in all static control processes. Ensure a comfortable fit with the Charge-Guard™ Series Adjustable Wrist Strap. One size adjusts to any size wrist to provide reliable, 360 degree protection.



Charge-Guard™ Disposable Wrist Strap

The Charge-Guard™ Disposable Wrist Strap provides cost-effective and reliable static protection. The wrist strap is suited for shipping valuable products to ensure protection at the receiving end.

Charge-Guard™ Wrist Straps & Grounding Cords



Charge-Guard™ Wrist Strap Tester

Makes it easy to test a wrist strap frequently and regularly while wearing it. PASS/FAIL lamps indicate if strap resistance is within acceptable ranges. Power Requirements: 6 volts (4 AA cells).



Description	Digi-Key Part No.	Price Each	3M Part #
Adjustable Wrist Strap			
w/Coiled Cord, 5 ft. (1.52 meters)*	SCP141-ND	24.18	80610611578
w/Coiled Cord, 10 ft. (3.05 meters)*	SCP142-ND	30.08	80610611586
w/Lightweight, Heavy-Duty, Coiled, 5 ft. (1.52 meters)*	SCP143-ND	25.44	80610611594
Replacement Wrist Bands	SCP144-ND	9.96	80610611602
Disposable Wrist Strap	SCP145-ND	1.04	80610611503
Wrist Strap With 5 ft. (1.5 M) Coiled Cord			
Small, Gray, 4.5-6" (114.30-152.40mm)	SCP132-ND	20.57	80610611545
Med., Burgundy, 5.5-7.25" (139.70-184.15mm)	SCP133-ND	20.57	80610611552
Lg., Blue, 6.5" (165.10mm) and larger	SCP134-ND	20.57	80610611560
Wrist Strap With 10 ft. (3 M) Coiled Cord			
Small, Gray, 4.5-6" (114.30-152.40mm)	SCP135-ND	24.78	80610611644
Med., Burgundy, 5.5-7.25" (139.70-184.15mm)	SCP136-ND	24.78	80610611651
Lg., Blue, 6.5" (165.10mm) and larger	SCP137-ND	24.78	80610611669
Wrist Strap - Rep. Wrist Band			
Small, Gray, 4.5-6" (114.30-152.40mm)	SCP138-ND	8.14	80610611446
Med., Burgundy, 5.5-7.25" (139.70-184.15mm)	SCP139-ND	8.14	80610611453
Lg., Blue, 6.5" (165.10mm) and larger	SCP140-ND	8.14	80610611461
Wrist Strap Tester			
1.75 x 4-5/16 x 7-3/8" (44.45 x 109.54 x 187.32), 1.0 lb. (.45kg)	SCP101-ND	218.69	98079824474

*Practical Extended Length

Static Control Shoe Grounding Assemblies (Heel Straps)

Long lasting Static Control heel straps provide static protection while retaining worker mobility • Increase personnel mobility • One size fits most shoe • Extra long contact ribbon accommodates most boots.



Note: The Grounding Assemblies are not to be used in areas where the individual may come in contact with electrical circuitry exceeding 250 volts.

Description	Digi-Key Part No.	Price Each	3M Part No.
With 1meg ohm resistor	SCP163-ND	9.84	98079823385
With 240K ohm resistor	SCP164-ND	9.84	98079823393

Grounding Cord

15 ft. (4.6 meter) Pre-installed male snap fastener with integral one megohm resistor on one end, solderless terminal on other end.



Description	Digi-Key Part No.	Price Each	3M Part No.
Grounding Cord	SCP114-ND	13.04	98079802009

Field Service Kit

Static-Dissipative Portable Field Service Kit: • Static-dissipative work mat with two pockets, .024 in. x 2 ft. x 2 ft. (0.6mm x 61cm x 61cm) • Grounding cord assembly with alligator clip • Charge-Guard™ Series adjustable wrist strap.

Lightweight Field Service Kit

The smallest lightweight kit offers the same level of static control as the full-sized 3M 8501 Field Service Kit, yet is small enough to fit in a shirt pocket.

Kit Includes: • Static-Dissipative Work Surface with Pocket 0.015" x 15" x 20" (38mm x 38.10cm x 50.80cm) • 2204 Adjustable Wrist Band • Lightweight Heavy-Duty Coiled Ground Cord: 2240 Wrist strap ground cord, 5 ft. (1.52m); 2243 Extension ground cord, 5 ft. (1.52m); 3063 Work surface ground cord 5 ft. (1.52m) • 3038 Alligator Clip

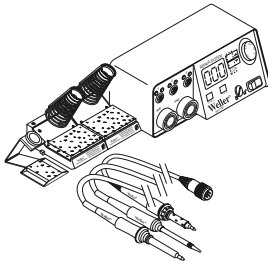
Description	Digi-Key Part No.	Price Each	3M Part No.
Field Service Kit	SCP124-ND	56.36	98079817510
Lightweight Field Service Kit	SCP182-ND	58.96	98079823427

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com



WRS3000S Soldering Station (Through Hole and SMT Repair or Rework)



The WRS3000S combines all of the tools needed to cover most through hole and SMT repair or rework applications. The soldering tool is the powerful EC1204, featuring 54 watts of power to cover even the most difficult multi-layered applications. The desoldering tool is the DS58. This tool features an inline design and 60 watts of power. Finally, the HAP1 Hot Air tool features a static free air stream that is heated by 100 watts of power. A full complement of nozzles are available for fine solder reflow or removing PLCC packages. The system is completely ESD safe, U.L. Approved and meets the Mil-Specs.

Features: • Self-Contained • Closed Loop Controlled hand pieces • Digital Display • Microprocessor Control for the ultimate in accuracy • Lock-Out Equipped • Temperature Set-Back • Separate control of air flow rate, time and temperature • Three independently controlled channels • Burn Resistant Cords • F/C degree selector • ESD Safe • Meets U.L. Requirements • Full range of tips for rework and repair available • Hot Air and Desoldering Applications can be run without any separate switching • Temperature Range 350°F to 850°F (177°C to 454°C)

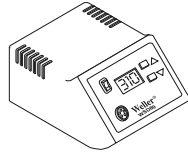
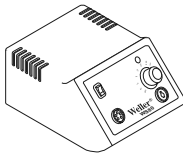
Note: Tweezers will also work with EC series units.



Description	Digi-Key Part No.	Price Each	Weller Part No.
Rework Station w/Hot Air & Irons	WRS3000S-ND	1519.64	WRS3000S
Thermal Tweezers for SMT w/Stand	WT50SET-ND	311.51	WT50SET
Tip, 1 mm Thermal Tweezers, 2 pc.	WT1-ND	21.42	WT1
Tip, 3 mm Thermal Tweezers, 2 pc.	WT2-ND	21.42	WT2
Tip, 6 mm Thermal Tweezers, 2 pc.	WT3-ND	21.42	WT3
Tip, 12.5 mm Thermal Tweezers, 2 pc.	WT4-ND	50.64	WT4
Tip, 18.5 mm Thermal Tweezers, 2 pc.	WT5-ND	50.64	WT5

WS "Silver Series" Soldering Station

The WS80 (80 Watt analog dial station) and WSD80 (80 Watt digital dial station) irons heat up in one-third to one-fourth the time of regular irons. The patented Weller low-mass tip has a faster recovery time and very little temperature loss when compared to other conventional irons and tips. Perfect for the production line and any area where continuous soldering takes place. **Features:** • Pencil • Holder • Antistatic housing • Automatic tool recognition • All Weller accessories up to 80W may be connected • Solder tool holder • Dimensions: 165.10mm x 114.30mm x 101.60mm (L x W x H)

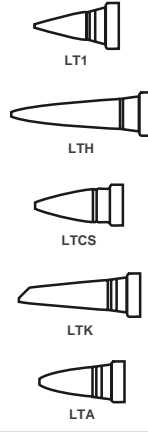


WS80 Features: • Analog control electronics • Temperature dial control from 300°F to 850°F (149°C to 454°C) • Temperature locking via key-operated switch • Accuracy ±2% of final value • Visual control with LED

WSD80 Features: • Digital control electronics • Temperature control from 100°F to 850°F (38°C to 454°C) adjustable via buttons • Calibration box may be connected for time (setback), locking functions (lock-out), and calibration • 3-position digital display for PRE-SET and READ VALUE • Accuracy ±2% from input

Description	Digi-Key Part No.	Price Each	Weller Part No.
Solder Station, 80 Watt w/Iron	WS80-ND	252.38	WS80
DIG Solder Station, 80 Watt w/Iron	WSD80-ND	339.99	WSD80
Replacement Solder Pencil, 80 Watt	WSP80-ND	107.22	WSP80
Solder Pencil Stand	WPH80-ND	24.34	WPH
Replacement Tip, 0.25mm for WS	LT1-ND	7.00	LT1
Replacement Tip, 0.8mm for WS	LTH-ND	7.00	LTH
Replacement Tip, 3.2mm for WS	LTCS-ND	7.00	LTCS
Replacement Tip, 1.2mm for WS	LTN-ND	7.00	LTN
Replacement Tip, 1.6mm for WS	LTA-ND	7.00	LTA

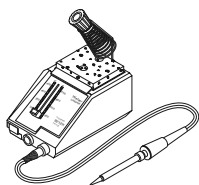
Replacement Tips



921ZX1 Soldering Station

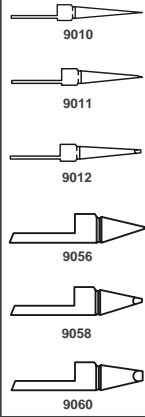
Now you can get the quality, dependability, and reputation of a Weller soldering station at a price that's very competitive. **Features:** • Electronically Controlled - ZERO CROSS circuitry • SPIKE FREE - ESD SAFE • Ceramic heater rated for exceptionally long life • Variable control - fully adjustable 550°F to 850°F (288°C to 454°C) • Lightweight handpiece • External Fuse and Calibration Access • Temperature Lockout Available • Small Footprint - less bench space

Note: The 921ZX1 carries a full one-year warranty.

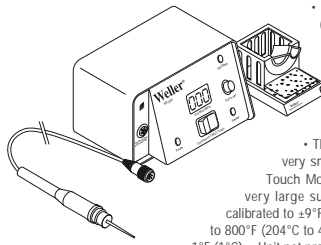


Description	Digi-Key Part No.	Price Each	Weller Part No.
Solder Station, Variable 60 Watt	921ZX1-ND	91.50	921ZX1
Heater Replacement Element for 921ZX1	9908-ND	21.46	9908
Tip, Precision Point 0.01" (0.25mm) Dia.	9010BK-ND	8.66	9010BK
Tip, Spade 0.03" (0.76mm) Dia.	9011BK-ND	5.49	9011BK
Tip, Screwdriver 0.05" (1.27mm)	9012BK-ND	5.49	9012BK
Tip, Conical Thermal Thrust .02" (.51mm) Dia.	9056BK-ND	5.49	9056BK
Tip, Screwdriver Thermal Thrust .05" (1.27mm)	9058BK-ND	5.49	9058BK
Tip, Screwdriver Thermal Thrust .10" (2.54mm)	9060BK-ND	5.49	9060BK
Tip Retainer for Thermal Thrust Tips	9919-ND	21.46	9919
Tip Retainer for Standard Tips	9037-ND	21.62	9037

Replacement Tips



MT1500 Soldering Station (Microtrough)

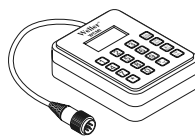


• Immediate, accurate tip temperature for faster soldering (MT202-3 seconds) • Quick tip change system, no tools required • Expanded tip selection - .010 point to PLCC68 (over 50 available) • Touch feature for extended tip life - reduces operating cost • Excellent thermal capacity - improves performance in all applications • Immediate response to thermal loads - improves productivity • Complete control with adjustable temperature and digital display • Three basic modes: (1) Touch Mode: Intended for soldering very small components with microtips; (2) Idle Mode: Similar to Touch Mode, but uses large tips; (3) Continuous Mode: Suited for very large surface mount device tips • Average tip temperature is calibrated to +9°F (+5°C) at idle with no load • Tip temperature range 400°F to 800°F (204°C to 427°C) • Stability ±10°F (+6°C) • Control setting resolution 1°F (1°C) • Unit not provided with tip - tips to be purchased separately

Description	Digi-Key Part No.	Price Each	Weller Part No.
Microtrough Soldering Station	MT1500-ND *	607.14	MT1500
Tip, Screwdriver, 1.19mm W x 5.08mm	MT301-ND	41.90	MT301
Tip, Conical, .38 dia. x 5.08mm	MT302-ND	41.90	MT302
Tip, Screwdriver, 1.78mm	MT601-ND	41.90	MT601
Tip, Bevel, .51mm	MT607-ND	41.90	MT607
Tip, SMT Blade, 10.41mm Long	MT617-ND	88.65	MT617
Tip, SMT Blade, 20.83mm Long	MT1205-ND	88.65	MT1205
Tip, PLCC68, 25.53mm Sq.	MT1208F-ND	141.63	MT1208

* 5 yr. unconditional warranty for "MT1500-ND".

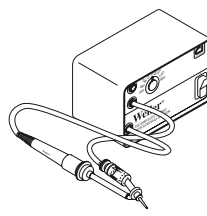
WS System Calibration Unit



• Designed to work with WS series soldering stations • Allows user to calibrate tip temperature of soldering iron to outside temperature reference • Enables timer setback mode (allows station to set back to 350°F (177°C) after period of inactivity) • Insert fixed temperature into station and turning off front panel control knob • Switching station display between °F or °C • Resetting station electronics to original factory calibration • Unit uses four "AA" alkaline batteries for power (included) • 3 month normal life expectancy of batteries • 16 button keypad • Three digit LED display • Connectors to attach to soldering station and iron

WCB1 Calibration Unit \$216.00

DS700M Electronically Controlled Desoldering Station



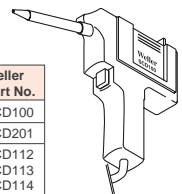
Features: • Lightweight desoldering tool with convenient index finger push button to control vacuum • Product designed as technicians portable unit (intermittent use) • Lightweight, compact electronic desoldering unit with internal vacuum pump • Fingertip control of desoldering vacuum • Special, large capacity air filter provided in power unit to back up small filter in tool's solder-collection reservoir • Air output for low volume heat shrinking and other hot air jobs • ESD safe

Description	Digi-Key Part No.	Price Each	Weller Part No.
Complete Station 24V Output	DS700M-ND	726.33	DS700M
In-Line Filter	DS205-ND	6.84	DS205
Replacement Tip, .79mm	DS112-ND	12.60	DS112
Replacement Tip, 1.85mm	DS114-ND	12.60	DS114

SCD100 Desoldering Gun

Self-contained desoldering gun draws solder into the disposable collector tube.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Desoldering Gun, Self-contained	SCD100-ND	199.50	SCD100
Replacement Disposable Tubes	SCD201-ND	11.80	SCD201
Replacement Tip, 0.9mm for SCD100	SCD112-ND	21.86	SCD112
Replacement Tip, 1.2mm for SCD100	SCD113-ND	21.86	SCD113
Replacement Tip, 1.8mm for SCD100	SCD114-ND	21.86	SCD114



EASY BRAID CO.

Low Cost Fixed-Temp Soldering Irons and Holders



Compact, lightweight fixed-temp solder irons designed for the occasional user and hobbyist.

Super quick heat up with replaceable tip and stainless steel heating core.

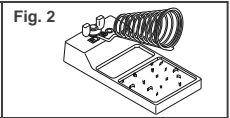
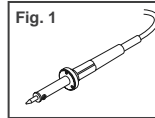


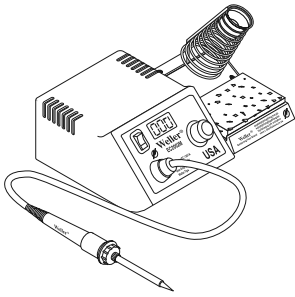
Fig.	Description	Digi-Key Part No.	Price Each	Easy Braid Part No.
<i>Fixed Temp Iron</i>				
1	Deluxe, 30W, 115VAC	EB1068-ND	19.95	DJY-10730S
1	Micro, 30W, 115VAC	EB1069-ND	9.95	DJY-10330
1	High Power, 40W, 115VAC	EB1070-ND	10.95	DJY-10340
<i>Solder Iron Holder</i>				
2	Small, with Sponge	EB1071-ND	10.95	DST58
2	Large, with Sponge	EB1072-ND	16.95	DST68
<i>Replacement Tip</i>				
—	Conical for EB1068-ND (30W, 1 pc.)	EB1073-ND	3.99	DSIT-R30W
—	Conical for EB1069-ND (30W, 1 pc.)	EB1074-ND	2.99	DSIT-B30W
—	Conical for EB1070-ND (40W, 1 pc.)	EB1075-ND	2.99	DSIT-B40W

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com



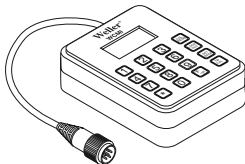
EC2002M Digital Soldering Station



• LED readout displays temperature settings and tip temperature with a resolution of 1°F (1°C) and stability of ±10°F (±6°C). • Display shows "Read" mode by default which displays current temperature of the tip. • To switch to "Set" mode, turn knob slightly, display will show current set temperature. • Handles delicate applications. • Electrostatic discharge safe (ESD safe). • Water reservoir will keep the sponge moist. • Externally fused. • UL listed and FCC approved.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Complete Station w/EC1201A Iron & Stand	EC2002M-1-ND	334.70	EC2002M-1
Complete Station w/EC1302A Iron & Stand	EC2002M-2-ND	334.70	EC2002M-2

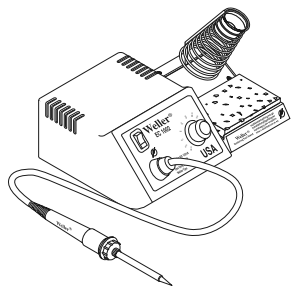
WCM1 System Calibration Unit



• Designed to work with EC2002M (above) series soldering stations. • Allows user to calibrate tip temperature of soldering iron to outside temperature reference. • Enables timer setback mode (allows station to set back to 350°F (177°C) after period of inactivity). • Insert fixed temperature into station and turning off front panel control knob. • Switching station display between °F or °C. • Resetting station electronics to original factory calibration. • Unit uses four "AA" alkaline batteries for power (included). • 3 month normal life expectancy of batteries. • 16 button keypad. • Three digit LED display. • Connectors to attach to soldering station and iron.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Calibration Unit	WCM1-ND	165.96	WCM1

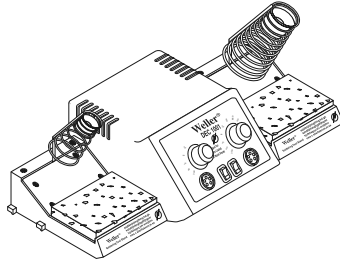
EC1002 Variable Soldering Station



• Dial calibrated in 10°F (6°C) increments. • Power control with zero cross switching for tips free of high voltage spikes. • Electrostatic discharge safe (ESD safe). • Available with 40, 20, 42 watt iron. • Iron stand, with tip storage, position left, right or remote from main unit. • SPEC. COMPLIANCE: DOD-STD-2000, Mil-STD-2000, Mil-S-45743, W-S-6536, W-S-570 AND DOD-STD-1686. • Externally fused. • UL Listed.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Complete Station w/EC1201A Iron & Stand	EC1002-1-ND	244.49	EC1002-1
Complete Station w/EC1302A Iron & Stand	EC1002-2-ND	244.49	EC1002-2

DEC1001 Dual Soldering Station

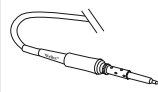


• Combined power of two temperature controlled stations in one. • Dual dial temperature range of 350°F to 850°F (177°C to 454°C). • Ideal for multiple use situations • For use with 40, 20, 42 watt irons combining two at a time. **IRONS SOLD SEPARATELY (below).**

• Electrostatic discharge safe (ESD safe) • Two iron stands included with tip storage, position left, right or remote from main unit. • Water reservoir keeps sponge moist. • SPEC. COMPLIANCE - DOD-STD-2000, Mil-STD-2000, Mil-S-45743, W-S-6536, W-S-570, DOD-STD-1686 • Externally fused • UL listed

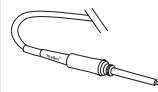
Description	Digi-Key Part No.	Price Each	Weller Part No.
Dual Iron Power Unit w/ Two Iron Stands	DEC1001-ND	244.22	DEC1001

Soldering Irons



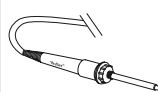
EC1503A

Tool designed for difficult applications such as multilayer boards, large heat output from small tool. Large tip iron for high wattage application.



EC1302A

• Micro-soldering tool. • Stainless steel heater element construction. • Fine tip iron for light duty applications



EC1201A

• General purpose soldering tool. • Stainless Steel plug-in heater element construction. • General purpose iron for mid-range applications.

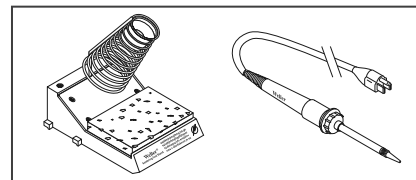
• Specifically designed for use at electrostatic free work stations. • Non-burnable silicon rubber cord. • Lightweight, high impact plastic handle. • Blue plastic meets requirements for ESD, ELECTROSTATIC DISSIPATIVE MATERIALS. • Uses Weller EM series tips made of copper w/heavy iron, nickel and chromium plating for long life. • UL listed.

NOTE: EC1503A, EC1302A and EC1201A work with DEC1001 and EC1002.

Description	Digi-Key Part No.	Price Each	Weller Part No.
42w Soldering Iron w/EMA Tip	EC1503A-ND	110.43	EC1503A
20w Iron w/EPH 101 Tip	EC1302A-ND	94.97	EC1302A
40w Soldering Iron w/ETA Tip	EC1201A-ND	94.97	EC1201A
Replacement Sponge	TC205-ND	1.55	TC205

Professional Soldering Irons

WP25, WP30, WP35 Series Irons

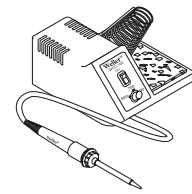


• Fixed temperature units • Ideal for a wide variety of electronic tasks. • Interchangeable heater elements - Single handle plus three different heating elements gives the user a trio of irons for different jobs. • Quick change knurled collar makes changing heater simple. • Lightweight handle with cushioned grip. • For additional safety, all irons come with 3-wire power cord. • Irons use ST series iron plated tips for long life and greater soldering efficiency. • Important: Use only Weller tips. • ST series tips. • UL Listed.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Soldering Iron w/ST3 Tip, 25 watt	WP25-ND	32.46	WP25
Soldering Iron w/ST3 Tip, 30 watt	WP30-ND	35.07	WP30
Soldering Iron w/ST3 Tip, 35 watt	WP35-ND	40.85	WP35
Soldering Iron Stand For WP Series*	PH60-ND	19.59	PH60

* Note that iron stand is sold separately.

WCC100 Soldering Station

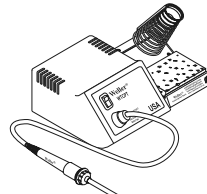


This electronically controlled station meets all government specifications including Mil STD 2000.

The temperature is adjustable from 350°F-850°F (177°C to 454°C) and is stable within 10°F at idle. The 40 watt pencil is fitted with an ETA tip and can be used with the full range of Weller ET series tips to cover many soldering applications.

WCC100-ND	\$114.29
WCC101-ND Replacement Iron w/ETA	\$50.00

Controlled-Output Soldering Station WTCPT Weller's Work Horse



• Transformer powered soldering station complete with macro style, low voltage, temperature controlled soldering iron. • Special "closed loop" method of controlling maximum tip temperature ... to protect temperature sensitive components. • Power unit housing features impact resistant plastic for durability. • Quick disconnect plug for soldering iron and lighted on/off switch. • Separate conductor grounds iron tip and terminates at third pin of power cord. • PT series soldering tips come in a variety of shapes and sizes in three standard temperature ranges: 600°F (316°C), 700°F (371°C), and 800°F (427°C). • Uses PT series tips.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Complete Station-24V Output	WTCPT-ND	136.28	WTCPT
Replacement Soldering Iron	TC201T-ND	71.57	TC201T

Replacement Tips for Irons

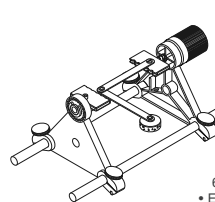
Tip Dim. (mm)	Description	Digi-Key Part No.	Price Each	Weller Part No.
<i>PT Series Tips For TC201T Iron</i>				
1.57	Screwdriver, 700°F (371°C)	PTA7-ND	5.66	PTA7
1.57	Screwdriver, 800°F (427°C)	PTA8-ND	5.66	PTA8
3.18	Screwdriver, 700°F (371°C)	PTC7-ND	5.66	PTC7
3.18	Screwdriver, 800°F (427°C)	PTC8-ND	5.66	PTC8
.79	Conical Flat, 700°F (371°C)	PTF7-ND	5.66	PTF7
.79	Conical Flat, 800°F (427°C)	PTF8-ND	5.66	PTF8
.38	Long Conical, 700°F (371°C)	PTS7-ND	5.66	PTS7
.38	Long Conical, 800°F (427°C)	PTS8-ND	5.66	PTS8

<i>EPH Series Tips for EC1302A Iron</i>				
.38	Micropoint Tip	EPH101-ND	5.60	EPH101
.79	Bent Conical Tip	EPH102-ND	5.60	EPH102
1.57	Screwdriver Tip	EPH106-ND	5.60	EPH106

<i>ET Series Tips For EC1201A</i>				
1.57	Screwdriver Tip	ETA-ND	5.33	ETA
2.36	Screwdriver Tip	ETB-ND	5.33	ETB
.79	Screwdriver Tip	ETH-ND	5.33	ETH
.79	Conical Tip	ETP-ND	5.33	ETP
.38	Single Flat Tip	ETU-ND	5.33	ETU
.79	Long Conical Tip	ETO-ND	5.33	ETO

<i>Tips For Professional Soldering Irons</i>				
<i>ST Series Tips For WP25, WP30, WP35 Irons</i>				
1.57	Screwdriver Tip	ST1-ND	5.01	ST1
4.75	Screwdriver Tip	ST4-ND	5.01	ST4
.79	Single Flat Tip	ST5-ND	5.01	ST5
.79	Screwdriver Tip	ST6-ND	5.01	ST6

ESF120ESD Circuit Board Vise



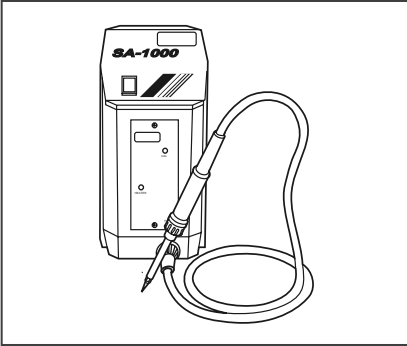
• Complete work center for placing, soldering and de-soldering printed circuit boards. • Spring clamps will hold workpiece in place securely. • Rotates through 360°, allowing work performance at any convenient angle. • Adjustable features allow handling of variety of circuit board sizes. • Maximum surface: 6-1/4" x 160 mm x 9-1/8" x 235 mm. • ESF-120ESD is ESD SAFE.

Description	Digi-Key Part No.	Price Each	Weller Part No.
Circuit Board Vise	ESF120ESD-ND	87.41	ESF120ESD



Modular Soldering Station SA-1000

Division of OK International



OK International's unique modular design allows the operator low cost system upgrades with its Connectorized Handpiece and Removable Temp Module. Changes can be made in seconds. Sold individually or as complete stations. Complete stations are supplied with Power Base, Variable Temp Module, Handpiece and Holder. Static dissipative construction. Meets MIL-STD-2000, MIL-1686 and WS6536 D/E.

Input Voltage: 115V AC 50/60Hz. **Temp. Range:** 600°F to 800°F (316°C to 427°C) **Temp. Repeatability:** ±8°F (±4°C). **AC Source Leakage:** <2mV rms. **Tip to Ground Resistance:** <2Ω. **Power Base Dim.:** 8" x 4" x 9.5" (15.24cm x 10.16cm x 24.13cm). **AC Power Cord:** 115V AC 3-wire U.S. plug.

Description	Digi-Key Part No.	Price Each	OK Int'l Part No.
Power Base			
Power Base	K314-ND	116.58	SA-1001
Temperature Modules			
Fixed Temp. Module, 700°F (371°C)	K299-ND	36.18	FTM-1
Replacement Irons for SA-1000 and SA-400			
High Pwr. Macro Iron, 90W, 28V, RTD Sensor	K295-ND	79.50	SAI-690
Micro Iron, 40W, 28V, RTD Sensor	K296-ND	79.50	SAI-640
Micro Iron with Fume Extraction Adapter	K338-ND	115.00	SAI-640X
High Power Macro Iron with Fume Extraction Adapter	K339-ND	115.00	SAI-690X
Iron - Replacement Parts			
Repl. Heat Assembly for K295-ND	K420-ND	40.14	15589S
Repl. Collar, Nut and Sleeve for K295-ND	K421-ND	13.84	15920S
Repl. Heat Assembly for K296-ND	K422-ND	44.00	16226S
Repl. Collar, Nut and Sleeve for K296-ND	K423-ND	14.79	16492A

SMT Tweezers Iron

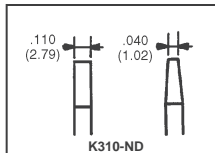
- Tweezer-Action handpiece for reflow of SMT components.
- ESD-safe handle and cord.
- Includes S8-11 tip set.
- For use with SA-1000, SA-2000, SA-400 stations.



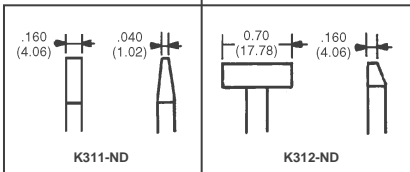
K297-ND 40W Tweezer.....\$225.00

SMT Tweezer Replacement Tips

- Tweezer-Action handpiece for reflow of SMC
- ESD-safe handle and cord
- Includes S8-11 tip set
- For use with SA-1000, SA-2000, SA-400 Stations



K310-ND



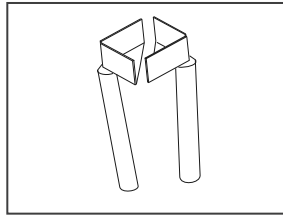
K311-ND

K312-ND

Description	Digi-Key Part No.	Price Each	OK Int'l Part No.
SMT Tweezer Replcmnt. Tip	K310-ND	59.10	S8-11
SMT Tweezer Replcmnt. Tip	K311-ND	59.10	S8-16
SMT Tweezer Replcmnt. Tip	K312-ND	70.94	S8-70

For use with K297-ND.

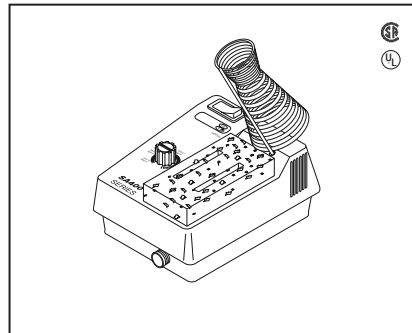
PLCC Tweezer Tips



The new SP-8 series PLCC Tweezer Tips address the Need for low cost PLCC Removal. The simple tweezer action simplifies the removal process to a single step, just squeeze and lift. For use with K297-ND.

Description	Digi-Key Part No.	Price Each	OK Int'l Part No.
52 Pin PLCC	K317-ND	61.84	S8-P52

Variable Soldering Stations



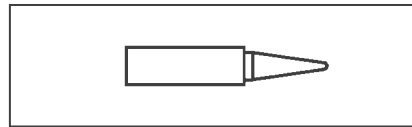
OK International's SA-400 Series feature connectorized handpieces for interchangeability with different irons. By using the SA-400 base you have the versatility of changing soldering irons (Macro or Micro) as well as the SMT Tweezers for SMT desoldering. Temperature variable from 446°F to 850°F (230°C to 454°C) with better than 10°F (5.5°C) temp. repeatability. Fully ESD safe and meets Mil-STD 2000, Mil-1686 requirements. 115VAC

Input: 115V AC, 50/60 Hz. **Heater:** Ceramic with embedded RTD. **Cord:** 3 wire, U.S. plug. **Dimensions:** 7" x 4.5" x 5.25" (17.78cm x 11.43cm x 13.34cm). **Shipping Weight:** 2.4 lbs. (1.09kg.)

K451-ND	Complete Soldering Station with Micro (40W) Iron.....	\$169.00
K452-ND	Complete Soldering Station with Macro (90W) Iron.....	\$169.00
K453-ND	Complete Soldering Station with SMT Tweezer Iron.....	\$299.00

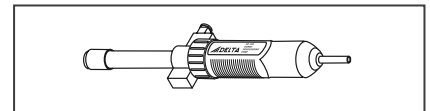
Note: Replacement Tips sold below.

Replacement Tips for Irons



Tip Dim. In. (mm)	Description	Digi-Key Part No.	Price Each	OK Int'l Part No.
Micro Iron Replacement Tips				
.047 (1.19)	Double Flat	K303-ND	6.51	S4-305L
.047 (1.19)	Chisel	K305-ND	6.51	S4-105S
.047 (1.19)	Double Flat	K341-ND	6.51	S4-305S
.015 (.38)	Conical	K342-ND	7.95	S4-201L
.020 (.51)	Angled	K343-ND	7.95	S4-202B
.047 (1.19)	Dbl. Flat Long Life	K450-ND	7.25	S4-305SX
Macro Iron Replacement Tips				
.039 (.99)	Conical	K307-ND	6.51	S9-204L
.031 (.79)	Conical	K308-ND	7.95	S9-203S
.047 (1.19)	Double Flat	K344-ND	6.51	S9-305S
.015 (.38)	Conical	K345-ND	7.95	S9-201L
.047 (1.19)	Dbl. Flat Long Life	K449-ND	7.25	S9-305SX

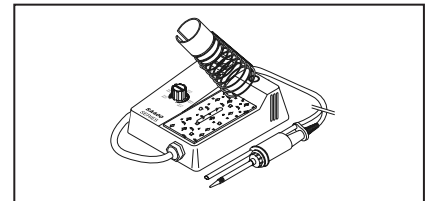
High Vacuum Desolder Pumps



Features durable corrosion resistant plastic construction and corrosion treated springs with uniform reset pressure and cushioned shock reduction. Fitted with replaceable teflon tips.

Description	Digi-Key Part No.	Price Each
High-Vac Desoldering Pump with Tip	K412-ND	18.95
Repl. Teflon Tip for K412-ND	K413-ND	2.95
ESD Safe Desoldering Pump with Tip	K414-ND	23.95
Repl. ESD Safe Teflon Tip for K414-ND	K415-ND	4.95

Fume Extract Solder Stations

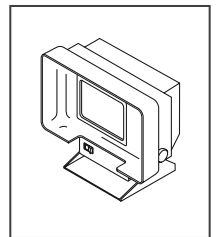


OK International's SA-400 soldering station fitted with a fixed fume extraction adapter for clean, fume free soldering. Must be used with an external fume extraction unit. Comes complete with variable station, handpiece with integral fume extraction tube, sponge and tray. 115VAC.

Description	Digi-Key Part No.	Price Each
Micro Iron Solder Station with Fume Extraction, 40W	K454-ND	189.00
Macro Iron Solder Station with Fume Extraction, 90W	K455-ND	189.00
Macro Iron Solder Station with Fume Extract Iron	K337-ND	124.62

Benchtop Fume Absorber

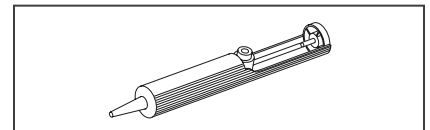
Aerodynamic hood design effectively draws solder fumes away from the work area. Carbon filters traps up to 80% of the flux fumes. Compact size and adjustable for convenient placement near work area. Optional articulating arm with bench mount clamp converts benchtop fume absorber to suspended fume absorber for positioning directly over the work area. An inexpensive alternative to individual fume extraction.



Description	Digi-Key Part No.	Price Each
Benchtop fume absorber 115V with 3 filters	K416-ND	105.00
Benchtop ESD safe fume absorber 115V w/3 filters	K417-ND	135.00
Articulating arm assembly kit w/bench clamp	K418-ND	119.00
Replacement carbon filter set, 3 Pcs.	K419-ND	18.81

Weidmüller Paladin Tools

Desoldering Pump



The desoldering tool removes solder with simple push-button operation. A conductive tool for anti-static operation. Replaceable tips available.

PAL1700-ND	Desoldering Pump.....	\$17.05
PAL2712-ND	Replacement Tip.....	\$5.25

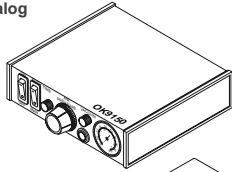
1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

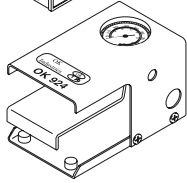


Fluid Dispensing Systems

K424 - Analog Dispenser



K425 - Foot Valve Dispenser



OK International fluid dispensing equipment is well suited for all types of liquids and fluids, from water thin solvents to thick pastes to sticky syrups. Both dispensers require external air source.

The **K424-ND** Analog dispenser has a vacuum control of all viscosities of fluids. The solid state timer provides accurate and repeatable dispensing cycles. This unit offers an adjustable vacuum feature for controlling drip of fluid or paste between dispensing cycles. Three dispense time ranges are included to offer controlled time shots from .01 to 30 seconds with one-touch or interruptible actuation.

Features: • Solid state digital integrated circuitry timer • 0.18 CV factor constant flow solenoid • Lighted function switches • Adjustable vacuum up to 15 inches Hg • Micro action foot switch

The **K425-ND** foot valve dispenser is the ideal dispensing unit for most general applications of adhesives, sealants and compounds.

Features: • Rugged and easy to use • Built-in pressure regulator • Connects to any OK syringe adapter • Fluid will flow as long as foot pedal is depressed

The **K426-ND** dispense kit consists of 3 syringe assemblies complete with barrels; air stoppers, tip caps and barrel adapters. The kit also includes 50 tips (assorted sizes) and an in-line filter, shop air filter and syringe stand.

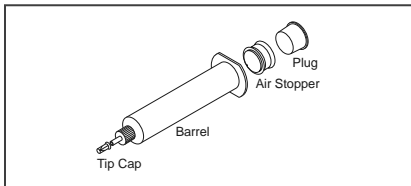
K424-ND Analog Precision Fluid Dispenser 1-100PSI
Solid State Timer 115 VAC..... **\$495.00**

K425-ND Foot Valve Fluid Dispenser 20-100PSI
with built-in pressure regulator **\$195.00**

K426-ND Dispenser Kit for K424-ND and K425-ND
(65 pieces total) **\$105.00**

Air Powered Syringe Assemblies

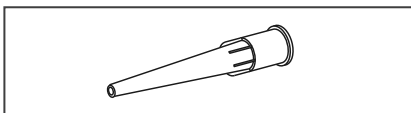
Available in 3 popular sizes (6cc, 10cc, and 35cc). Air powered assemblies include syringe barrel and tip caps, air stoppers and end plugs for safety when transporting filled syringes.



K427-ND 5cc-6cc (pkg. of 20 assemblies) **\$10.40**
K428-ND 10cc-12cc (pkg. of 15 assemblies) **\$9.75**
K429-ND 30cc-35cc (pkg. of 10 assemblies) **\$10.40**

Dispensing Tips

These tips are molded in high density polyethylene with color coding indicating tip inside diameter.



K435-ND .063" (1.60mm) ID Tan Color (pkg. of 50) **\$6.40**
K436-ND .047" (1.19mm) ID Grey Color (pkg. of 50) **\$6.40**
K437-ND .033" (.84mm) ID Green Color (pkg. of 50) **\$6.40**
K438-ND .024" (.61mm) ID Pink Color (pkg. of 50) **\$6.40**
K439-ND .016" (.41mm) ID Blue Color (pkg. of 50) **\$6.40**



Hot Air Rework for SMT FCR-1000 Series

Division of OK International

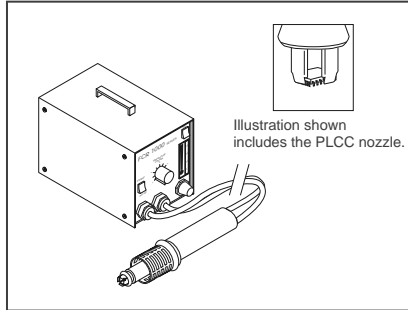


Illustration shown includes the PLCC nozzle.

The FCR-1000 Series is a low-cost hot air rework system with closed-loop temperature control and air flow control. Heat is focused on the components leads for fast, safe removal and attachment

Features: • Removes and replaces discrete, SOIC, PLCC and QFP components • Closed-loop, variable temperature control • Variable air flow adjusts to thermal demands of the board • Self-contained air source provides easy set up • Fully grounded and static-safe system • Optical isolation with zero voltage switching

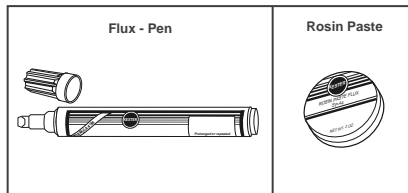
System Includes: • Air flow meter/temperature control module • Focused convection handpiece • Power base with pump • Handpiece holder • Nozzle removal tool

Specifications: • **Input Voltage:** 115VAC, 60 Hz • **Power Consumption:** 280W • **Fuse:** 4.0A 250V T • **Heater:** Resistive, 280W @ 280VAC • **Heater Control:** Closed-Loop Thermocouple sensor feedback • **Air Source:** High efficiency diaphragm pump • **Air Flow:** Variable, 3-20 liters/minute • **Temperature:** 212°F to 932°F (100°C to 500°C) • **Weight:** 16 lbs. (7.27kg) • **Dimensions (L x W x H):** 11.25" x 6.5" x 7.0" (286mm x 165mm x 178mm)

Description	Digi-Key Part No.	Price Each	OK Int'l Part No.
Focused Convection SMT Rework System	K466-ND	995.00	FCR-1001
Handpiece Holder and Stand for FCR-1001	K446-ND	900.00	RTS-A
Adjustable Board Holder for FCR-1001	K447-ND	750.00	RBH-A
Nozzle Tray and Holder for FCR-1001	K468-ND	47.32	17867S
Replacement Vacuum Pad 3/16" (4.76mm) Dia. (10 pcs.)	K411-ND	23.67	18376S-10



Flux - Pens & Rosin Paste



Kester flux pens use a spring loaded tip to dispense just the right amount of flux while preventing the flux inside from drying out. The SP44 rosin paste is ideal for larger rework jobs while leaving no corrosive residue.

SP244 rosin paste is a mildly activated flux designed as a No-Clean formula for rework applications. SP596 organic paste is a water washable paste designed for syringe dispensing for rework applications.

Description	Digi-Key Part No.	Price Each
SP44 Activated Rosin Paste Flux 2 oz (56.70g) can	KE1700-ND	1.15
SP44 Activated Rosin Paste Flux 1 Lb. (.45 kg) can	KE1701-ND	6.04
Tinning Block for Solder Tips	KE1800-ND	2.81
Flux Pen - Formula 186 RMA	KE1803-ND	3.33
Flux Pen - Formula 951 No-Clean	KE1804-ND	3.33



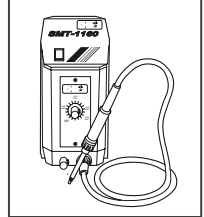
Surface Mount Hot Air Soldering System

Division of OK International

The SMT-1161-V is a non-contact hot air soldering system for most SMD's utilizing forced air convection. The SMT-1161-V is designed for low thermal-stress reflow. Primarily a soldering device, the SMT-1161-V can be utilized for SMT component removal also.

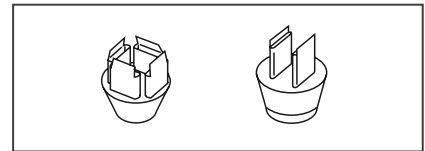
System includes: • Base with pump • Variable temperature module • Handpiece • Handpiece holder • 3-pc. nozzle kit • Instruction manual

Specifications: • **Input:** 115VAC/60Hz • **Temperature Range:** 600° - 800°F (316° - 427°C) • **Airflow:** 1 to 6 liters/min. • **Dimensions:** 5.7" x 4.3" x 8.5" (14.48cm x 10.92cm x 21.59cm) • **Weight:** 8.8 lbs. (3.99kg)



Description	Digi-Key Part No.	Price Each	OK Int'l Part No.
SMT Hot Air Soldering System	K353-ND	745.00	SMT-1161-V

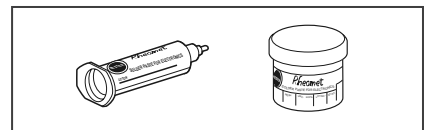
Focused Convection Rework System Nozzles



Type of Package	Digi-Key Part No.	Price Each	OK Int'l Part No.
Discrete	K357-ND	49.00	N-D25
Discrete	K358-ND	72.00	N-D4515
SOIC 8	K359-ND	115.00	N-S8
SOL 14,16	K360-ND	115.00	N-SL16
SOL 24,24J	K361-ND	115.00	N-SL24
SOL 28	K362-ND	115.00	N-SL28
PLCC-20	K363-ND	115.00	N-P20
PLCC-28	K364-ND	115.00	N-P28
PLCC-32	K365-ND	115.00	N-P32
PLCC-44	K366-ND	115.00	N-P44
PLCC-52	K367-ND	115.00	N-P52
PLCC-68	K368-ND	115.00	N-P68
PLCC-84	K369-ND	115.00	N-P84
QFP-44	K370-ND	115.00	N-Q10
QFP-52,80	K371-ND	115.00	N-Q14
QFP-64, 80, 100	K372-ND	115.00	N-Q1420
QFP-120, 128, 144, 160	K373-ND	115.00	N-Q28



Solder Paste



Kester solder paste was developed for applications of surface mount PCB's and components. All pastes are Sn63/37Pb with mesh size of -325 +500 (25 to 40 microns) and come in 25gm syringes for hand and automatic application or 500gm jars for screen or stencil printing. The R596 formulation is an improved Halide Free formula that is classified as ORH per ANSI/J-STD-005 Specification.

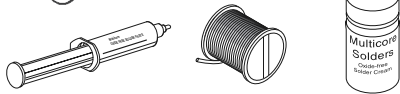
Pastes should be refrigerated to preserve their usable life.

Note: To ensure customer satisfaction and product integrity, pastes must be shipped overnight or 2nd Day Air only.

Description	Digi-Key Part No.	Price Each
No Clean Paste 25gm Syringe (R244)	KE1500-ND	14.92
No Clean Paste 500gm Jar (R244)	KE1501-ND	112.46
Water Soluble Paste 25gm Syringe (R593)	KE1502-ND	14.92
Water Soluble Paste 500gm Jar (R593)	KE1503-ND	112.46
Water Soluble Paste 25gm Syringe (R596)	KE1704-ND	14.92
Water Soluble Paste 500gm Jar (R596)	KE1705-ND	112.46
Plunger & Tip for 25gm Syringe	KE1504-ND	1.98
Plunger for 25gm Syringe	KE1505-ND	.99



5-Core Solders



Multicore's flux cored solder contains 5 separate cores of flux inside of the solder wire. This design helps assure even wetting action and prevents "cold" or "dry" solder joints due to a void in the flux. RA solder is a highly active solder that will clean with fast wetting action, used for hard to solder joints. No-Clean solder reduces or eliminates the need for cleaning after the soldering process, leaving very little residue. Crystal is a heat stable flux giving crystal clear residues with minimal fumes. Low Residue is a non-corrosive, halide free flux that leaves minimal residue. Water soluble solder is an active solder that is soluble when exposed to water, eliminating the need for solvent washes. Savbit is a copper containing alloy for reduced erosion of fine copper wires and copper based soldering tips. Used for copper based soldering and extending soldering tip life. Lead-Free Solder has similar soldering characteristics to standard lead based solders but without the health hazard associated with lead.

Dross-X is a solder bath dross reducer for solder baths and wave solder systems to reduce waste during the soldering process. Solder paste is a solder/flux cream intended for soldering surface mounted components. Available in RMA, No-Clean and Water Soluble flux formulations in both 25gm syringes for automatic or manual dispensing and 250gm jars for manual and automated stenciling.

Pastes should be kept refrigerated until 8 hours before use. The 250gm jars should be stirred slightly before use. Pastes must be shipped overnight or 2nd-day-air only, to ensure product integrity.

Description	Digi-Key Part No.	Price Each
RA Flux 60/40 — Activated Solder, 1 Lb. (.45 kg)		
20 Gauge Rosin, .036" dia. (.91mm)	SN6020-ND	13.32
22 Gauge Rosin, .028" dia. (.71mm)	SN6022-ND	15.08
RA Flux 63/37 — Activated Solder, 1 Lb. (.45 kg)		
18 Gauge Rosin, .050" dia. (1.27mm)	SN6318-ND	13.22
20 Gauge Rosin, .036" dia. (.91mm)	SN6320-ND	14.02
21 Gauge Rosin, .032" dia. (.81mm)	SN6321-ND	14.82
22 Gauge Rosin, .028" dia. (.71mm)	SN6322-ND	15.78
24 Gauge Rosin, .022" dia. (.56mm)	SN6324-ND	17.70
NEW! No-Clean "Crystal" Flux 60/40 2.2%, 1 Lb. (.45 kg)		
18 Gauge, .050" dia. (1.27mm)	SN60CRYSTAL18-ND	12.53
21 Gauge, .032" dia. (.81mm)	SN60CRYSTAL21-ND	13.78
22 Gauge, .028" dia. (.71mm)	SN60CRYSTAL22-ND	14.73
28 Gauge, .015" dia. (.38mm)	SN60CRYSTAL28-ND	14.33
NEW! No-Clean "Crystal" Flux 63/37 2.2%, 1 Lb. (.45 kg)		
18 Gauge, .050" dia. (1.27mm)	SN63CRYSTAL18-ND	12.90
21 Gauge, .032" dia. (.81mm)	SN63CRYSTAL21-ND	14.48
22 Gauge, .028" dia. (.71mm)	SN63CRYSTAL22-ND	15.40
No-Clean "Low Residue" Flux 63/37 1.1%, 1 Lb. (.45 kg)		
16 Gauge, .063" dia. (1.60mm)	SN63R16-ND	12.75
18 Gauge, .050" dia. (1.27mm)	SN63R18-ND	12.90
21 Gauge, .032" dia. (.81mm)	SN63R21-ND/NEW!	14.48
22 Gauge, .028" dia. (.71mm)	SN63R22-ND	15.78
24 Gauge, .020" dia. (.51mm)	SN63R24-ND/NEW!	17.28
19 Gauge, .040" dia. (1.02mm) (1.5% flux)	SN63C19-ND	13.18
21 Gauge, .032" dia. (.81mm) (1.5% flux)	SN63C21-ND/NEW!	14.48
NEW! Water Soluble Flux, 63/37, 1 Lb. (.45 kg)		
18 Gauge, .050" dia. (1.27mm)	SN63W18-ND	12.90
21 Gauge, .032" dia. (.81mm)	SN63W21-ND	14.48
24 Gauge, .020" dia. (.51mm)	SN63W24-ND	17.28
NEW! Tin-Copper — Savbit Specialty, RA Flux, 1 Lb. (.45 kg)		
18 Gauge, .050" dia. (1.27mm)	SAVBIT366-18-ND	12.48
22 Gauge, .028" dia. (.71mm)	SAVBIT366-22-ND	14.65
NEW! Lead Free, RA Flux, 1 Lb. (.45 kg)*		
18 Gauge, .050" dia. (1.27mm)	SN96WRAP318-ND	29.88
22 Gauge, .028" dia. (.71mm)	SN96WRAP322-ND*	21.90
NEW! Silver, RA Flux, 1 Lb. (.45 kg)		
18 Gauge, .050" dia. (1.27mm)	SN62WRAP318-ND	21.70
22 Gauge, .028" dia. (.71mm)	SN62WRAP322-ND	23.88
NEW! High Melt Point, RA Flux, 1 Lb. (.45 kg)		
18 Gauge, .050" dia. (1.27mm)	HMP366-18-ND	14.98
22 Gauge, .028" dia. (.71mm)	HMP366-22-ND	17.20
Solder Accessories		
Dross Reducer, 1 qt. (.95 liter) Dross-X	DROSS-X-ND	19.02
Tinner/Cleaner for Solder Tips	TTC-1-ND	6.16
NEW! Solder Paste		
Water Soluble, 25gm Syringe (WS22) 63/37	SN63WS22AA-ND	14.88
Water Soluble, 250gm Jar (WS22) 63/37	SN63WS22AG-ND	67.50
RMA Paste, 25gm Syringe (RM10) 62/36/2	SN62RM10-ND	14.88
RMA Paste, 250gm Syringe (RM92) 63/37	SN63RM92-ND	67.50
No-Clean Paste, Long Track Life (RP11) 63/37	SN63RP11-ND	14.88
NEW! Copperset Through-Hole Plating Kit		
PTH Kit for PCBs, .062" (1.57mm) thick boards	CSS001-ND	315.00
Replacement Cores, .031" dia (.79mm), 500 Pcs.	C55031-ND	62.38
Replacement Cores, .039" dia (.99mm), 500 Pcs.	C55032-ND	62.38
Replacement Cores, .047" dia (1.19mm), 500 Pcs.	C55033-ND	62.38

* 22 Gauge Weight is .5 Lb. (.23kg)



Flux-Core Solders



Kester's "44" activated rosin flux has been used for decades because of its "instant-action" wetting performance and fast spreading action, used for most general purpose applications.

Kester's RMA flux is a mildly activated rosin flux where difficult assemblies are to be soldered but stipulate use of an RMA flux, over the more active RA.

No-Clean low residue flux was developed for assemblies normally soldered with RMA but allows a visually clean assembly without the need for cleaning.

Water-soluble flux is an organic flux used for hard to solder joints where a low residue is difficult to use. The residue also can be completely removed with a simple water rinse.

Silver solder is intended for previously fluxed assemblies and automated soldering applications.

Silver solder is a Tin-Silver mixed solder with generally higher melting points than lead, making them ideal for under hood automotive and higher temperature applications.

Lead-free solder is a suitable replacement to Tin-Lead solders where environmentally friendly materials are required.

Description	Digi-Key Part No.	Price Each
RA Solder 3.3% Flux "44" 63/37, 1 Lb. (.45 kg) Roll		
16 Gauge Solder, .062" (1.57mm) dia.	KE1100-ND	10.28
19 Gauge Solder, .040" (1.02mm) dia.	KE1101-ND	10.89
21 Gauge Solder, .031" (.79mm) dia.	KE1102-ND	11.36
25 Gauge Solder, .020" (.51mm) dia.	KE1103-ND	15.89
RA Solder 3.3% Flux "44" 60/40, 1 Lb. (.45 kg) Roll		
16 Gauge Solder, .062" (1.57mm) dia.	KE1104-ND	10.28
19 Gauge Solder, .040" (1.02mm) dia.	KE1105-ND	10.89
21 Gauge Solder, .031" (.79mm) dia.	KE1106-ND	11.36
25 Gauge Solder, .020" (.51mm) dia.	KE1107-ND	15.89
RMA Solder 2.2% Flux "285" 63/37, 1 Lb. (.45 kg) Roll		
16 Gauge Solder, .062" (1.57mm) dia.	KE1199-ND	11.14
21 Gauge Solder, .031" (.79mm) dia.	KE1200-ND	11.36
25 Gauge Solder, .020" (.51mm) dia.	KE1201-ND	15.89
No Clean 1.1% Flux "245" 63/37, 1 Lb. (.45 kg) Roll		
16 Gauge Solder, .062" (1.57mm) dia.	KE1399-ND	11.14
21 Gauge Solder, .031" (.79mm) dia.	KE1400-ND	11.36
25 Gauge Solder, .020" (.51mm) dia.	KE1401-ND	15.89
Water Soluble 3.3% Flux "331" 63/37, 1 Lb. (.45 kg) Roll		
16 Gauge Solder, .062" (1.57mm) dia.	KE1299-ND	11.14
21 Gauge Solder, .031" (.79mm) dia.	KE1300-ND	11.36
25 Gauge Solder, .020" (.51mm) dia.	KE1301-ND	15.89
Solid Wire Solder (No Flux), 1 Lb. (.45 kg) Roll		
16 Gauge Solder 63/37, .062" (1.57mm) dia.	KE1603-ND	11.14
21 Gauge Solder 63/37, .031" (.79mm) dia.	KE1606-ND/NEW!	11.36
25 Gauge Solder 63/37, .020" (.51mm) dia.	KE1607-ND/NEW!	15.89
16 Gauge Solder 60/40, .062" (1.57mm) dia.	KE1608-ND/NEW!	11.14
21 Gauge Solder 60/40, .031" (.79mm) dia.	KE1604-ND	11.36
25 Gauge Solder 60/40, .020" (.51mm) dia.	KE1605-ND	15.89
Specialty Solders		
Lead-Free SAF-ALLOY Solders, 1 Lb. (.45 kg) Roll		
21 AWG Silver Solder, 62/36/2, RA Flux	KE1350-ND	15.53
21 AWG Lead-Free Solder, 97/12/8/2, RA Flux	KE1351-ND	17.89
21 AWG Lead Free Solder, 97/12/8/2, No-Clean	KE1352-ND	17.89
21 AWG Low Temp Solder, 43/43/14, No-Clean	KE1353-ND	17.66
Bar Solder		
Oxide Free Solder (E-Bar), 63/37, 1 lb. (.45 kg)	KE1600-ND	6.69
Oxide Free Solder (E-Bar), 60/40, 1 lb. (.45 kg)	KE1601-ND	6.71
Premium Oxide Free Solder (Ultrapur), 63/37, 1.6 lbs. (.73 kg)	KE1602-ND	12.30
Boxed Solder		
Pocket Pak Solder, No-Clean 21 Gauge 60/40	KE1801-ND	1.53
Elec. Silver Solder, RA Flux, 24 Gauge .35oz. (9.92g) Tube	KE1802-ND	.60

3M Scotch™ brand No. 1285 Plating Tapes



Scotch™ brand 1285 are silicone-free plating tapes designed to eliminate the clean-up associated with silicone adhesive residue. 1285 is recommended for all types of PWBs. • Color: Blue • Adhesive Type: Rubber • Adhesive Thickness: 3 mils (.08mm) • Adhesive Strength: 25 oz./in. width (27N/100mm)

Description	Width In. (mm)	Digi-Key Part No.	Price Each
Plating Tape	1.0 (25.40)	3M12851-ND	25.37

3M Scotch™ brand No. 854 Polyester Tape

An opaque, cream-colored polyester tape with excellent chemical resistance in precious metal plating, especially gold. **General Information:** • Polyester film backing imparts excellent chemical and thermal stability • Remains flexible at -60°F (-50°C) and retains dimensional stability up to 300°F (149°C) • **Construction:** • Backing: Polyester • Adhesive: Rubber • Color: Cream • Standard Roll Length: 72 yds.(66m) • Elongation at Break: 123% • Backing Thickness: 1 mil (.02mm) • Total Tape Thickness: 2.7 mils (.065mm) • Water Vapor Transmission Rate: 1.6 gms H₂O/100sq.in./24 hrs (24.8 g/m²/24hrs) • Resists many solvents found in photographic, electroplating and chemical milling processes. Hot caustics will weaken the backing after prolonged immersion. **Application Ideas:** • Excellent chemical resistance in precious metal plating, especially gold. • Excellent results in sodium hydroxide etching of aluminum • Chemical milling • General splicing

Description	Width In. (mm)	Digi-Key Part No.	Price Each
Polyester Tape	0.75 (19.05)	3M85402-ND	27.28
Polyester Tape	0.5 (12.70)	3M85401-ND	13.65

Scotch™ brand No. 5413 Polyimide Film Tape



Increase your productivity with this superior performing Kapton™ polyimide film tape. • Chemical and radiation resistant polyimide film is dimensionally stable at high temperatures, and flame retardant. • Strong, heat resistant silicone adhesive resists adhesive transfer at elevated temperatures, providing higher productivity. • Rated for continuous use at 500°F and intermittent use at 700°F, Scotch™ brand No. 5413 provides an excellent mask for high temperature powder coating. **Construction:** • Backing: Kapton™ Polyimide Film • Adhesive: Silicone • Liner: None • Color: Amber • Roll Length: 36 yds. (33m). **Typical Physical Properties:** • Adhesion to Steel: 20 oz./in. width (22N/100mm) • Tensile Strength at Break: 33 lbs./inch width (578N/100mm) • Elongation at Break: 60% • Backing Thickness: 1 mil (.03mm) • Total Tape Thickness: 2.7 mils (.07mm) • Temperature Use Range: -100°F to 500°F (-73°C to 270°C)

Description	Width In. (mm)	Digi-Key Part No.	Price Each
Scotch™ brand No. 5413	0.75 (19.05)	3M541334-ND	31.32
Scotch™ brand No. 5413	0.5 (12.70)	3M541312-ND	20.06

Scotch™ brand No. 5414 Water Soluble Tape

Get reliable protection for your circuit boards during wave soldering with this water soluble tape. • Saves time and clean-up costs by completely dissolving during in-line, aqueous cleaning operations. • Biodegradable, non-toxic tape has a neutral pH and leaves no residue • Eliminates static and labor usually associated with tape removal. • Packaged in a moisture impervious bag which ensures long term storage stability under extreme humidity • Available in roll format or die-cut circles for easy application manually or by machine. **Construction:** • Backing: PVA film • Adhesive: Water soluble synthetic adhesive • Liner: Kraft paper • Color: Hazy, transparent • Standard Roll Length: 36 yds. (33m) **Typical Physical Properties:** Not recommended for specification purposes. • Adhesion to Steel: 7 oz./in. width (7.8 N/100mm) • Tensile Strength: 6.2 lbs./in. width (115.6 N/100mm) • Elongation at Break: 98% • Total Thickness: 2.5 mils (.06mm) • Dissolution Time: 40 seconds at 140° with agitation • Electrostatic Decay Time: <0.1 second **Features:** • Total water solubility • Low static upon liner release • Biodegradability • Absolute moisture barrier packaging plus desiccant

Description	Width In. (mm)	Digi-Key Part No.	Price Each
Scotch™ brand No. 5414	0.75 (19.05)	3M541434-ND	31.90
Scotch™ brand No. 5414	0.5 (12.70)	3M541412-ND	21.26

Scotch™ brand No. 5419 Low Static Polyimide Film Tape

A translucent, polyimide film-backed silicone adhesive tape with unique and extremely low electrostatic discharge properties. For gold tab protection during wave soldering of printed circuit boards. **General Information:** • 5419 tape employs a proprietary technology that results in extremely low electrostatic discharge at unwind and removal from the PWB. • Polyimide film does not soften at elevated temperatures, thus, the film provides and excellent release surface at elevated temperatures. **Construction:** • Backing: Polyimide • Adhesive: Silicone • Color: Gold • Standard Roll Length: 36 yds (33m) **Typical Physical Properties and Performance Characteristics:** • Adhesion to Steel: 20 oz./in. width (22N/100mm) • Tensile Strength: 33 lbs./in. width (578N/100mm) • Elongation at Break: 60% • Backing Thickness: 1 mil (.03mm) • Total Tape Thickness: 2.7 mils (.07mm) • Temperature Use Range: -100°F to +500°F (-73°C to +260°C) • Dielectric Strength: 7000 volts • Insulation Resistance: >1*10⁹ ohms • Static Charge: (measured @ 50% RH, 70° in an ESD controlled environment • Removal from roll: <150 volts • Removal from PWB: <50 volts **Application Ideas:** • Mask for printed circuit boards during wave solder or solder dip process • Used as release surface in fabrication of parts cured at elevated temperatures.

Description	Width In. (mm)	Digi-Key Part No.	Price Each
Low Static Polyimide Film Tape	0.75 (19.05)	3M591934-ND	32.15
Low Static Polyimide Film Tape	0.5 (12.70)	3M591912-ND	21.47

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com



Dispensing Bottles

Division of OK International

Description	Digi-Key Part No.	Price Each	OK Internat'l Part No.
Fluid Bottle with Curved Spout, 4 oz. (.12 liter)	K461-ND	4.25	OKB-40
Fluid Bottle with Curved Spout, 8 oz. (.24 liter)	K462-ND	4.95	OKB-80

EASY BRAID CO. Desoldering Braid

25% cleaner than most major brands (leaving less residue on the desoldered connection). Meets the requirements of Mil-F-14256F Type R, Mil STD. 2000 and in compliance with DOD Standard 1686A. Also meets the requirements of Bellcore spec. TR-T5Y-000078 and Ipc Test Method III.



Width Inch (mm)	Length Ft. (Meter)	Label Color	Digi-Key Part No.	Price Each 1 25
Quick Braid				
.025 (.64)	5 (1.52)	Silver	EB1020-ND	1.88 1.60
.050 (1.27)	5 (1.52)	Gold	EB1022-ND	1.88 1.60
.075 (1.91)	5 (1.52)	Green	EB1024-ND	1.93 1.64
.100 (2.54)	5 (1.52)	Blue	EB1026-ND	2.14 1.82
.125 (3.18)	5 (1.52)	Brown	EB1028-ND	2.28 1.94
.025 (.64)	25 (7.62)	Silver	EB1021-ND	8.30 7.06
.050 (1.27)	25 (7.62)	Gold	EB1023-ND	8.30 7.06
.075 (1.91)	25 (7.62)	Green	EB1025-ND	8.55 7.28
.100 (2.54)	25 (7.62)	Blue	EB1027-ND	10.11 8.60
.125 (3.18)	25 (7.62)	Brown	EB1029-ND	10.34 8.80
No-Clean				
.025 (.64)	5 (1.52)	Silver	EB1050-ND	2.09 1.78
.050 (1.27)	5 (1.52)	Gold	EB1052-ND	2.09 1.78
.075 (1.91)	5 (1.52)	Green	EB1054-ND	2.16 1.84
.100 (2.54)	5 (1.52)	Blue	EB1056-ND	2.49 2.12
.125 (3.18)	5 (1.52)	Brown	EB1058-ND	2.89 2.46
.025 (.64)	25 (7.62)	Silver	EB1051-ND	9.59 8.16
.050 (1.27)	25 (7.62)	Gold	EB1053-ND	9.59 8.16
.075 (1.91)	25 (7.62)	Green	EB1055-ND	9.89 8.42
.100 (2.54)	25 (7.62)	Blue	EB1057-ND	11.07 9.42
.125 (3.18)	25 (7.62)	Brown	EB1059-ND	12.69 10.80

BGA / PLCC Desoldering Strips and Pads

Sized to fit existing footprints of BGA, PLCC and QFP pads for removing residual solder from the PCB solder pads. Strips can be easily cut to length, while patches are pre-cut coupons that fit over the pads and may be heated by either convection or conduction methods.

Description	Size (W x L) Inch (mm)	Digi-Key Part No.	Price Each 1 10	EasyBraid Part No.
Desolder Strip				
BGA-119	.50 x 6 (12.70 x 152.40)	EB1076-ND	2.37	WI-B
BGA-119 to PLCC28, 32, OFP44	.75 x 6 (19.05 x 152.40)	EB1077-ND	2.57	WI-C
BGA-119 to 361, PLCC44, 52, OFP48, 52, 80, 100	1 x 6 (25.40 x 152.40)	EB1078-ND	2.76	WI-D
BGA256P to 324, PLCC68	1.25 x 6 (31.75 x 152.40)	EB1079-ND	2.84	WI-E
Desolder Pad				
BGA-119, PLCC-28, 32, OFP-44	.75 (19.05) Sq.	EB1080-ND	— .52	WI-C-S
BGA-119 to 361, PLCC44, 52, OFP48, 52, 80, 100	1 (25.40) Sq.	EB1081-ND	— .57	WI-D-S
BGA256P to 324, PLCC68	1.25 (31.75) Sq.	EB1082-ND	— .62	WI-E-S
BGA313 to 625, PLCC84, 100, OFP120-208	1.5 (38.10) Sq.	EB1083-ND	— .70	WI-F

63/37 Eutectic Solder

EasyBraid's No-Clean solder has excellent wetting action and is intended for applications where residue removal is not required or recommended. Available in .020" (.51mm) and .031" (.79mm) diameters and meets Bellcore Issue 3 TR-NWT-000078, IPC-SF-818 Type LR 3CN and IPC-SF-818 Type H3C specifications. Sea Step solder is water washable solder where flux residue becomes soluble in water. Available in regular bobbin or anti-static type bobbin.



Diameter Inch (mm)	Length Feet (Meter)	Digi-Key Part No.	Price Each 1 25 50	EasyBraid Part No.
No-Clean Solder - 2.2% Flux				
.020 (.51)	25 (7.62)	EB1060-ND	1.97 1.68 1.52	OS-S020
.020 (.51)	25 (7.62) antistatic	EB1061-ND	2.23 1.90 1.71	OS-S020AS
.031 (.79)	20 (6.10)	EB1062-ND	1.97 1.68 1.52	OS-S031
.031 (.79)	20 (6.10) antistatic	EB1063-ND	2.23 1.90 1.71	OS-S031AS
Sea Step Solder - 2.2% Flux				
.020 (.51)	25 (7.62)	EB1064-ND	1.97 1.68 1.52	SS-S020
.020 (.51)	25 (7.62) antistatic	EB1065-ND	2.23 1.90 1.71	SS-S020AS
.031 (.79)	20 (6.10)	EB1066-ND	1.97 1.68 1.52	SS-S031
.031 (.79)	20 (6.10) antistatic	EB1067-ND	2.23 1.90 1.71	SS-S031AS

Solder Sponges



Replacements	Size Inch (mm)	Digi-Key Part No.	Price Each 1 25 50
OK Ind. 45803S	1.2 x 2.7 (30.48 x 68.58)	EB1001-ND	.61 .52 .47
Ungar 9901	1.55 x 2.55 (39.37 x 64.77)	EB1002-ND	.68 .59 .53
Weller MP	2 x 2.6 (50.80 x 66.04)	EB1003-ND	.68 .59 .53
Weller DS-100; EC-1000; EC-2000	2.2 x 3.5 (55.88 x 88.90)	EB1004-ND	.93 .79 .72
Weller WTCP; EC-3000; EC-4000; TC205	2.6 x 2.6 (66.04 x 66.04)	EB1005-ND	.95 .82 .74
Metalcl; Plato CS-46	3.2 x 1.9 (81.28 x 48.26)	EB1006-ND	.78 .67 .60
Hexacon 810; 812; 890; 891; 892	3.4 x 4.4 (86.36 x 111.76)	EB1007-ND	1.88 1.61 1.45
Hakko 926; Plato CS-43	4 x 1.7 (101.60 x 43.18)	EB1008-ND	.98 .84 .75
Sponge Sheet	8.5 x 17 (215.90 x 431.80)	EB1009-ND	21.15 18.00 16.20
EDSYN Models	2.4 x 3.2 (60.96 x 81.28)	EB1010-ND	.93 .79 .72

Chemtronics® Chem-Wik® Desoldering Braid

Pure copper braid construction coated with high purity rosin, quickly and thoroughly removes solder. Use Chem-Wik to remove components, SMDs, ICs, blobs and clean up poor solder connections. Meets or exceeds these requirements: • Mil-F-14256F Type R • NASA NHB 5300.4(3A) Reliability and Quality Assurance publication • NASA SP-5002 Soldering Electrical Connections • NASA NPC200-4 Quality publication • DOD Standard 1686B and DOD Handbook 263 • Mil-B-81705C Static Decay Rate Provision • Mil-Std-2000A



Width Inch (mm)	Length Feet (Meter)	Label Color	Digi-Key Part No.	Price Each 1 100	Chemtronics Part No.
.035 (.89)	5 (1.52)	White	CW2-5-ND	2.38 2.15	2-5L
.050 (1.27)	5 (1.52)	Yellow	CW5-5-ND	2.38 2.15	5-5L
.075 (1.91)	5 (1.52)	Green	CW7-5-ND	2.48 2.24	7-5L
.100 (2.54)	5 (1.52)	Blue	CW10-5-ND	2.62 2.36	10-5L
.150 (3.81)	5 (1.52)	Brown	CW15-5-ND	3.02 2.72	15-5L
.025 (.64)	25 (7.62)	White	CW2-25-ND	10.40 9.36	2-25L
.050 (1.27)	25 (7.62)	Yellow	CW5-25-ND	10.40 9.36	5-25L
.075 (1.91)	25 (7.62)	Green	CW7-25-ND	10.82 9.74	7-25L
.100 (2.54)	25 (7.62)	Blue	CW10-25-ND	11.54 10.39	10-25L
.150 (3.81)	25 (7.62)	Brown	CW15-25-ND	13.62 12.26	9.88 15-25L
.030 (.76)	100 (30.48)	Gray	2-100L-ND	41.62 37.46	30.18 2-100L
.050 (1.27)	100 (30.48)	Yellow	5-100L-ND	41.62 37.46	30.18 5-100L
.075 (1.91)	100 (30.48)	Green	7-100L-ND	43.18 38.87	31.31 7-100L
.100 (2.54)	100 (30.48)	Blue	10-100L-ND	46.30 41.67	33.57 10-100L
.150 (3.81)	100 (30.48)	Brown	15-100L-ND	54.50 49.05	39.52 15-100L

No-Clean Desoldering Braid

Width Inch (mm)	Length Feet (Meter)	Label Color	Digi-Key Part No.	Price Each 1 100	Chemtronics Part No.
.030 (.76)	5 (1.52)	Gray	2-5NC-ND	2.62 2.36	1.90 2-5NC
.050 (1.27)	5 (1.52)	Yellow	5-5NC-ND	2.62 2.36	1.90 5-5NC
.075 (1.91)	5 (1.52)	Green	7-5NC-ND	2.82 2.54	2.05 7-5NC
.100 (2.54)	5 (1.52)	Blue	10-5NC-ND	3.22 2.90	2.34 10-5NC

Ball Grid Array (BGA) Desoldering Braid

SW60BGA5-ND No-clean desolder braid for clean free solder removal, 5' (1.52 Meter) Spool **\$3.87**
SW80BGA5-ND RMA type desolder braid for fast, thorough solder removal, 5' (1.52 Meter) Spool ... **\$3.50**

Swabs and Applicators

For general purpose cleaning of magnetic heads, video heads and optical pickups.

Fig. 1 Chamois Tip, ABS Handle



Fig. 2 Chamois Tip, Double Ended



Fig. 3 Foamtip Pro, Double Ended

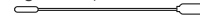


Fig. 4A Foamtip, Wood Handle



Fig. 5 Cottontip, Wood Handle

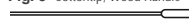


Fig. 6 Cottontip, Double Ended



Fig.	Qty. (Pcs)	Length Inch (mm)	Digi-Key Part No.	Price Each 1 25 100	Chemtronics Part No.
1	15	3.25 (82.55)	CC15-ND	9.79 8.85 8.26	CC15
1	50	3.25 (82.55)	CC50-ND	28.72 25.95 24.22	CC50
2	15	6.50 (165.10)	CCD15-ND	17.78 16.07 15.00	CCD15
2	50	6.50 (165.10)	CCD50-ND	51.59 46.62 43.52	CCD50
3	10	6.75 (171.45)	CFP10-ND	6.76 6.11 5.70	CFP10
4A	15	6.125 (155.58)	CF15-ND	5.53 5.00 4.67	CF15
4B	10	2.875 (73.03)	CF4010-ND	3.57 3.23 3.01	CF4010
4B	10	6.125 (155.58)	CF3010-ND	3.75 3.39 3.17	CF3010
5	100	6.00 (152.40)	CT100-ND	2.84 2.57 2.40	CT100
5	1000	6.00 (152.40)	CT1000-ND	22.39 20.24 18.89	CT1000
6	100	6.00 (152.40)	CT200-ND	3.04 2.75 2.57	CT200
6	1000	6.00 (152.40)	CT2000-ND	25.08 22.67 21.16	CT2000
—	25	—	CS25-ND	23.19 20.96 19.56	CS25

Flux-Off II Pen

ESP30-ND Removes all types of flux and the chisel shaped tip helps scrub contaminants from the surface. Housed in a spill resistant pen designed for spot cleaning of pcb joints. .33 fl. oz. (9.76ml) **\$4.96**

Presaturated Wipes

Description	Digi-Key Part No.	Price Each 1 25	Chemtronics Part No.
Optic Prep High Quality Optical Cleaning and Polishing Pads (50 Pcs)	CP410-ND	16.80 15.18	CP410
Chempad General Purpose, Lint-free, Nonabrasive Cleaning Pads (50 Pcs)	CP400-ND	18.49 16.71	CP400
Screen-Prep Wet-and-Dry Wipes for Monitor Screens (25 Twin Packs)	CSP20-ND	19.82 17.91	CSP20
Gold Guard Pads for Cleaning Gold, Tin and Silver Contacts (50 Pcs)	CP420E-ND	32.42 29.30	CP420E

Liquid Dispensers

Description	Digi-Key Part No.	Price Each 1 25	Mfg. Part No.
Chempump 4 oz. (.12 liter) Automatic Liquid Dispenser for Solvents	CP40-ND	16.57 14.97	CP40
Chempump 6 oz. (.18 liter) Automatic Liquid Dispenser for Solvents	CP60-ND	16.82 15.20	CP60
Chembottle 4 oz. (.12 liter) Liquid Dispenser with Curved Spout	CB40-ND	5.76 5.21	CB40
Chembottle 8 oz. (.24 liter) Liquid Dispenser with Curved Spout	CB80-ND	6.54 5.91	CB80



Chempump™
Automatic liquid dispenser eliminates waste caused by spills & evaporation.



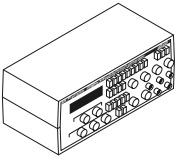
Chembottle™
Provides controlled delivery of oils, solvents & cleaners.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com



Function Generators



General Specifications: Waveforms: Sine, Square, Triangle, \pm Pulse, \pm Ramp. Temp. Stability: $\pm 0.06\%/^{\circ}\text{C}$. Variable Duty Cycle: 15:85:15 Continuously Variable. **Output Characteristics:** Impedance: 50 Ω $\pm 10\%$. Level: 20V p-p Open-circuit, 10V p-p into 50 Ω . **Amplitude:** Variable, 20dB range typical. **Attenuation:** $\pm 20\text{dB}$ $\pm 1\text{dB}$. DC Offset: Preset: $\pm 0.1\text{V}$ typical. **Variable:** $\pm 10\text{V}$ open-circuit, $\pm 5\text{V}$ into 50 Ω . **TTL Output:** Level: 8V to 2.4V. **Rise Time:** $\leq 20\text{ns}$. **Duty Cycle:** 50% typical. **CMOS Output:** Max frequency: 4MHz. **Level:** 4V p-p to 14.5V p-p, continuously variable. **Rise Time:** $\leq 120\text{ns}$. **VCG Input:** Input Voltage: 0-10V $\pm 1\text{V}$ causes a 100:1 frequency change. **Impedance:** 10K $\pm 5\%$. **Power Source:** 120/230VAC $\pm 10\%$ 50/60 Hz. Internal jumper selectable. **Accessories:** Output Cable, BNC to Alligator Clips, Instruction Manual. **Dim.:** (HxWxD) 85.73mm x 263.53mm x 290.51mm.

2MHz Function Generator

Model BK4010-ND: Frequency Characteristics: Range: 0.2Hz to 2MHz in 7 ranges. **Dial Accuracy:** $\pm 5\%$ (BK4010-ND). **Tuning Range:** 10:1. **Operating Modes:** Normal, VCG (Voltage Controlled Generator). **Sine Wave:** Distortion: 0.5Hz to 100kHz: $\leq 1\%$ $> 100\text{kHz}$: $\leq 35\text{dB}$ below fundamental. **Flatness:** $\leq 5\%$ (35dB). **Square Wave:** Symmetry: 0.5Hz to 2MHz $\geq 2\%$. **Rise Time:** $\leq 20\text{ns}$. **Triangle Wave:** Linearity: $\geq 98\%$ to 100kHz, $\geq 95\%$ to 2MHz.

5MHz Function Generator with Digital Display

Model BK4011-ND: Frequency Characteristics: • Range: 0.5Hz to 5MHz in 7 ranges • Resolution: 4 digits • Tuning Range: Coarse: 10:1. Fine: $\pm 5\%$ of Coarse Setting • Operating Modes: Normal, VCG (Voltage Controlled Generator) • Sine Wave: Distortion: 0.5Hz to 100kHz: $\leq 1\%$ $> 100\text{kHz}$: $\leq 35\text{dB}$ below fundamental • Flatness: $\leq 5\%$ (35dB) • Square Wave: Symmetry: 0.5Hz to 5MHz $\geq 2\%$ • Rise Time: $\leq 20\text{ns}$ • Triangle Wave: Linearity: $\geq 98\%$ to 100kHz, $\geq 95\%$ to 5MHz. **Frequency Counter:** • Accuracy: Time Base Accuracy ± 1 count • Time Base Accuracy: $\pm 10\text{ppm}$ (23°C $\pm 5^{\circ}\text{C}$)

10MHz Sweep/Function Generator with Digital Display

Model BK4017-ND: Frequency Characteristics: • Range: 0.1Hz to 10MHz in 8 ranges • Resolution: 5 digits • Tuning Range: Coarse: 10:1. Fine: $\pm 5\%$ of Coarse Setting • Operating Modes: Normal, Sweep, VCG (Voltage Controlled Generator) • Sine Wave: Distortion: 0.1Hz to 100kHz: $\leq 1\%$ $> 100\text{kHz}$: $\leq 35\text{dB}$ below fundamental • Flatness: $\leq 5\%$ (35dB) • Square Wave: Symmetry: 0.1Hz to 10MHz $\geq 2\%$ • Rise Time: $\leq 20\text{ns}$ • Triangle Wave: Linearity: $\geq 98\%$ to 100kHz • Sweep Operation: Mode: LIN/LOG. Width: 100:1, continuously variable. Rate: .5sec to 30sec, continuously variable • Sweep Output: 0 to 2V. **Frequency Counter:** • Accuracy: Time Base Accuracy ± 1 count • Time Base Accuracy: $\pm 1\text{ppm}$ (23°C $\pm 5^{\circ}\text{C}$) • Display: 5 digit LED.

20MHz Sweep/Function Generator with Frequency Counter and Digital Display

Model BK4040-ND: Frequency Characteristics: • Range: 0.2Hz to 20MHz in 8 ranges • Resolution: 5 digits • Tuning Range: Coarse: 10:1. Fine: $\pm 10\%$ of Coarse Setting • Operating Modes: Normal, Sweep, VCG (Voltage Controlled Generator), AM, FM, Burst • Sine Wave: Distortion: 0.2Hz to 100kHz: $\leq 1\%$ $> 100\text{kHz}$: $\leq 35\text{dB}$ below fundamental. **Flatness:** $\leq 5\%$ (35dB) • Square Wave: Symmetry: 0.2Hz to 20MHz $\geq 2\%$. **Rise Time:** $\leq 20\text{ns}$ • Triangle Wave: Linearity: $\geq 98\%$ to 100kHz • Sweep Operation: Mode: LIN/LOG. Width: 100:1, continuously variable. Rate: .5sec to 30sec, continuously variable • Sweep Output: 0 to 2V • Start/Stop Frequencies: Adjustable. **AM Modulation Characteristics:** • Source: Internal, External • Modulation Ratio: 0 to 100% • Int Modulation: 1KHz • Ext Modulation: DC to 20KHz • EXT Sensitivity: $< 10\text{V}$ fir 100% modulation. **Burst Characteristics:** • Source: Internal, External • Burst Width: Continuously variable from 5% to 90% of internal gating frequency • Repetition Rate: 0.5Hz to 50Hz Internal DC to 500KHz external • External Level: TTL levels • Burst Frequency: Determined by the main generator frequency setting. Tone burst is in integral cycles of frequency being gated. **Frequency Counter:** Accuracy: Time Base Accuracy: ± 1 count. Time Base Accuracy: $\pm 10\text{ppm}$ (23°C $\pm 5^{\circ}\text{C}$). Display: 5 digit LED. Mode: INT External Input: Frequency: 5Hz to 30MHz. Resolution: 0.1, 1.0, 10.0Hz. Sensitivity: $\leq 20\text{mV}$ rms. Impedance: 1M Ω 100pF.

BK4010-ND	2MHz Function Generator	\$250.00
BK4011-ND	5MHz Function Generator w/Digital Display	\$315.00
BK4017-ND	10MHz Sweep/Function Generator with Digital Display	\$399.00
BK4040-ND	20MHz Sweep/Function Generator with Frequency Counter & Digital Display	\$545.00

NEW! Frequency Counters

Model 1870-ND: 1.25GHz, portable, handheld, battery powered
Model 1875-ND: 2.5GHz, portable, handheld, battery powered.
Model 1856B-ND: 2.7GHz, benchtop, with large LCD & HF inputs. Battery and AC power sources.

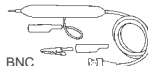
BK1870-ND	1.25GHz Portable Handheld Counter	\$209.00
BK1875-ND	2.5GHz Portable Handheld Counter	\$249.00
BK1856B-ND	2.7GHz Benchtop Freq. Counter	\$469.00

NEW! Telescoping Antenna with BNC Connector

For BK1870-ND and BK1875-ND Frequency Counters
 AT-20-ND \$25.00

Oscilloscopes

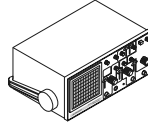
Demodulator Probe for Oscilloscopes



All purpose demodulator/detector probe with BNC Connector, usable with most oscilloscopes. Features include lightweight design and 1.2m coaxial cable. Probe bodies are constructed of rugged plastic and shielded. Ergonomically designed handle. **Input Voltage:** 200V Max. **HF Voltage:** 50Veff. **Max. Bandwidth:** 100kHz to 950MHz. **Input Impedance:** 5pF.

PR-32A-ND NEW! \$60.00

20, 60, 100 MHz Dual Trace Oscilloscope



General Specifications: Power Source: 115/230VAC $\pm 10\%$, 50/60Hz Accessories Supplied: Two 10:1 Probes, Power Cord, Instruction Manual

Model BK2120B-ND: 20MHz Dual-Trace operation. 1 mV/div. sensitivity. AUTO-NORM triggered sweep operation with AC, TVH, TVV, line coupling and DC. Calibrated 23 step timebase with x10 magnifier. Approx. 40W. **Dimensions:** 368.30mm x 177.80mm x 439.42mm. **Two year warranty.**

Model BK2160A-ND: 60MHz Dual-Trace 1 mV/div sensitivity. Sweep to 5 nS/div. **Main Time Base:** 23 calibrated ranges. **Delayed Time Base:** 19 calibrated ranges. Signal delay line. V mode-displays two signals unrelated in frequency. Component tester. Z axis input. Single sweep. Beam finder. **Dimensions:** 134.62mm x 330.20mm x 406.40mm. **Three year warranty.**

Model BK2190B-ND: 100MHz Dual-Trace Dual Time Base Oscilloscope. 1mV/div sensitivity. Sweeps to 5nS/division. **Main Time Base:** 22 calibrated ranges. **Delayed Time Base:** 19 calibrated ranges. Calibrated delay time multiplier. **Signal Delay Line:** 15 kV accelerating voltage. **Channel 1 output:** Output Voltage: Approx. 100mV/division open circuit. Approx. 50 mV/division into 50-ohms. **Output Impedance:** Approx. 50 ohms. Approx. 60W. **Dimensions:** 139.70mm x 320.04mm x 429.26mm. **Three year warranty.**

BK2120B-ND	20MHz	\$499.00
BK2160A-ND	60MHz	\$999.00
BK2190B-ND	100MHz	\$1499.00

Oscilloscope Probes

Model BKPR33A-ND: Bandwidth: 90MHz (15MHz) Division Ratio: x10 (x1). **Input R:** 10M Ω (1M Ω). **Input C:** 15pF (45pF). **Compensation:** 15 - 35pF. **Max Voltage:** 600V (200V). **Length:** 1.32 meters approx. **Connector:** BNC. **NOTE:** Specifications in () refer to x1 position. **Three month warranty.**

Model BKPR-37AR-ND: Bandwidth: 150MHz (6MHz). **Division Ratio:** x10 (x1). **Input R:** 10M Ω (1M Ω). **Input C:** 15pF (100pF). **Compensation:** 15 - 35pF. **Max Voltage:** 600V. **Length:** 1.32 meters approx. **Connector:** BNC. **NOTE:** Specifications in () refer to x1 position. **Six month warranty.**

Model BKPR100A-ND: Bandwidth: 250MHz. **Division Ratio:** x100. **Input R:** 100M Ω . **Input C:** 6.5pF. **Compensation:** 10 - 35pF. **Max Voltage:** 1200V. **Length:** 1.37 meters approx. **Connector:** BNC. **Six month warranty.**

BKPR-33A-ND	90MHz	\$43.00
BKPR-37AR-ND	150MHz	\$56.00
BKPR-100A-ND	250MHz	\$72.00

DC Power Supplies

DC Power Supplies to 240W Output



All models are backed by B+K's 2-year warranty. All models have short circuit protection, overload protection, reverse polarity protection, thermal protection, and current limiting. All models have CV and CC operation. 0.02% +2mV line and 0.04%+2mV load regulation (zero to full load), adjustable current limits (five to 100%), low ripple ($\leq 1\text{mVrms}$), fast recovery time ($\leq 100\mu\text{S}$), and operate from 120VAC $\pm 10\%$, 60Hz. **Dimensions:** 144.78mm x 266.7mm x 381mm. **Test Lead Set TL-5A and TL-30 sold separately.**

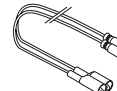
Model BK1746-ND: Single 0-16V, 0-10A output. Two analog meters. **Voltmeter:** 0-16V $\pm 2.5\%$. **Ammeter:** High Range = 0-11A, Low Range = 0-2.2A, Accuracy = $\pm 2.5\%$. **Power Consumption:** 380W

Model BK1740-ND: Single 0-60V, 0-4A output. Two analog meters. **Voltmeter:** 64V $\pm 2.5\%$. **Ammeter:** High Range = 0-4.4A, Low Range = 0-1.1A, Accuracy = $\pm 2.5\%$. **Power Consumption:** 450W

Model BK1743-ND: Single 0-35V, 0-6A output. Two 3-digit LED meters. **Voltmeter:** 0-99.9V (green) $\pm (0.5\% \text{ rdg} + 2 \text{ digits})$. **Ammeter:** High Range = 0-99.9A (red), Accuracy = $\pm (0.5\% \text{ rdg} + 2 \text{ digits})$. **Power Consumption:** 420W

BK1746-ND	0-16V, 0-10A	\$515.00
BK1740-ND	0-60V, 0-4A	\$515.00
BK1743-ND	0-35V, 0-6A	\$515.00

Power Supply Hook-up Cables

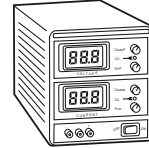


NEW! TL-5A-ND: 5A power supply leads. Banana plug on supply end. Alligator clamp on component end.

BKTL-30-ND: 30A power supply leads. Spade lug on supply end. Alligator clamp on component end.

TL-5A-ND	5A Power Supply Lead NEW!	\$9.00
BKTL-30-ND	30A Power Supply Lead	\$12.50

Single Output Power Supply



All models are backed by B+K's 2-year warranty. All models have short circuit protection, overload protection, reverse polarity protection, thermal protection, and current limiting. All models have CV and CC operation, 0.01% +3mV line and load regulation (zero to full load), adjustable current limits (5 to 100%), low ripple ($\leq 1\text{mVrms}$), fast recovery time ($\leq 100\mu\text{S}$), and operate from 120 VAC $\pm 10\%$, 60Hz. **Dim.:** 157.48 x 139.70 x 317.50mm.

Test Lead Set TL-5A and TL-30 sold separately above.

Model BK1710-ND: Single 0-30V, 0-1A output. Two analog meters. **Voltmeter:** 0-32 $\pm 2.5\%$. **Ammeter:** High Range = 0-1.04A, Low Range = 0-0.26A, Accuracy = $\pm 2.5\%$. **Power Consumption:** 70W.

Model BK1711-ND: Single 0-60V, 0-2A output. Two analog meters. **Voltmeter:** 0-64 $\pm 2.5\%$. **Ammeter:** High Range = 0-2.2A, Low Range = 0-0.55A, Accuracy = $\pm 2.5\%$. **Power Consumption:** 210W.

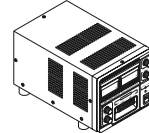
Model BK1715-ND: Single 0-60V, 0-2A output. Two 3-digit LED meters. **Voltmeter:** 0-99.9V (green) $\pm (0.5\% \text{ rdg} + 2 \text{ digits})$. **Ammeter:** Range = 0-99.9A (red), Accuracy = $(0.5\% \text{ rdg} + 2 \text{ digits})$. **Power Consumption:** 210W.

Model BK1730-ND: Single 0-30V, 0-3A output. Two analog meters. **Voltmeter:** 0-32 $\pm 2.5\%$. **Ammeter:** High Range = 0-3.2A, Low Range = 0-0.53A, Accuracy = $\pm 2.5\%$. **Power Consumption:** 180W.

Model BK1735-ND: Single 0-30V, 0-3A output. Two 3-digit LED meters. **Voltmeter:** 0-99.9V $\pm 0.5\%$. **Ammeter:** Range = 0-9.99A, Accuracy = $\pm 0.5\%$. **Power Consumption:** 180W.

BK1710-ND	0-30V, 0-1A	\$235.00
BK1711-ND	0-60V, 0-2A	\$315.00
BK1715-ND	0-60V, 0-2A	\$389.00
BK1730-ND	0-30V, 0-3A	\$319.00
BK1735-ND	0-30V, 0-3A	\$389.00

Triple Output Power Supply



Two Main sections capable of independent or tracking operation (Master & Slave). One fixed section. Switchable series/parallel control and adjustable current limit controls for Main sections. Two displays: one reads volts or amps of "slave" supply; one reads volts or amps of "master" supply or fixed supply. Constant current & voltage indicators for Main sections. **Power Source:** 120VAC, $\pm 10\%$ 60Hz. **Accessories Supplied:** Spare fuse, Instruction Manual, Power Cord. Test Lead Set TL-5 is sold separately.

Model BK1760-ND: Two 0-30VDC, 2A sections, One 5VDC, 4A section. Switchable series/parallel operation for 24V sections. Three Digit LED Displays. **Dimensions:** 99.06mm x 238.76mm x 190.50mm **2 year warranty.**

Model BK1651-ND: Two 0-24VDC, 0.5A sections, One 5V, 4A section. Switchable series/parallel operation for 24V sections. Two Analog Displays. **Accessories Included:** Test leads (3 Pairs) **Dimensions:** 314.96mm x 381mm x 165.10mm. **1 year warranty.**

Model BK1670-ND: Produces 3 outputs simultaneously. #1 = 0-30V @ 2.5A, #2 = 12VDC @ 500mA and #3 = 5VDC @ 500mA. Three digit LCD displays. **Dimensions:** 139.70mm x 149.22mm x 241.30mm. **Flame retardant case. 1 year warranty.**

BK1760-ND	2x 30V, 2A, 5V, 4A	\$650.00
BK1651-ND	2x 24V, 0.5A, 5V, 4A	\$435.00
BK1670-ND	3x outputs	\$199.00

NEW! Programmable Power Supplies

• **Standard GPIB Interface:** Greater flexibility interfacing with a number of third party GPIB cards, computers and controllers • **Load Effect:** 0.001% +1mV; 1mA current • **Parallel and Series Operation:** (1775 & 1780) increases useable voltage and current capabilities for a wider variety of applications. One power supply satisfies a greater number of applications • **Front Panel keypad:** Easy entry to set voltage, current, overvoltage and over-current • **Remote Sensing:** Maintains set voltage regardless of lead loss • **Backlit LCD Display:** Vital output information, voltage, current and operating mode • **True RMS Reading Metering:** Reliable means of comparing dissimilar waveforms • **50k MTBF:** High reliability with no downtime

General Specifications: • **Programming Accuracy:** Voltage: 0.05% +2LSB; Current: 0.15% +5LSB • **PARD:** Voltage: 01mVrms/10mV p-p; Current: 1mA rms • **AC Input:** 115/220 VAC • **Operating Temp. Ratings:** 0°C to 50°C • **Storage Temperature Ratings:** -40°C to 70°C • **GPIB Interface Capability:** SH1, AH1, T6, TED, L4, LED, AL1 SRD, C1, DTD, CO, E1 • **Warranty:** Three years • **Weight:** 1780 & 1770: 13 lbs. 8.1kg; 1775: 20 lbs (9 kg) • **Dimensions:** 8.4" x 5.2" x 15.7" (213mm x 132mm x 399mm)

Model BK1780-ND: 0-18V, 0-4A DC output • Programming Resolution: 5mV, 1.5mA, 100mV DVP

Model BK1775-ND: 0-35V, 0-2A DC output • Programming Resolution: 10mV, 0.6mA, 200mV DVP

Model BK1770-ND: 0-17.5V, 0-35V, 0-6A; 0-3A DC output • Programming Resolution: 10mV, 2mA, 200mV DVP

BK1780-ND	0-18V, 0-4A	\$1350.00
BK1775-ND	0-35V, 0-2A	\$1295.00
BK1770-ND	0-17.5V, 0-35V, 0-6A	\$950.00

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

Multimeters

NEW! Pen Style DMM

With Current Clamp and Temperature Adapter

DMM is a 3200 count multimeter that measures VDC, VAC resistance and checks continuity and diodes. The current clamp head attaches to the top of the DMM and reads out in VAC up to 300A. The temperature adapter also attaches to the top of the DMM and reads temperature out in millivolts.

Specifications: VAC: 3.2V to 600V, 1.7% accuracy. VDC: 320mV to 600V, 0.7% accuracy. Resistance: 320Ω to 30MΩ, 1.0% accuracy. AC Current: 0.1A to 300A (CH-100), 1.9% accuracy. Temperature: -58°F to 1834°F (-50°C to 1001°C), 0.5% accuracy

BK2720-ND \$165.00

NEW! High Performance Dual-Display Multimeters

General Specifications: • 4,000/40,000 selectable display counts • 67/50V AC • 61/1000V DCV • ±(0.06%+3) basic DCV accuracy • 61/0A AC and DC current • 6.0 to 40MΩ resistance • Auto or manual ranging • Voltage range frequency of 5200KHz on dual display • dB measurement • 7/9,999µF capacitance • Bargraph • Min./Max., Data and Refresh hold • Relative zero • RS232 output • Diode and continuity test • Auto-off

Model BK2880A-ND: DMM with AC Coupled RMS.

Model BK2890-ND: DMM with frequency counter to 10MHz. True RMS: AC + (AC + DC) Coupled. Operating Temperature: to 2502°F (1372°C). Square Wave Output: 16 / 4.8KHz @ 0 to +3V. Timer + Signal Output: Max. Timer 99Ksec. @ 0 to +3V. Backlight

BK2880A-ND \$199.00
BK2890-ND \$299.00

NEW! Clamp-on Multimeters



General Specifications: • Power Requirements: One 9V battery • Jaw Opening: 2.24" (56.9mm) for Models 330B, 340B, 350B and 369B; 1.75" (44.45mm) for Model 367
Accessories Included Battery, test leads, instruction manual, carrying case.

Model BK330B-ND: AC Current: 200A to 1000A, 2 ranges, ±(1.5% rdg + 5D) accuracy, 1200A overload protection. AC Voltage: 750V, ±(1.2% rdg + 5D) accuracy, 1000V DC/750V RMS overload protection, 4.5MΩ input impedance. DC Voltage: 1000V, ±(0.5% rdg + 1D) accuracy, 1000V DC/750V RMS overload protection, 10MΩ input impedance. Resistance: 200Ω to 2000MΩ, 14 ranges. Frequency: 40KHz. Capacitance: 200µF. Dimensions: 10.8" x 3.6" x 1.7" (275mm x 90mm x 43mm). Weight: 17 oz. (481.9gm). Features: • Continuity • Diode • 2000 count resolution • Data hold • Max. hold • UL Listed

Model BK340B-ND: AC Current: 20A to 1000A, 3 ranges, ±(1.5% rdg + 5D) accuracy, 1200A overload protection. AC Voltage: 200V to 750V, 2 ranges, ±(1.2% rdg + 5D) accuracy, 1000V DC/750V RMS overload protection, 4.5MΩ input impedance. DC Voltage: 200mV to 1000V, 3 ranges, ±(0.5% rdg + 1D) accuracy, 1000V DC/750V RMS overload protection, 10MΩ input impedance. Resistance: 200Ω to 2000MΩ, 14 ranges. Frequency: 40KHz. Capacitance: 200µF. Dimensions: 10.8" x 3.6" x 1.7" (275mm x 90mm x 43mm). Weight: 17 oz. (481.9gm). Features: • Continuity • Diode • 2000 count resolution • Data hold • Max. hold • UL Listed

Model BK350B-ND: AC Current: 32A to 1000A, 3 ranges, ±(1.5% rdg + 5D) accuracy, 1200A overload protection. AC Voltage: 320mV to 1000V, 5 ranges, ±(1.5% rdg + 4D) accuracy, 1000V DC/750V RMS overload protection, 10MΩ overload protection. DC Voltage: 320mV to 1000V, 5 ranges, ±(0.5% rdg + 1D) accuracy, 1000V DC/750V RMS overload protection, 10MΩ input impedance. Resistance: 320Ω to 2000MΩ, 14 ranges. Frequency: 320Hz to 32KHz, 3 ranges, ±(1% rdg + 2D) accuracy, 500V DC/AC RMS. Dimensions: 10.8" x 3.6" x 1.7" (275mm x 90mm x 43mm). Weight: 17 oz. (481.9gm). Features: • Continuity • Diode • 3200 count resolution • Bargraph • Data hold • Peak hold • Range hold • UL Listed

Model BK367-ND: AC and DC Current: 200A to 2000A, 2 ranges, ±(1.5% rdg + 5D) accuracy, 2000A overload protection. AC Voltage: 750V, ±(1% rdg + 2D) accuracy, 800V overload protection, 10MΩ input impedance. DC Voltage: 200V, ±(0.8% rdg + 1D) accuracy, 1000V overload protection, 10MΩ input impedance. Resistance: 10Ω to 3.75" x 1.44" (254mm x 95mm x 36mm). Weight: 1.5 lbs. (68kg). Features: • Diode • 2000 count resolution • Data hold • Peak hold

Model BK369B-ND: AC and DC Current: 400A to 1000A, 2 ranges, ±(1.5% rdg + 5D) accuracy, 1200A overload protection. AC Voltage: 400mV to 1000V, 5 ranges, ±(1.5% rdg + 4D) accuracy, 1000V DC/750V RMS overload protection, 10MΩ input impedance. DC Voltage: 400mV to 1000V, 5 ranges, 0.5% accuracy, 1000V DC/750V RMS overload protection, 10MΩ input impedance. Resistance: 400Ω to 40MΩ. Frequency: 100Hz to 400KHz, 5 ranges. Capacitance: 4nF to 40µF. Dimensions: 10.8" x 3.6" x 1.7" (275mm x 90mm x 43mm). Weight: 18.3 oz. (518.9gm). Features: • True RMS • Continuity • Diode • 4000 count resolution • Bargraph • Data hold • Peak hold • Range hold • Max/Min • Relative • UL Listed

BK330B-ND 200/1000A \$95.00
BK340B-ND 20/200/1000A \$115.00
BK350B-ND 32/320/1000A \$155.00
BK367-ND 200/2000A \$175.00
BK369B-ND 400/1000A \$205.00

Analog Multimeter



Model BK114A-ND: 20,000Ω/Volt Multimeter. 28 ranges. 88.90mm mirrored scale. Tests batteries under load. Test transistors. Power Source: Two 1.5 volt batteries (Digi-Key Part No. P103-ND) and one 9V battery (Digi-Key Part No. P104-ND). Size: 146.05mm x 98.43mm x 34.93mm. Accessories Supplied: Batteries, test leads (1 red and 1 black), transistor test leads, instruction manual.

BK114A-ND \$43.00

Pocket Size Multimeter



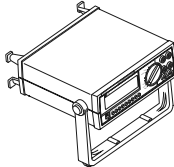
Measures DC & AC Voltage: 50/250/500VAC, 10/50/250/500VDC scales with ±5% accuracy (full scale). 2000Ω/V. Measures DC current: 25/250mA with ±5% accuracy (full scale). Measures resistance: 0-10k/1MΩ, ±5% degree arc of scale length. Measures decibel: +4dB to +56dB on AC voltage ranges. Bargraph Test Range: 1.5V/9V. Power Supply: One 1.5V, AA battery (Digi-Key Part No. P103-ND). Dimensions: 80mm x 120mm x 30mm. Accessories Supplied: Battery, test leads, and instruction manual.

BK117B-ND NEW! \$20.00

Bench DMM

"Certificate of Traceability Supplied"

All Models: • 50,000 count • True RMS, AC or AC + DC • Capacitance to 50,000 µF • IEC1010, class 2 safety compliance • Three year Warranty.



Model BK-5490-ND: • RS-232 interface standard • 0.025% DCV • 0.07%Ω • 100 kHz AC response • Autoranging, bargraph with zoom • Frequency, duty cycle, pulse width • dB across 1Ω to 10kΩ • Power across 1Ω to 1kΩ • Min./Max./Avg. • 100 to 253 VAC, 50/60 Hz

Model BK-5470-ND: • RS-232 interface standard • 0.05% DCV • 0.07%Ω • 100 kHz AC response

• Autoranging, bargraph with zoom • Frequency, duty cycle • Temperature mode • dB across 1Ω to 10kΩ • Min./Max./Avg. • 100 to 253 VAC, 50/60 Hz

Model BK-5460-ND: • 0.1% DCV • 0.1% ohms • 30 KHz AC response • Autoranging, bargraph • Frequency, duty cycle • 100 to 253 VAC, 50/60 Hz

BK-5490-ND \$650.00
BK-5470-ND \$499.00
BK-5460-ND \$399.00

"Tool Kit" Multimeters



Display: 3-1/2 digit, high-contrast 17.78mm LCD, 1999 counts. Sampling: 3 times/sec. (nominal). 0.5%DCV accuracy. DC current to 10A. Diode Test. Drop resistant case. Audible continuity. Operating Temp: 0°C to +50°C, 0% to 70% RH. Power Requirements: 9V battery (Digi-Key Part No. P104-ND). Accessories Included: Battery, Test Leads, and Instruction Manual. One year Warranty.

Model BK2702-ND: DMM, Display: 3-1/2 digit, high-contrast 24.13mm LCD, 1999 counts, DCV to 1000V, 5 ranges, ±0.6% accuracy. ACV to 750V, 5 ranges, 200mV to 750V. Resistance: 200Ω to 20MΩ. Rubber holster included. Dimensions: 170.18mm x 86.36mm x 35.56mm

Model BK2704B-ND: DMM, Component Tester with Frequency Counter. Resistance: 0.1Ω to 20MΩ. Capacitance: to 20µF. Transistor Gain Measure: (hFE). Frequency Counter: Autoranging from 10Hz to 15MHz with a sensitivity of 1 volt rms and an accuracy of 0.5%. Dimensions: 149.86mm x 78.74mm x 33.02mm.

Model BK2703B-ND: DMM, measures voltage, resistance, and current. Display: 3-1/2 digit, high-contrast 17.78mm LCD, 1999 counts, 0.5%DCV accuracy. Resistance: 0.1Ω to 20MΩ. Dimensions: 149.86mm x 78.74mm x 33.02mm.

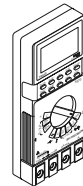
Model BK2706A-ND: DMM, Component tester and temperature meter with frequency counter. Resistance: 0.1Ω to 20MΩ. Capacitance: to 20µF. Temperature: 0°C to 750°C. Transistor Gain Measure: (hFE). Frequency Counter: Autoranging from 10Hz to 15MHz with a sensitivity of 1 volt rms and an accuracy of 1%. DC and AC Current: 2 amp range. Thermocouple probe included. Dimensions: 149.86mm x 78.74mm x 33.02mm.

Model BK2707A-ND: Autoranging DMM, Component tester and temperature meter. Resistance: 0.1Ω to 20MΩ. Frequency: 10Hz to 15MHz. Capacitance: to 20µF. Logic probe function: (TTL). Transistor Gain Measure: (hFE). Dimensions: 149.86mm x 78.74mm x 33.02mm.

BK2702-ND \$42.90
BK2704B-ND \$59.00
BK2703B-ND \$39.00
BK2706A-ND \$79.00
BK2707A-ND \$89.00

Premium DMM

"Certificate of Traceability Supplied"



All Models: • 50,000 count • True RMS, AC or AC + DC • Capacitance to 50,000 µF • Splashproof sealed case • IEC1010, class 2 safety compliance • Three-year Warranty

Model BK-5390-ND: • 0.025% DCV • 0.07% ohms • 100 KHz AC response • Autoranging, bargraph with zoom • Frequency, duty cycle, pulse width • dB across 1Ω to 10kΩ • Power across 1Ω to 10kΩ • Disturbance indicator • Min./Max./Avg.

Model BK-5380-ND: • 0.025% DCV • 0.07% ohms • 100 KHz AC response • Autoranging, bargraph • Frequency • dB

Model BK-5370-ND: • 0.05% DCV • 0.07% ohms • 100 KHz AC response • Autoranging, bargraph with zoom • Frequency, duty cycle, pulse width • dB across 1Ω to 10kΩ • Disturbance indicator • Min./Max./Avg.

Model BK-5360-ND: • 0.01% DCV • 0.1% ohms • 30 KHz AC response • Autoranging, bargraph • Frequency, duty cycle

BK-5390-ND \$325.00
BK-5380-ND \$309.00
BK-5370-ND \$289.00
BK-5360-ND \$229.00
AK-5300-ND Communications Hardware \$195.00
AK-5350-ND Calibration Software \$95.00

3 1/2 Digit Ruggedized DMM



The Survivor™. High Energy Fused Ruggedized DMM. 3-1/2 digit 20.32mm high contrast LCD display. Audible Continuity: 20 Amp range. Sampling: 2.5 times/sec (nominal). Heavy Duty 1500VDC, 1000VAC rating. Water resistant case. Power Requirements: Single 9V battery. Auto Power Off: approximately 30 min. Dimensions: 174.50mm x 88.90mm x 38.10mm. Accessories Supplied: Battery, Test Leads, Instruction Manual, Rubber Boot. Five year Warranty.

BK2860A-ND \$99.00
LC-29A-ND Carrying Case (1 year Warranty) \$11.00

Pocket DMM



Pocket DMM. Analog bar graph with 32 segments. 3200 count LCD display. Auto power off. Low battery indicator. Range hold. Data hold. Integral test leads (one red, one black). Power: 1.5V button type 10 batteries. Dimensions: 111.76mm x 55.88mm x 10.16mm. Accessories Supplied: Batteries, Instruction Manual, Case.

BK2700-ND \$35.00

"Test Bench" Multimeters



High quality, ruggedized, multi-function DMM's in a drop resistant case. Resistance and Frequency measurement. Diode check. Auto power off. All current ranges fused. Power Requirements: Single 9V battery, Digi-Key Part No. P104-ND. Dimensions: 190.50 x 86.36 x 38.10mm. Accessories Supplied: 9 Volt Battery, Test Leads, Instruction Manual, Rubber Boot. Three year warranty.

Model BK388A-ND: 3-3/4 Digit 15.24mm LCD Display, 41 ranges. DC and AC current. Drop resistant to 4 feet. 0.5% DCV accuracy. Resistance: 0.1Ω to 4MΩ. Frequency: 1Hz to 4MHz. Capacitance: to 40µF. Logic level measure (TTL). Transistor gain (hFE) and peak hold.

Model BK390-ND: 3-3/4 Digit 11.43mm LCD Display (4000 count). Analog Bar Graph: 42 segments. 0.1% DCV accuracy. Auto/manual ranging. Capacitance measurement. Temperature probe. Relative mode. Min-max hold. Memory. Audible continuity. Data hold. Thermocouple probe included.

Model BK389-ND: 3-3/4 Digit 11.43mm LCD Display (4000 count). Analog Bar Graph: 42 segments. 0.25% DCV accuracy. Auto/manual ranging. Capacitance measurement. Relative mode. Min-max hold. Memory. Audible continuity. Data hold.

Model BK391-ND: 4-1/2 Digit 15.24mm LCD Display (20,000 count). True RMS reading. 0.05%DCV accuracy. Measures voltage to 1,000VDC and 750VAC; amps to 20ADC and AC; and ohms to 20M. Data hold. Logic probe function. Duty cycle measurement.

BK388A-ND \$125.00
BK390-ND \$165.00
BK389-ND \$145.00
BK391-ND \$185.00
LC-29A-ND Carrying Case for use with Test Bench Multimeter (1 year warranty) \$11.00

Accessories

Temperature Adapter



Type K thermocouple. Measures from -50°C to +1000°C. 1mV per degree. Measures temperature of any surface, liquid or gas. Converts any voltmeter to measure temperature. Open probe warning. Power: Standard 9V battery (Digi-Key Part No. P104-ND). Dimensions: 121.92mm x 45.72mm x 30.48mm. Cable Length: .914 meters. Accessories Supplied: TP-29.

TP-30B-ND \$69.00

Temperature Probe

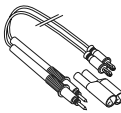
TP-5300-ND Platinum, for BK-5370 and BK-5470 \$89.00

Thermocouple Probe

Type K bead probe, Teflon tape insulated. **Maximum Insulation Temperature:** 260°C. **Probe Accuracy:** ±16°C or ±0.75% of reading, whichever is greater, from 0°C to 816°C. For Models 390, 2706, and other digital temperature meters.



TP-29-ND \$15.00



Test Leads

Universal Test Leads with unshrouded banana plugs includes red and black alligator clip attachments. Order BKTL-4-ND all B&K Precision "Tool Kit", "Test Kit", "Test Bench", "Survivor", bench DMMs, and most other brands.

BKTL-4-ND \$8.00



Deluxe Test Leads

Fits: B&K Precision "Test Bench", "Tool Kit" and "Survivor" series DMMs, and most other multi-meters. **Insulation:** Silicon insulation withstands soldering iron burns, pliable at low temperatures. **Probe:** Flexible PVC plastic handle provides the

ultimate in strain relief, 19.05mm diameter finger guard ring. **Tip:** Blunt brass tip with a notched tip for better contact with component leads. **Plug:** Safety type shrouded banana plug 90° with strain relief, flame retardant ABS plastic insulation. **Accessory Connector:** 8-32 threaded shank securely attaches screw-on accessory tips. **Length:** 1.22 meters. **Volt Rating:** 1000 volts. **Current Rating:** 10 amps. **Cable:** 18 gauge copper stranded. **Items Supplied:** 1 red and 1 black test lead, 1 black alligator clip; storage pouch. **Optional Accessories:** Model TL-3A Accessory Tips Kit.

TL-2A-ND NEW! \$20.00



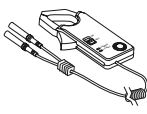
DMM Test Leads

Safety type shrouded banana plug. Fits all B&K Precision "Tool Kit", "Test Kit", "Test Bench", "Survivor" bench DMMs, and most other brands. 1000V 3A rating. PVC insulation, .914 meter length. Red and Black alligator clips included.

TL-1-ND \$8.00

DC/AC Current Clamp Adapter

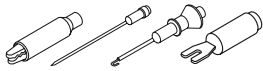
Measures current without disconnecting circuit under test. Measures to 400A DC or AC. Outputs 1 mV per Amp., operates on 2V range of any DMM. **Power Requirements:** 9V battery. **Operating Temperature:** 0° to 50°C, $70\% RH$. **Dimensions:** 177.80mm x 69.85mm x 33.02mm.



Accessories Included: Battery, Instruction Manual.

BKCP-3-ND \$86.00

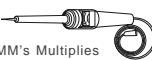
Accessory Tips Kit



Fits: B&K Precision Model TL-2A Deluxe Test Leads. **Attachment Method:** 8-32 threaded connector securely attaches screw-on tips to probe handle of TL-2A. **Insulation:** PVC. **Items Supplied:** One alligator clip (red); two component clips (1 red, 1 black); two #10 spade lugs (1 red, 1 black); two 3-inch (76.2mm) extension tips (1 red, 1 black); one storage pouch.

TL-3-ND 12.00

High-Voltage Probes



Model PR-28-ND: Accessory for DMM's Multiplies instrument ranges by 1000 (40V becomes 40,000V). PR-28 for use with any high impedance (10MΩ or greater) voltmeter. **Voltage Range:** 40kVDC and 20kVAC (60Hz). **Frequency Range:** DC-8Hz 20kVAC max. 60Hz. **Impedance:** 600MΩ. **Accuracy:** ±3% plus instrument accuracy. **Calibration:** Internal; factory calibrated at 25kV. **Size:** 355.6mm long; 57.15mm dia. (max.); 762mm cord. **Connector:** Dual banana.

Model PR-28A-ND: DMM Probe. Measures to 40,000VDC topology. Measures to 28,000VAC 50/60Hz. 1000MΩ Input impedance. 1000:1 Voltage divider. Compatible with most 10MΩ digital multi-meters. DMM Accessory.

NEW! Model HV-44A-ND: Built in meter for stand-alone operation (No DMM required). Measures voltages up to 40,000VDC. Factory calibrated at 25kV (±2% accuracy); full scale ±3% accuracy. Conventional round needle type tip and flat spring type tip for easy access to CRT anode. **Size:** 419.10mm x 53.98mm x 50.80mm **Color:** Black & Red. **Positive Polarity Only - Not for microwave ovens.**

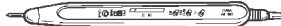
PR-28A-ND \$59.00

HV-44A-ND NEW! \$109.00

BKLC-32-ND Carrying Case \$22.00

Logic Probes

20MHz and 50MHz Logic Probes



Model DP-21-ND (20MHz Logic Probe): Tests TTL, DTL, RTL, HTL, CMOS, and MOS. Displays pulse presence and logic states. Memory mode "freezes" pulse display. Catches pulses to 30ns or pulses trains to 20MHz. 1MΩ input impedance. **Operating Supply Voltage Range:** TTL-5V, CMOS 5-15V. **Dimensions:** 17.78mm x 17.78mm x 208.28mm.

Model BKDP52-ND (50 MHz Logic Probe): Tests TTL and CMOS. Displays DC to 50MHz. Detects 10ns pulse width. Overload protected. 120kΩ input impedance. **Operating Supply Volt. Range:** 4-18VDC. **Dimensions:** 17.78mm x 17.78mm x 208.28mm.

DP-21-ND \$35.00

BKDP52-ND \$45.00

Pulsar Probe



For TTL and CMOS. Produces 10μS pulse signal at 100mA. External square wave terminal. **Output Current:** Pulsar mode-100mA sink/source square wave mode-5mA sink/source. **Operating Supply Voltage Range:** 5-15VDC. **Sync Input Impedance:** 1MΩ. **Dimensions:** 17.78mm x 17.78mm x 208.28mm.

DP-31A-ND \$35.00

Component Testers



Dual-Display LCR Bridge

Measures inductance, resistance, capacitance, DF & Q. Auto ranging, 4-digit LCD display. Auto calibrate. Tests at 120Hz or 1kHz. Relative mode. Tolerance mode. Basic accuracy 0.7%. **Dimensions:** 38.10mm x 88.90mm x 193.04mm. **Accessories Included:** Test leads, AC adapter, instruction manual.

BK878-ND \$275.00

LC-29A-ND Carrying Case (1 yr. warranty) \$11.00



LCR Meter

Model 875B-ND: Measures capacitance (200pF-20mF ±1%), resistance (2-20MΩ ±1%), and inductance (200μH-200H ±1%). 3-1/2 digit LCD display. Low battery and overload indicator. **Power:** Single standard 9V battery (Digi-Key Part No. P104-ND). **Dimensions:** 34.93mm x 88.9mm x 190.5mm. **Accessories Included:** Test leads, battery, spare fuse, instruction manual.

BK875B-ND NEW! \$189.00

LC-29A-ND Carrying Case (1 yr. warranty) \$11.00

Auto Ranging Capacitance Meter

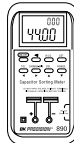


3-1/2 digit LCD display. Measures capacitance to 199.9nF, 10 ranges from 199.9pF to 199.9mF. **Power Source:** Four "C" size cells (Digi-Key Part No. P106-ND). **Dimensions:** 162.56mm x 111.76mm x 60.96mm.

BK830-ND \$350.00

NEW! Auto Ranging Capacitance Meter

Nine ranges 0.1pF to 50mF. 0.1pF resolution. 4 digit LCD display. Dual display. RS-232 output to PC. Data hold. Auto power off. Display zeroing. Audible alert mode (for sorting). High/Low limit sorting capability. **Power Source:** One 9V battery (Digi-Key Part No. P104-ND). **Dim.:** 37mm x 90mm x 192mm. **Accessories Included:** Protective holster, alligator clips, 9V battery, operation manual.



BK890-ND \$149.00

Capacitance Meter

3 1/2 digit LCD display. Nine ranges from 200pF to 20mF. 0.1pF resolution. Low battery and overrange indicator. **Power Source:** One 9V battery (Digi-Key Part No. P104-ND). **Dim.:** 144.78mm x 76.20mm x 40.64mm. **Accessories Included:** Test leads, battery, and manual.

BK810B-ND \$99.00

LC-29A-ND Carrying Case (1 yr. warranty) \$11.00

3 1/2 Digit Hand-Held Parts Tester



26 user ranges for versatile test selection. Tests capacitance from 0.1pF-20mF. Tests resistances from 0.1Ω-20MΩ. Tests transistors, SCRs, diodes and LEDs. Tests batteries under actual load conditions. **Power:** One 9V transistor battery (Digi-Key Part No. P104-ND). **Dimensions:** 174.63mm x 92.08mm x 31.75mm. **Accessories Included:** Test leads, spare fuse, battery, instruction manual.

BK815-ND \$99.00

LC-29A-ND Carrying Case (1 yr. warranty) \$11.00

NEW! Cable/Harness Tester

A compact, stand-alone unit that can be used for any type of wired assembly. Opens, shorts and miswires are detected immediately. A universal adapter card offers outstanding flexibility and convenience, ready to accept any of industry's most popular 22 connector styles. A crisp, easy-to-read LCD instantly indicates good or faulty connections and simplifies troubleshooting.

Connect Test Threshold: Resistance: Shorts <math><1300\Omega \pm 10\%</math>; Opens 1300Ω ±10%; Capacitance: Shorts >math>>0.6\mu F \pm 10\%</math>; Opens <math><0.6\mu F \pm 10\%</math>. **Test Conditions:** 5 volts at 6mA. **Max. Multiple Connection Display:** Up to 16 test points. **Test Cycle Time:** <math><0.5 sec.</math> **Test Point Capacity:** Max. 128 points (64 connections). **Program Storage:** Lithium battery backs up memory for 50 cables. **Probe:** Single wire test probe with standard .175" (4.45mm) banana jack. **Display:** 2 line x 16 character LCD; 2 LEDs (green/red) for "PASS" or "FAIL" conditions. **Printer Port:** Standard Centronics type parallel interface. **Power:** DC 12V-14V, 500mA AC adapter. **Dimensions:** (H x W x D): 2.1" x 13.8" x 9" (53.34mm x 350.52mm x 228.60mm). **Weight:** 6 lbs. (2.72kg)

Interface Qty. (Ea.)	Accepts These Connectors		
	Spacing/ Style	Connector Type	Max. Pins
8	0.1" (2.54mm)	Dual-Row	64
2	"D" Submini	Dual-Row	37
2	Delta	Centronics	80
2	0.6" (15.24mm)	DIP	40
2	RJ11	Phone Plug	6
2	RJ45	Phone Plug	8
2	0.156" (3.96mm) Header	Single-Row	20
2	0.1" (2.54mm) Header	Single-Row	32

BK205-ND \$895.00

NEW! SIMM Module Tester



Model 898-ND

Memory Types Tested: Module Types: 30-pin and 72-pin Single In-line modules (DRAM and 72-pin SO-DIMM with adapters). **Data Width:** up to 36 bit. **Address Depth:** up to 32M bytes. **Access Time Range:** 40 to 200nSEC. **Refresh Time:** 4 to 999 mSEC. **Refresh Modes:** Static-column and Page Mode. **Device Structure:** up to 2 banks 16M 36 bits.

Test Patterns: Walking Os, Walking 1s, checkerboard, inverse checkerboard, address walking bit Os, Address walking bit 1s, address refresh, bus noise, marching up, user programmable pattern, marching down.

Tests Performed: Memory bit test. Access Time. Refresh time.

User Programmable Parameters: Vcc: Four Independent Test Voltages. Access Time: 40-200nSEC. Refresh Time: 4-999mSEC. Preheat Time: 1-999 SEC. Tests Performed: User selectable.

Error Detection and Identification: Single data bits. Power and noise related failures. Solder opens and shorts. Timing related failures. Data retention errors. Intermittent failures.

Other Specifications: Test Sockets: Heavy Duty 30-pin and 72-pin SIMM. User Interface: 16 x 1 LCD, 4-button keypad. PC Interface: 9-pin RS-232 (9600, 8, 1, N, X-ON/X-OFF) For output of test results.

Power Adapter: Input: 115VAC, 60Hz, 0.2A. Output: 8VAC, 1.5A.

Dimensions (L x W x H): 8" x 6" x 2" (200mm x 150mm x 50mm). **Weight:** 4.5 lbs. (1.82kg).

Optional Accessories: 230 VAC Power Adapter. DRAM Test Adapter. 72-pin SO-DIMM Test Adapter.

BK898-ND \$730.00

SEALED UNIT PARTS CO., INC!



Digital Capacitor Tester

The MFD-10 will also check for open and short conditions and can be used as a continuity tester. For out-of-circuit use only. Cap must be discharged prior to testing.

Case Material: Hi-impact thermoplastic. **Batteries:** Four AA 1.5V batteries (Digi-Key Part No. P107-ND). **Dimensions:** 66.68mm x 34.93mm x 107.95mm. **Display:** 7.94mm high, light emitting diodes. **Switch Range:** From 0.01 to 10 MFD and 10 to 10,000 MFD. **Test Wires:** Furnished complete with alligator clips. **Back panel:** Removable for test wire storage.

DCT-ND \$79.95

Solid State Megohmmeter



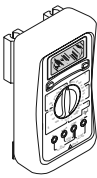
Specifically designed as an inexpensive alternative to costly taub band, (swing needle), megohmmeters. This reliable battery operated instrument, complete with LED indicators, will accurately measure insulation values up to 1000 megohms at 500 volts and also indicate the condition of insulation on the zone scale.

Specifications: Indicator range: 20 to 1000 Megohms. **Display:** Light emitting diodes. **Back panel:** Removable for test lead storage. **Case:** Hi-impact thermoplastic. **Dimensions:** 85.73mm x 161.93mm x 44.45mm. **Carrying case:** Vinyl, zippered (furnished). **Batteries:** Two "C" size 1.5 Volt (Order separately. Digi-Key Part No. P106-ND).

MGM-ND \$129.66



Multimeters



Model 290-1133-ND (TPI 133): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 200mV-2000V and 200µA-10A. Range AC: 200mV-750V and 200µA-10A. Resistance Range: 200-20MΩ. Diode test. Continuity buzzer. Data hold. Extra large LCD. Dimensions: 1.22" x 3.5" x 7.44" (30.99mm x 88.90mm x 188.98mm). Rubber boot included. Three Year Limited Warranty.

Model 290-1153-ND (TPI 153): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 400mV-1000V and 400µA-10A. Range AC: 4V-750V and 400µA-10A. Resistance Range: 400-40MΩ. Auto or manual range. Diode test. Continuity buzzer. Extra large LCD. Data hold. Min/Max/Ave and Record. Auto power off. Dimensions: 1.22" x 3.5" x 7.44" (30.99mm x 88.90mm x 188.98mm). Rubber boot included. Three Year Limited Warranty.

290-1133

Model 290-1163-ND (TPI 163): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 400mV-1000V and 400µA-10A. Range AC: 4V-750V and 400µA-10A. Resistance Range: 400-40MΩ. Auto or manual range. Diode test. Continuity buzzer. Extra large LCD. Data hold. Min/Max/Ave and Record. Auto power off. Dimensions: 1.22" x 3.5" x 7.44" (30.99mm x 88.90mm x 188.98mm). Rubber boot included. Three Year Limited Warranty.

Model 290-1283-ND (TPI 183): Meets CE and IEC 1010 safety standards. Specifications: Range DC: 400mV-1000V and 400µA-10A. Range AC: 4V-1000V and 400µA-10A. Resistance Range: 400-40MΩ. Capacitance Range: 100fj-10,000fj. Frequency Range: 200Hz-200KHz. Backlighted triple display with two-hold system. Record, compare and relative percentage modes. Auto or manual range. True RMS. Sleep mode. Transfer data directly to a PC with RS232 output. Dimensions: 1.22" x 3.5" x 7.44" (30.99mm x 88.90mm x 188.98mm). Rubber boot included. Three Year Limited Warranty.

NEW! Model 290-1120-ND (TPI 120): DMM Manual range. cULus pending. Continuity buzzer. Data hold. Specifications: Range DC: 2V-600V. Range AC: 200-600V. Resistance Range: 2KΩ. Accuracy: 0.75% +3 digits VDC; 1.2% +3 digits VAC; 1.0% +3 digits Ohm. LCD Counts: 2,000. Test leads and rubber boot included. (Boot hook optional).

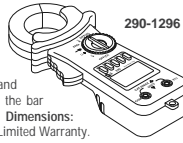
Model 290-1293-ND (TPI 293): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 40V-750V. Range AC: 40V-750V and 40A-700A. Resistance Range: 400-40KΩ. Frequency Range: 1KHz-10KHz. Diode test. Continuity buzzer. Auto range. True RMS. Peak hold. Data hold. Trim mode. Measures frequency of the current being measured while the bar graph display simultaneously indicates the current level. Sleep mode. Dimensions: 1.22" x 3.5" x 7.44" (30.99mm x 88.90mm x 188.98mm). Three Year Limited Warranty.

Model 290-1296-ND (TPI 296): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 40V-750V and 40A-700A. Range AC: 40V-750V and 40A-700A. Resistance Range: 400-40KΩ. Frequency Range: 1KHz-10KHz. HDR mode at line voltage and 60Hz. Auto or manual range. Diode test. Continuity buzzer. True RMS. Peak hold. Min/Max/Ave and Data hold. Measures frequency of the current being measured while the bar graph display simultaneously indicates the current level. Sleep mode. Dimensions: 1.22" x 3.5" x 7.44" (30.99mm x 88.90mm x 188.98mm). Three-Year Limited Warranty.



290-1440

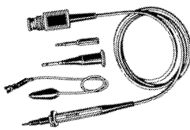
Model 290-1440-ND (TPI 440 Scope plus True RMS DMM): Hand-held oscilloscope. 1MHz DC Bandwidth. 25 Megasamples per second. Auto range. True RMS DMM to 4000 count. Continuous autoset. Real Time display. Cursor measurements. Flexible triggering including glitch capture. Roll mode. Frequency counter to 10MHz. Basic DC accuracy to 0.3%. Opto-Isolated RS-232C Port. Designed to meet IEC 1010-1 600V Cat III Rating. Dimensions: 8.75" x 3.88" (222.25mm x 98.55mm). Test leads included.



290-1296

Description	Digi-Key Part No.	Price Each	TPI Part No.
DMM 3-1/2 Digit, Model No. TPI 133	290-1133-ND	56.95	TPI 133
DMM 4 Digit, Model No. TPI 153	290-1153-ND	76.95	TPI 153
DMM 4 Digit, Model No. TPI 163	290-1163-ND	119.95	TPI 163
DMM 4 Digit, Model No. TPI 183	290-1283-ND	199.95	TPI 183
DMM 3 Digit, Model No. TPI 120	290-1120-ND	32.95	TPI 120
DMM 4 Digit, Model No. TPI 293	290-1293-ND	149.95	TPI 293
DMM 4 Digit, Model No. TPI 296	290-1296-ND	199.95	TPI 296
DMM Boot Hook	290-1103-ND	4.95	TPI A103
TPI 440 Hand-held Oscilloscope	290-1440-ND	349.95	TPI 440
Battery Charger for TPI 440	290-1441-ND	19.95	TPI A401
Carrying Case for TPI 440	290-1900-ND	19.95	TPI A900
Deluxe Test Lead Kit IEC1010	290-1041-ND	33.08	TL52000B
R/A Deluxe Test Lead Kit IEC1010	290-1042-ND	33.08	TL52000RB
Economy Test Lead Kit IEC1010	290-1043-ND	21.45	TL1000B
R/A Economy Test Lead Kit IEC1010	290-1044-ND	21.45	TL1000RB

Oscilloscope Probe Line



Specifications	Replaces Stack	Digi-Key Part No.	Price Each	TPI Part No.
20MHz, x 1	—	290-1000-ND	30.00	1P20B
100MHz, x 10	CP-901, CP-223, CP-801	290-1001-ND	39.00	P100B
100MHz, x 10*	CP-902, CP-240, CP-802	290-1050-ND NEW!	39.96	P100BR
200MHz, x 10	—	290-1002-ND	42.00	P200B
250MHz, x 100	—	290-1051-ND NEW!	44.96	P250
250MHz, x 100*	—	290-1052-ND NEW!	49.96	P250R
250MHz, x 10	CP-241	290-1053-ND NEW!	44.96	P250B
250MHz, x 10*	CP-243	290-1054-ND NEW!	55.00	P250BR
60MHz, x 10	CP-210	290-1003-ND	36.00	SP60B
100MHz, x 1 x 10	CP-209	290-1004-ND	45.00	SP100B
150MHz, x 1 x 10	—	290-1005-ND	47.00	SP150B
200MHz, x 1 x 10	—	290-1006-ND	49.00	SP200B
250MHz, x 1 x 10	—	290-1007-ND	51.00	SP250B
300MHz, x 1 x 10	CP-261	290-1008-ND	55.00	SP300B
60MHz, x 1 x 10	—	290-1055-ND NEW!	49.96	IP060
100MHz, x 1 x 10	CP-325	290-1056-ND NEW!	59.96	IP100
250MHz, x 1 x 10	—	290-1057-ND NEW!	69.96	IP250

* With Readout



Jumper Wire Test Leads

Handy test leads with insulated alligator clips attached to each end. Each package contains black, red, white, green and yellow jumpers.



GC396-ND Std. Test Leads, 2 Ea. 15" (38.10cm) long 27 AWG wires (10 Pkg.) \$6.68
GC397-ND Heavy Duty Test Leads, 1 Ea. 25" (55.88cm) long 21 AWG wires (5 Pkg.) \$6.44



Oscilloscope Probes and Accessories

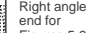
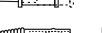
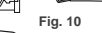
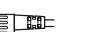
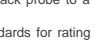
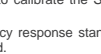
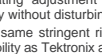
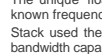
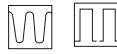
One out of every five oscilloscope users in the world has already used a STACK probe without knowing it!

CROSS REFERENCE GUIDE

60MHz B/W — CP-801-ND: Kikusui: C0S5040TM, C0S5041TM, C0S5020TM, C0S5021TM, DSS5020A. Hitachi: V-209, V-222, V-422, V-509.

60MHz B/W — CP-802-ND: Tektronix: 2221, 2211, 2224.

*Give us a call if your scope is not listed!



Loading resistance is 10MΩ (1 MΩ scope input resistance) for all x 10 probes except for the CP-264 & CP-320 which are 500Ω (50Ω scope input resistance). All probes have a 1.5 meter cable length except for the CP-320 which is 1.0 meter.

Oscilloscope Probes

Band-width	Atten. % Acc.	Capacitance Load	Comp. Scope	Comp. Range	Max. VDC	Access. Group	Digi-Key Part No.	Pricing 1 10
60MHz	x10 3%	19.5pF	25pF	20-45pF	600 A	—	CP-801-ND	35.00 315.00
60MHz	x10 3%	19.5pF	25pF	20-45pF	600 A	A	CP-802-ND1	41.67 375.00
100MHz	x10 2%	14pF	20pF	20-35pF	600 D	—	CP-240-ND1	80.00 720.00
1GHz	x10 3%	1pF	—	—	22rms C	—	CP-264-ND1	116.67 1050.00
8GHz	10:1	<0.5 pF	—	—	10Vrms	—	CP-320-ND	380.65 —

† Digital Readout Actuator • Ground Reference

Accessories

Fig.	Description	Digi-Key Part No.		Pricing		Digi-Key Part No.		Pricing	
		A	B	1	10	C	D	1	10
1	Retractable pincher tip	PF-004-ND	PF-004-ND	5.50	49.50	—	—	—	—
2	Ground lead	PF-060-ND	PF-060-ND	2.83	25.50	PF-014-ND	PF-061-ND	4.17	37.50
3	IC tip	—	PF-009-ND	1.67	15.00	PF-016-ND	PF-016-ND	1.67	15.00
4	BNC adaptor	—	PF-010-ND	4.83	43.50	PF-017-ND	PF-017-ND	6.67	60.00
—	Screwdriver	PF-094-ND	PF-094-ND	2.42	21.75	PF-094-ND	PF-094-ND	2.42	21.75

Test Leads and Accessories

Fig.	Description	Digi-Key Part No.	Pricing 1 10
5	Test Lead Set Standard 46" (1168.40mm)	CP-2601-ND	7.88 66.50
6	Test Lead Set Deluxe Extender	CP-2602-ND	14.63 123.50
7	Test Lead Set Lg Clip 9" (228.60mm) Pigtail	CP-2603-ND	5.51 46.55
8	Test Lead Set Sm Clip 9" (228.60mm) Pigtail	CP-2604-ND	4.76 35.15
9	Probe Tip Red Mini Grabber With 9" (228.60mm) Pigtail	CP-2607-ND	6.53 55.10
9	Probe Tip Black Mini Grabber With 9" (228.60mm) Pigtail	CP-2608-ND	6.53 55.10
10	Probe Tip Set Short: Dimension A = 12.7mm	CP-2605-ND	5.51 46.55
10	Probe Tip Set Long: Dimension A = 62mm	CP-2606-ND	7.09 59.85
—	Kit Test Lead Set 7 Pair	CP-2600-ND	43.16 390.00
11	Current Clamp Head	CP-2609-ND	33.40 291.83
12	Current Clamp Adapter	CP-2610-ND	9.39 82.00



CUI STACK Alligator Clips

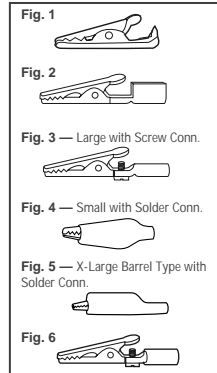
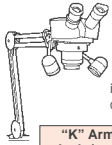


Fig.	Description	Color	Size	Digi-Key Part No.	Pricing 1 10 100
1	w/o Cover	—	27mm	CP-2400-ND	.36 2.93 22.50
1	w/o Cover	—	35mm	CP-2401-ND	.36 2.93 22.50
1	w/o Cover	—	44mm	CP-2402-ND	.36 2.93 22.50
2	w/o Cover	—	50mm	CP-2403-ND	.40 3.25 25.00
3	w/Wire Term	—	50mm	CP-2404-ND	.44 3.58 27.50
1	w/Screw	—	44mm	CP-2405-ND	.44 3.58 27.50
4	w/Cover	Black	27mm	CP-2406-ND	.44 3.58 27.50
4	w/Cover	Red	27mm	CP-2407-ND	.44 3.58 27.50
5	w/Cover	Black	35mm	CP-2408-ND	.44 3.58 27.50
5	w/Cover	Red	35mm	CP-2409-ND	.44 3.58 27.50
5	w/Cover	Black	44mm	CP-2410-ND	.52 4.23 32.50
5	w/Cover	Red	44mm	CP-2411-ND	.52 4.23 32.50
5	w/Screw, w/Cov	Black	44mm	CP-2412-ND	.60 4.88 37.50
5	w/Screw, w/Cov	Red	44mm	CP-2413-ND	.60 4.88 37.50
6	w/Handle	Black	50mm	CP-2414-ND	.52 4.23 32.50
6	w/Handle	Red	50mm	CP-2415-ND	.52 4.23 32.50



LAMPS & ACCESSORIES

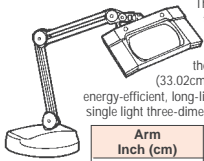
MicroLux Microscope



A system that finally addresses Ergonomics in the workplace. Meets Mil standard 2000, DOD 2000 and WS 6536E. Luxo's MicroLux Microscope System features high quality, precision microscopes combined with Luxo's patented "K" arm. Comes standard with 10X extra wide eyepiece, eye-guards and cover glass to protect lens from fumes and scratches. Backed by a 3-year mechanical warranty. Luxo's MicroLux Microscope System has several methods of illumination. Dual 5 watt halogen lights mounted on the flexible necks allowing full adjustability depending on job and operator. Comes with two low-voltage halogen, adjustable lamps (5 watt).

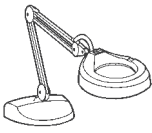
"K" Arm Inch (cm)	Mount	Digi-Key Part No.	Price Each	Luxo Part No.
26 (66.04)	Clamp Bracket	L601LB-ND	1414.17	18200

Wave + Plus Series Magnifiers 3-DIOPTER LENS



The Luxo Wide Angle Viewing Enlargement system with stadium shaped lens offers the largest distortion-free viewing area in the industry. Improved light output uses two 13-watt compact fluorescent lamps. Blue indicator lights are located on either side of the magnifier head. When one or both fluorescent tubes are in operation, the respective indicator light(s) is illuminated. Magnification 3/4X; Focal length: 13" (33.02cm); viewing area: 6 3/4" (17.13cm). ABS molded housing. Independently switched, energy-efficient, long-life compact fluorescent lamps offer both shadow-free dual light two-dimensional and single light three-dimensional viewing. UL listed (13W PL Compact Bulb)

Arm Inch (cm)	Mount	Digi-Key Part No.	Price Each	Luxo Part No.
45 (114.30) K	Clamp Bracket	L845LG-ND	418.69	17845LG
30 (76.20) K	Clamp Bracket	L846LG-ND	397.76	17846LG
30 (76.20) K	Weighted Base	L847LG-ND	476.44	17847LG



KFM Series Magnifiers

KFM's multi-lens capability offers a wider range of distortion-free magnification than any other magnifier. KFM's patented internal spring arm offers perfect balance and full adjustability to an infinite number of positions. There are no knobs to tighten, nothing to adjust. The 5" (12.7cm) diameter lenses are mounted in die-cast aluminum housing. Comes with a 22W energy-efficient fluorescent bulb which provides cool, shadow-free illumination. (22W T-9 Bulb)

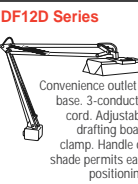
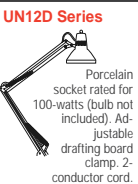
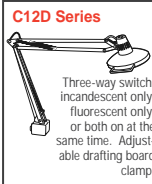
Lens Type	"K" Arm Inch (cm)	Mount	Color	Digi-Key Part No.	Price Each	Luxo Part No.
3d	45 (114.30)	Clamp Bracket	Black	L225B-ND	259.88	17113BK
3d	45 (114.30)	Clamp Bracket	Lt. Gray	L225LG-ND	259.88	17113LG
5d	45 (114.30)	Clamp Bracket	Black	L230B-ND	274.31	17115BK
5d	45 (114.30)	Clamp Bracket	Lt. Gray	L230LG-ND	274.31	17115LG
3d	30 (76.20)	Weighted Base	Black	L235B-ND	332.06	17253BK
3d	30 (76.20)	Weighted Base	Lt. Gray	L235LG-ND	332.06	17253LG

IFM Series

Full size 5" (12.70cm) 3 diopter lens provides distortion free 3/4 power magnification. Lens allows a generous 13" (33.02cm) (focal length) work area between lens and objects. 9" (22.86cm) shade is made of tough, mar-resistant cycloac, and is reinforced at neck and back with heavy steel plate. Comes with an energy-efficient 22W circular fluorescent lamp for cool, shadow-free illumination (22W T-9 Bulb). 5-tube L-arm offers a full range of adjustability. Perfect balance maintained by individually calibrated, tempered-steel springs.

Lens Type	"L" Arm Inch (cm)	Mount	Color	Digi-Key Part No.	Price Each	Luxo Part No.
3d	45 (114.30)	Clamp Bracket	Lt. Gray	L301LG-ND	173.25	16301LG

Ledu Task Master Series

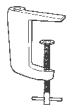


"L" Arm Inch (cm)	Mount	Color	Digi-Key Part No.	Price Each	Luxo Part No.	Luxo Series
42 (106.68)	Clamp Bracket	White	L120WT-ND	165.90	L012WT	C12D
42 (106.68)	Clamp Bracket	Black	L120BK-ND	165.90	L012BM	C12D
42 (106.68)	Clamp Bracket	White	L121WT-ND	159.60	L512WT	DF12D
42 (106.68)	Clamp Bracket	Black	L121BK-ND	159.60	L512BK	DF12D
42 (106.68)	Clamp Bracket	White	L122WT-ND	89.25	L112WT	UN12D
42 (106.68)	Clamp Bracket	Black	L122BK-ND	89.25	L112BK	UN12D
42 (106.68)	Clamp Bracket	Black	L123BK-ND	147.00	L554BK	L554

Clamp Bracket

For edgemounting on horizontal surfaces.

L501BK-ND Black
L501LG-ND Lt. Gray
\$12.51 each



Wall Bracket

For permanent mounting on vertical surface.

L503BK-ND Black
L503LG-ND Lt. Gray
\$12.51 each



Replacement Bulbs

Description	Digi-Key Part No.	Price Each	Luxo Part No.
22 Watt T-9 Bulb	L540-ND	15.40	31640
15 Watt T-8 Bulb	L541-ND	13.48	31641
13 Watt Fluorescent Bulb	L5205-ND	24.06	36205
7 Watt PL Compact	L536-ND	19.73	34436
5 Watt Halogen Lamp	L577-ND	23.10	34977



Command Console



Command Console gives you ISOBAR® protection in an under-monitor design and fingertip control of your computer peripherals.



- Superior ISOBAR® surge and RFI/EMI noise filtration
- Built-in touch-anywhere static guard
- 6 outlets; master control and 4 individual component switches
- Suppresses up to 13,000 amp spikes
- 15 amp circuit breaker with reset
- Modem/fax spike filter on CCI-6 PLUS model
- CCC4 features a slimline plastic housing and diagnostic LEDs.
- \$5,000 Ultimate Lifetime Insurance.

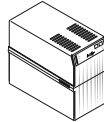
Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
6 outlets, 12' (3.66M) cord*	TL038-ND	79.95	CC16
Compact Command3 Console 4 outlet, 5 yr warranty	TL084-ND	49.95	CCC4
6 outlet, Touch Master	TL106-ND	79.95	MT-6

* ULTIMATE® LIFETIME WARRANTY covers both the Command Console and the connected equipment from surge related damage, including direct lightning strikes, up to \$10,000... for life!

Standby and On-Line UPS Systems



Standby UPS Systems

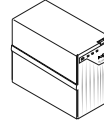


BC Standby UPS systems are battery backups in sleek, compact housings. They protect your computers, and electronic equipment from power failures, brownouts and AC surges and transients. With critical business functions being performed at home now more than ever before, Tripp Lite's BC Series makes power protection for the entire office affordable and a reality. BC Pro units are ideal for networked PCs and workstations.

BC Internet Backups offer complete protection for PC's connected to the internet and World Wide Web. These offer all the benefits of the BC Personal with RJ11 jacks for modem protection.

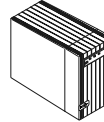
- All UPS's are UL Approved
- 2 year warranty
- 115VAC (TL203-ND, 230VAC)

SMART Pro Net Intelligent Standby UPS Systems



The Smart Pro Net UPS system is complete network power protection in a single box. You get a reliable Tripp Lite UPS System, a CD ROM containing power alert plus line of software for every major network operating system and complete cabling to implement your UPS solution. Everything you need is included in a single box. Complete brownout protection keeps your batteries fresh when they may be needed in a blackout. A built-in microprocessor constantly monitors incoming line voltages and protects your equipment from damaging voltage levels (spikes, sags, EMI/RFI).

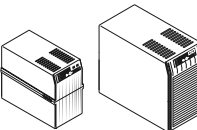
OmniSmart PnP Interactive Standby UPS System



Includes all the features of the Smart Pro series plus adds the capability of detailed self test to all major functions of UPS and offers automatic inverter shutdown 20 seconds after your file server has performed an unattended shutdown, the OmniSmart will also power itself down to save battery power. Network managers can view power conditions about any filesaver to include input voltage, load capacity, battery conditions, operating temperatures and output voltage and frequency data in easy to read pull down menus.

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
BC Personal Standby Backup 200VA, 140 Watts, 2 Outlets	TL120-ND	94.43	BC PERS 200
BC Personal Standby Backup 300VA, 175 Watts, 2 Outlets	TL196-ND NEW!	108.99	BC PERS 300
BC Personal Standby Backup 450VA, 265 Watts, 2 Outlets	TL197-ND NEW!	132.46	BC PERS 450
BC PRO Standby Backup 600VA, 345 Watts, 4 Outlets	TL198-ND NEW!	198.08	BC PRO 600
BC PRO Standby Backup 850VA, 570 Watts, 4 Outlets	TL127-ND	380.14	BC PRO 850
BC PRO Standby Backup 1050VA, 705 Watts, 6 Outlets	TL128-ND	427.48	BC PRO 1050
BC PRO Standby Backup 1400VA, 940 Watts, 6 Outlets	TL129-ND	540.81	BC PRO 1400
Internet Office Standby Backup 280VA, 175 Watts, 6 Outlets	TL199-ND NEW!	112.76	INTERNET OFFICE 280
BC Internet Standby Backup 300VA, 175 Watts, 2 Outlets	TL200-ND NEW!	118.56	BC INTERNET 300
Internet Office Standby Backup 500VA, 280 Watts, 6 Outlets	TL201-ND NEW!	150.82	INTERNET OFFICE 500
Internet Office Standby Backup 700VA, 425 Watts, 4 Outlets	TL202-ND NEW!	226.48	INTERNET OFFICE 700
Internet Office Standby Backup 230V, 500VA, 4 IEC Outlets	TL203-ND NEW!	168.61	INTERNET 500I
Smart Pro Net Backup 450VA, 325 Watts, 4 Outlets	TL157-ND	312.50	SMART450NET
Smart Pro Net Backup 700VA, 450 Watts, 4 Outlets	TL158-ND	411.44	SMART700NET
Smart Pro Net Backup 1050VA, 705 Watts, 6 Outlets	TL159-ND	579.95	SMART1050NET
Smart Pro Net Backup 1400VA, 940 Watts, 6 Outlets	TL160-ND	738.49	SMART1400NET
Smart Pro Net Rack Mount 700VA, 450 Watts, 8 Outlets	TL161-ND	568.67	SMART700RM
Smart Pro Net Rack Mount 1050VA, 705 Watts, 8 Outlets	TL162-ND	713.21	SMART1050RM
Smart Pro Net Rack Mount 1400 VA, 940 watts, 6 Outlets	TL140-ND	899.10	SMART1400RM
Omni Smart Standby Backup 300VA, 175 Watts, 3 Outlets	TL204-ND NEW!	156.48	OMNISMART300PNP
Omni Smart Standby Backup 450VA, 325 Watts, 4 Outlets	TL167-ND	260.63	OMNISMART450PNP
Omni Smart Standby Backup 675VA, 425 Watts, 4 Outlets	TL168-ND	331.38	OMNISMART675PNP
Omni Smart Standby Backup 850VA, 570 Watts, 4 Outlets	TL169-ND	444.30	OMNISMART850PNP
Omni Smart Standby Backup 1050VA, 705 Watts, 6 Outlets	TL170-ND	511.72	OMNISMART1050PNP
Omni Smart Standby Backup 1400VA, 940 Watts, 6 Outlets	TL171-ND	617.85	OMNISMART1400PNP

True On-Line UPS Systems With Zero Transfer Time



The new Tripp Lite/Unison models give you the true on-line, pure sine wave UPS protection with standby UPS affordability. Provides reliable blackout protection and fully regulated output, each unit continuously conditions all power to your computer to eliminate brownouts, spikes and line noise. Absolute surge and spike protection where power irregularities cannot penetrate Unison's double conversion on-line UPS design. Comes with Tripp Lite's award winning PowerAlert software and cable. Perfect for high-end servers and workstations, CAD/GAM, RISC, UNIX and other systems that have proven more sensitive to power irregularities.

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
Unison UPS 400 VA, 300 watts, 4 outlet	TL141-ND	569.00	PS450
Unison UPS 700 VA, 500 watts, 4 outlet	TL142-ND	691.75	PS700
Unison UPS 1000 VA, 700 watts, 6 outlet	TL143-ND	855.12	PS1000
Unison UPS 1200 VA, 800 watts, 6 outlet	TL144-ND	1332.66	MPS1400
Unison UPS 2000 VA, 1300 watts, 6 outlet	TL145-ND	1894.49	MPS2000

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com



DC to AC Power Inverters

Solid-state electronic power inverters change ordinary 12VDC to 115VAC. Simply plug in your computer, stereo, or household appliances for convenient portable AC power. Use on boats, campers, cars and anywhere 12VDC is available. **Auto motive Inverters** are housed in a sturdy portable metal case with 12V cigarette lighter plug built-in. Ideal for laptops, test equipment and TV-VCR units. **General Purpose Inverters** are low cost power inverters for equipment that doesn't require frequency controlled outputs or high inrush-startup currents. Ideal for most electronic test equipment. **Peak Power** models are able to handle up to twice their normal wattage for short periods of time delivering high start-up current. Frequency controlled AC, making them ideal for motors, refrigerators, power tools and microwaves. **APS Inverters** feature modified sine wave, frequency controlled, fully regulated output. These units automatically sense and switch AC between line power and battery power. A built-in recharge circuit will recharge the battery when line voltage becomes available. Perfect for pump systems, emergency lighting, and more.

Description: (H x W x D)	Digi-Key Part No.	Price Each	Tripp Lite Part No.
Automotive Inverters			
140W, 1 outlet w/cigarette plug 3" x 6" x 1.75" (7.62 x 15.24 x 4.45cm).....	TL193-ND	61.18	PV140
300W, 2 outlet w/cigarette plug 4.2" x 6" x 1.8" (10.67 x 15.24 x 4.57cm).....	TL194-ND	90.00	PV300
General Purpose Inverters			
125W, 1 outlet, cigarette lighter plug, 3" x 6" x 5" (7.62 x 15.24 x 12.70cm).....	TL063-ND	69.00	PV125
200W, 1 outlet, 3" x 6" x 5" (7.62 x 15.24 x 12.70cm).....	TL030-ND	96.20	PV200
400W, 1 outlet, 3.5-8" x 7" x 6" (9.12 x 17.78 x 15.24cm).....	TL031-ND	135.00	PV400
550W, 2 outlet, 6.75" x 7.5" x 14" (17.78 x 17.78 x 25.40cm).....	TL099-ND	198.95	PV550A
Peak Power Inverters (Frequency Controlled)			
400W, 2 outlet, 7" x 7" x 10" (17.78 x 17.78 x 25.40cm).....	TL098-ND	259.26	PV400FC
750W, 2 outlet, 7" x 7" x 10" (17.78 x 17.78 x 25.40cm).....	TL100-ND	389.82	PV750FC
1200W, 2 outlet, Modified Sine Wave, 6.75" x 7.5" x 14" (17.15 x 19.05 x 35.56cm).....	TL062-ND	599.00	PV1200FC
1800W, 24 V, 6" x 8" x 12" (15.24 x 20.32 x 30.48cm).....	TL101-ND	700.65	PV1800FC/24
APS Premium Inverters (Modified Sine Wave)			
400W, 2 outlet, 7" x 7" x 10" (17.78 x 17.78 x 25.40cm).....	TL102-ND	312.66	APS400
750W, 2 outlet, 7" x 7" x 10" (17.78 x 17.78 x 25.40cm).....	TL103-ND	513.30	APS750
1250W, 2 outlet, 6.5" x 8.5" x 12" (16.51 x 21.59 x 30.48cm).....	TL104-ND	806.66	APS1250

Line Conditioners

Line Conditioners let you work through brownouts for unlimited time periods, without using emergency power such as UPS systems. Line conditioners automatically adjust under and over voltages to provide safe computer grade AC power meeting ANSI C84.1 specifications. Full surge protection and noise filtering to eliminate erratic voltages coming to your equipment. Lifetime surge protection warranty (lightning strikes) and a full 2-year product warranty on all line conditioners.

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
600 watts, 2 outlets, under voltage only	TL012-ND	113.68	LS600
600 watts, 4 outlet	TL039-ND	129.01	LS604
1200 watts, 4 outlet	TL013-ND	164.03	LC1200
1800 watts, 6 outlet	TL014-ND	232.56	LC1800
2400 watts, 6 outlet	TL044-ND	364.94	LC2400
Rack Mount, 2400 watts, 14 outlet	TL028-ND	474.01	LCR2400

Precision - Regulated DC Power Supplies

Ideal for commercial/land-mobile 2-way and ham radios, 12 volt point of sale displays, test bench, tape players, amplifiers and more. **Features:** • Current-limiting electronic foldback for automatic overcurrent protection in case of overload; time controlled on 7 amp and larger models • Regulated output voltage maintains up to 95% of no load value • High quality filtering provides for very low ripple/low noise operation • Large heat sinks and vented cabinet provide cool operation for continuous use and long life of the unit

Digi Key Part No.	General Applications	Digi-Key Part No.	Price Each	Tripp Lite Part No.
TL183-ND	Low profile for 2-way base stations	TL183-ND	82.59	TL11
TL184-ND	Motorola, GE, EF Johnson radios	TL184-ND	94.27	TLC11
TL185-ND	Integrated enclosure for 2-way Motorola, GE, EF Johnson radios	TL185-ND	32.54	PR3
TL186-ND	Home use CBs, quality car tape players	TL186-ND	37.74	PR4.5
TL187-ND	Home use single sideband CBs, high power car stereos	TL187-ND	53.48	PR7
TL188-ND	30 Watt transmitters, VHF-UHF, 2-way radios/amps	TL188-ND	76.75	PR10
TL189-ND	40 Watt transmitters, VHF-UHF, 2-way radios/amps	TL189-ND	82.59	PR12
TL190-ND	50 Watt transmitters, VHF-UHF, commercial radios	TL190-ND	114.96	PR15
TL191-ND	75-100 Watt Ham-UHF-VHF, commercial radios	TL191-ND	160.17	PR25
TL192-ND	150-200 Watt Ham-UHF-VHF, commercial radios	TL192-ND	204.54	PR40
	250-300 Watt Ham-UHF-VHF, commercial radios		254.44	PR50

Description	Digi Key Part No.	Price Each	Tripp Lite Part No.
Trim Line Power Supply	TL183-ND	82.59	TL11
Trim Line Power Supply	TL184-ND	94.27	TLC11
Power Supply, 13.8VDC, 3A	TL185-ND	32.54	PR3
Power Supply, 13.8VDC, 4.5A	TL195-ND NEW!	37.74	PR4.5
Power Supply, 13.8VDC, 7A	TL186-ND	53.48	PR7
Power Supply, 13.8VDC, 10A	TL187-ND	76.75	PR10
Power Supply, 13.8VDC, 12A	TL188-ND	82.59	PR12
Power Supply, 13.8VDC, 15A	TL189-ND	114.96	PR15
Power Supply, 13.8VDC, 25A	TL190-ND	160.17	PR25
Power Supply, 13.8VDC, 40A	TL191-ND	204.54	PR40
Power Supply, 13.8VDC, 50A	TL192-ND	254.44	PR50

ISOBAR® Premium Surge Suppressors



ISOBAR® is the most electronically advanced surge suppressor available today. Includes isolation — preventing connected equipment from interfering with each other. The only surge suppressor with 3 UL listings.

Only ISOBAR® provides: • Superior RF/EMI noise suppression • Cascade Circuitry to increase protection for more sensitive devices • Surge Suppression up to 13,000 amp spikes • Rack Mount model (IBAR-12) for industrial and sound applications • Up to 24 active filtering components • Multiple filtering components to safeguard against equipment interaction • Meets IEEE 587 A & B Specifications • Less than 5 nanosecond transient response time.

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
2 outlet, direct plug-in*	TL002-ND	43.19	ISOBLOK2-0
2 outlet, 6' (1.83M) cord*	TL003-ND	53.91	IBAR2-6
4 outlet, 6' (1.83M) cord, w/Diag. LED1	TL076-ND	80.81	ISOBAR4ULTRA
6 outlet, 6' (1.83M) cord, w/Diag. LED1	TL077-ND	104.95	ISOBAR6ULTRA
8 outlet, 12' (3.66M) cord, w/Diag. LED1	TL078-ND	105.27	ISOBAR8ULTRA
8 outlets, 12' (3.66M) cord with remote power switch*	TL050-ND	116.62	ISOBAR8RM
Rack mt., 12 outlet, 12' (3.66M) cord*	TL027-ND	152.19	IBAR12

*ULTIMATE® LIFETIME WARRANTY covers both the ISOBAR® and the connected equipment from surge related damage, including direct lightning strikes, up to \$10,000... for life! (1 coverage up to \$25,000)

Power Miser

Automatically shuts down your monitor when not in use while providing continuous spike and surge protection. It can save you as much as \$190.00 per year in electric bills. User selectable time out. An economical alternative to a green PC.

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
Surge suppressor w/monitor shutoff	TL086-ND	59.95	PM-4
ISOBAR® surge suppressor w/monitor shutoff	TL087-ND	64.95	ISOMISER

Economy Surge Suppressors

For a more economical approach to power protection, Tripp Lite offers six units for your specialized needs.

Fig. 1 - Super Surge Alert

Mid-priced surge suppression with RF/EMI filtering. Suppresses up to 72,000 amp spikes. UL 1449 approved. Lifetime warranty.

Fig. 4 - Spike Stik

Effective spike suppressor. Suppresses spikes up to 27,000 amps. Lifetime warranty.

Fig. 2 - Super 8

Performance in a low cost spike and line noise suppressor. Suppresses up to 48,000 amps. UL 1449 approved. Lifetime warranty.

Fig. 5 - Super 6

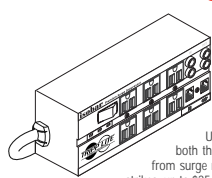
Performance in a low cost spike and line noise suppressor. Suppresses up to 27,000 amps. UL 1449 approved. 2 year warranty.

Fig. 3 - Spike Blok

Protects equipment from damaging AC surges, spikes, and line noise. Suppresses spikes up to 27,000 amps. Lifetime warranty.

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
Super Surge Alert, 6 outlets, 6' (1.83M) cord/Diag. LED's (Fig. 1)	TL051-ND	59.95	TR6
Super 8, 6 outlets, 6' (1.83M) cord (Fig. 2)	TL011-ND	38.26	SK6-6
Spike Blok, 6 outlets, Direct plug-in (Fig. 3)	TL010-ND	21.26	SK6-0
Spike Stik, 6 outlets, 6' (1.83M) cord (Fig. 4)	TL026-ND	21.25	STIK
Super 6, 6 outlets, 3.5' (1.22M) cord (Fig. 5)	TL083-ND	11.85	STRIKER
Super 7, 7 outlets, 7' (2.13M) cord w/LEDs	TL085-ND	23.75	SUPER7

NEW! DSS Surge Suppressor



Telephone protection combined with 4 coaxial connectors and 6 outlet AC Surge protection. Designed to protect all high video and audio equipment, such as large-screen TVs, satellite equipment, DSS systems, VCRs, CD changers and stereo receivers.

ULTIMATE® LIFETIME WARRANTY covers both the ISOBAR® and the connected equipment from surge related damage, including direct lightning strikes, up to \$25,000.

TL205-ND	120V Protector with RJ11 Jacks and Coaxial Connectors.....	\$119.95
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Modem/Fax Protectors

Protects modems, phone lines and faxes from damaging spikes and harmful line noise.

Fig. 1 Super 8

Fig. 2 Super 7 Audio Video

Fig. 3 Super Surge Alert

Fig. 4 Isotel

Fig. 5 SMPGS

Fig. 6 TSB

Fig. 7 ISO Fax

Description	Digi-Key Part No.	Price Each	Tripp Lite Part No.
Super surge alert w/fax protection, 6 outlet, (Fig. 3)	TL180-ND	69.95	TR6FM
Super 8 w/fax protection, 8 outlet, 8' (2.44M) cord, (Fig. 1)	TL181-ND	50.93	S8+TEL
Super 7 audio video w/'F' connector, 6 outlet, (Fig. 2)	TL182-ND	39.95	S7+COAX
4 outlet ISOBAR® w/2 RJ11 jacks for telephone line protection*, (Fig. 4)	TL009-ND	89.92	ISOTEL
6 outlet ISOBAR®, 6' (1.83M) cord w/fax protection†	TL081-ND	108.16	ISOTEL6ULTRA
8 outlet ISOBAR®, 12' (3.66M) cord w/fax protection†	TL082-ND	121.32	ISOTEL8MULTIMEDIA
Direct Plug-in 1 AC outlet, RJ11 fax supp. circuit*, (Fig. 5)	TL008-ND	21.22	SMPGS
Premium 3-stage data line protection, 2 year warranty, (Fig. 6)	TL015-ND	50.92	TSB
Economical data line protection, 2 year warranty	TL007-ND	16.99	MP
Direct Plug-in 2 AC outlet, RJ45 fax protector*, (Fig. 7)	TL070-ND	58.40	ISOFAX
2 outlet, direct plug-in, w/coaxial 'F' connectors. For cable TV systems*	TL079-ND	63.04	ISOBARULTRACOAX
2 outlet, direct plug-in, w/1 RJ11 jack for one data line circuit*	TL080-ND	63.04	ISOBARULTRAFAX
Super 7, 7 outlet, 7' (2.13M) cord, w/fax protection	TL105-ND	32.66	S7+TEL

*ULTIMATE® LIFETIME WARRANTY (on select models) covers your product and the connected equipment from surge related damage, including direct lightning strikes, up to \$10,000... for life! († Coverage up to \$25,000)

Line Surge Suppressors

Data networks are increasingly susceptible to problems from dataline transients as transmission rates continue to rise. Tripp Lite's dataline surge suppressors safely divert damaging surges before they reach your critical network equipment. Protects I/O and Serial ports, modem-fax cards, network interface cards and motherboards.

Specifications: • 6000V Clamping at <1 picosecond response time. • Breakover voltage: 7.5V (ethernet), 18V (RS-232), 260V (telephone). • Peak Pulse Current: 750 amps (ethernet), 340 amps (RS-232). • Max. Shunt Capacitance: <30 pF.

Fig. 1

Protects RS-232 DB9 serial ports of data terminal and data communication equipment including PCs, printers, fax/modems, etc. User configurable for either male or female captive ports.

Fig. 2

Protects many RS-232 DB25 serial ports of data terminal and data communication equipment including PCs, printers, fax/modems, etc. User configurable for either male or female captive ports.

Fig. 3

Protects any RS-232 serial or parallel DB25 regardless of cable configuration. Self-programming to your application. User configurable for male or female captive ports.

Fig.	Lines Protected	Interface Type	Digi-Key Part No.	Price Each	Tripp Lite Part No.
1	1-9 and Chassis	DB9	TL151-ND	22.03	DB9
2	1-8, 20, and Chassis	DB25	TL152-ND	23.40	DB25
2	1-25 and Chassis	DB25	TL153-ND	32.22	DB25-ALL
3	4, 5 & 3, 6	RJ11/RJ45	TL154-ND	26.56	DTL2

Panasonic Extra Heavy Duty Carbon Zinc Batteries

FEATURES: • Unsurpassed Leakage Resistance for a Longer Service Life • Discharge Characteristics Suited for All Applications • Excellent Storage Life

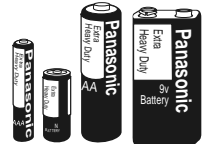
Panasonic Extra Heavy Duty battery is composed of: manganese dioxide for the positive-activating substance, zinc for the negative-activating substance, and an aqueous solution of neutral salts such as zinc chloride and ammonium chloride for the electrolyte.

APPLICATIONS: • Transistor radios, tape recorders, portable TVs, interphones, transceivers, electronic calculators, clocks and watches, communications equipment,

measuring instruments and various other electronic products • Flashlights, pen lights and various other lighting devices • 8mm cameras and other photographic products • Gas and oil equipment, toys, etc.

Also available in tabbed version of D, C, and AA cell batteries; denoted by "T" suffix in Digi-Key part number.

Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.



Size	(V)	Dimensions - In. (mm)		Weight* Oz. (grams)	Capacity (to 0.9V/Cell)	Digi-Key Part No.	Each	Pricing Pkg.	Carton	Panasonic Part No.
		Dia.	Height							
AAA	1.5	0.571 (14.5)	1.988 (50.5)	0.67 (19)	110 hrs. (1000 cont.)	P103-ND	.51	20.40/60	153.00/600	UM-3NX
AA	1.5	0.473 (12.5)	1.752 (44.5)	0.34 (9.7)	39 hrs. (1000 cont.)	P266-ND	.36	17.00/50	510.00/2000	R03NPA/BK
N	1.5	0.472 (12.0)	1.189 (30.2)	0.23 (6.55)	30 hrs. (1000 cont.)	P266-ND	.36	12.00/50	360.00/2000	UM-5NX
9V	9	1.91 x 1.04 x 0.69	(48.5 x 26.5 x 17.5)	1.34 (38)	2.5 hrs. (1000 cont. to 5.4V)	P104-ND	1.77	14.16/12	531.00/600	006PDX
Lantern †	6	2-11/16" x 2-11/16" x 4-1/16"	(68.26 x 68.26 x 103.19)	20.0 (567)	Heavy duty type battery	P206-ND	3.73	40.23/12	40.23/12	W4PDPA
AA	Tabbed Version					P103T-ND	.87	34.80/60	261.00/600	UM-3NX

* See "How To Order" for note on shipping charges on prepaid orders. † Spring top type.

Panasonic Alkaline Batteries

FEATURES:

- Large Current and Large Capacity for an Excellent Performance
- Stable Voltage and Current
- Unsurpassed Resistance to Leakage
- Excellent Storage Life

The cylindrical alkaline battery is composed of: manganese dioxide for the positive-activating substance, zinc powder for the negative-activating substance, and caustic alkali for the electrolyte.

APPLICATIONS:

- 99% MERCURY FREE
- Headphone stereo, radio-cassette recorders, strobes, cameras, electronic calculators, 8 mm cameras, electric shavers, tape recorders, high-power flashlights, toys and other cordless products.

Also available in tabbed version of D, C, and AA cell batteries; denoted by "T" suffix in Digi-Key part number.

Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.

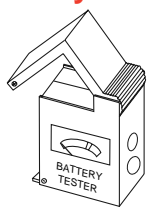
MADE IN U.S.A.



Size	(V)	Dimensions - In. (mm)		Weight* Oz. (grams)	Capacity (to 0.9V/Cell)	Rated Drain (mA)	Digi-Key Part No.	Each	Pricing Pkg	Carton	Panasonic Part No.
		Dia.	Height								
D	1.5	1.346 (34.2)	2.421 (61.5)	4.76 (135)	1200 hrs. (1000 cont.)	320	P105-ND	1.74	23.20/20	174.00/200	AM-1PIX
C	1.5	1.031 (26.2)	1.969 (50.0)	2.29 (65)	380 hrs. (1000 cont.)	300	P106-ND	1.29	17.20/20	129.00/200	AM-2PIX
AA	1.5	0.571 (14.5)	1.988 (50.5)	0.85 (24)	170 hrs. (1000 cont.)	130	P107-ND	.57	15.20/40	171.00/600	AM-3PIX/2S
AAA	1.5	0.473 (12.5)	1.752 (44.5)	0.42 (12)	65 hrs. (1000 cont.)	25	P146-NDT	.66	22.00/50	165.00/500	AM-4PIX/2S
N	1.5	0.472 (12.0)	1.189 (30.2)	0.32 (9)	48 hrs. (1000 cont.)	25	P147-NDT	1.08	17.28/24	324.00/600	AM5X
9V	9	1.93 x 1.04 x 0.69	(49.0 x 26.0 x 17.5)	1.66 (47)	6 hrs. (1000 cont. to 5.4V)		P145-ND	2.22	17.76/12	319.68/288	6AM-6PIX/1S
D	Tabbed Version						P105T-ND	2.10	28.00/20	210.00/200	AM-1PIX
C	Tabbed Version						P106T-ND	1.65	22.00/20	165.00/200	AM-2PIX
AA	Tabbed Version						P107T-ND	.93	24.80/40	279.00/600	AM-3PIX/2S

* See "How To Order" for note on shipping charges on prepaid orders. † Made in Japan.

Battery Tester



Tests D, C, AA, AAA, N and 9-Volt and button cell batteries under load — a true test of terminal voltage!

CEC-2-ND.....\$8.95

Panasonic Sealed Lead-Acid Batteries

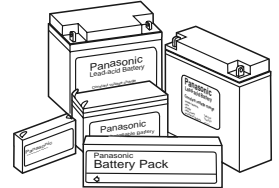
GENERAL FEATURES: "DO NOT LEAK!!"

High Quality & High Reliability: The LCR battery has stable and reliable capacity. 100% tested on line for voltage, capacity, and seals. And all vents are 100% visually inspected during the final assembly process.

High Power Density: These batteries save installation space, while providing full and reliable power for the equipment, and many have been designed for rapid recharge, or for high power output. **Leak-resistant Structure:** The LCR battery uses an absorbed electrolyte system. The LCR batteries have exceptional leak resistance, and can be used in any position. **Long Service Life; Flat or Cyclic:** The LCR battery has long life in float or cyclic service. **Easy Maintenance:** There is no need to check the specific gravity of the electrolyte or to add water during the service life. Totally sealed, and needs only charging for maintenance. **No Corrosive Gas Generation:** There is no corrosive gas generation during normal use. **Exceptional Deep Discharge Recovery:** LCR batteries have exceptional deep discharge recovery and charge acceptance, even after deep or prolonged discharge. **DOT & IATA Approval:** Transportation; The SLA batteries should be handled as common cargoes for both air and boat shipping. **UL Component Recognition:** U.L. Component

Recognition under UL924, Section 38, for Emergency Lights and Power Supplier (not UPS), requires that the battery safely vent when overcharged, and tested under mineral oil. It further requires that the equipment and battery be submitted together for formal UL approval. **(UL Component Recognition does NOT remove this requirement for complete package testing).** The manufacturer suggests peak charging all sealed lead acid batteries before use and intermittently during storage.

Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.



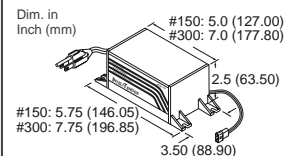
CROSS REFERENCE ABBREVIATIONS: EP=Eagle-Picher; YU=Yuasa; PS=Power Sonic; PA=Panasonic

Cap. 20h Rate (Ah)	Dimensions - In. (mm) L x W x H	Weight * lbs. (grams)	Digi-Key Part No.	1	Pricing 10	Carton	Panasonic Part No.	Panasonic Replacement Battery Cross Reference (see above for mfg. abbreviations)
6 1.3	3.82 x 0.94 x 1.97 (97.0 x 24.0 x 50.0)	0.66 (300)	P128-ND	9.23	82.00	303.40/40	LC-R061R3PU	YU: NP1-2-6; PS: PS-612
6 2.4	2.60 x 1.30 x 3.88 (66.0 x 33.0 x 98.5)	1.15 (520)	P262-ND	16.36	145.40	322.79/24	LC-R062R4PU	—
6 3.2	2.60 x 1.30 x 4.69 (66.0 x 33.0 x 119.0)	1.46 (660)	P129-ND	15.86	141.00	313.02/24	LC-R063R2PU	—
6 3.4	5.28 x 1.34 x 2.36 (134.0 x 34.0 x 60.0)	1.37 (620)	P166-ND	16.31	145.00	321.90/24	LC-R063R4PU	EP: CFV62-6; YU: NP3-6; PS: PS-626
6 4.0	2.76 x 1.85 x 4.02 (70.0 x 47.0 x 102.0)	1.98 (900)	P168-ND	9.34	83.00	184.26/24	LC-RB064P	EP: CFV64; YU: NP4-6; PS: PS-640
6 6.5	5.95 x 1.34 x 3.70 (151.0 x 34.0 x 94.0)	2.56 (1160)	P169-ND	13.50	—	133.20/12	LC-RB066R5P	EP: CFM6V6.5; YU: NP6-6; PS: PS-660
6 7.2	5.95 x 1.34 x 3.70 (151.0 x 34.0 x 94.0)	2.78 (1260)	P074-ND	14.06	—	138.75/12	LC-R067R2P	YU: NP7-6
6 10.0	5.95 x 1.97 x 3.70 (151.0 x 50.0 x 94.0)	3.93 (1780)	P170-ND	15.98	—	157.62/12	LC-RB0610P	EP: CFM6V8.0; YU: NP10-6; PS: PS-6100
6 10.0	5.95 x 1.97 x 3.70 (151.0 x 50.0 x 94.0)	3.93 (1780)	P269-NDT	15.98	—	157.62/12	LC-RB0610P1	—
6 12.0	5.95 x 1.97 x 3.70 (151.0 x 50.0 x 94.0)	4.30 (1950)	P075-ND	16.88	—	166.50/12	LC-R0612P	—
12 1.3	3.82 x 1.87 x 1.97 (97.0 x 47.5 x 50.0)	1.30 (590)	P264-ND	18.23	162.00	299.70/20	LC-R121R3PU	PS: PS-1212
12 2.2	6.97 x 1.34 x 2.36 (177.0 x 34.0 x 60.0)	1.76 (800)	P171-ND	21.38	190.00	421.80/24	LC-R122R2PU	EP: CF12V1.5; YU: NP1-9-12; PS: PS-1219
12 3.4	5.28 x 2.64 x 2.36 (134.0 x 67.0 x 60.0)	2.65 (1200)	P172-ND	26.78	—	264.18/12	LC-R123R4PU	EP: CF12V2.651; YU: NP2-6-12; PS: PS-1230
12 4.0	3.54 x 2.76 x 4.02 (90.0 x 70.0 x 102.0)	3.84 (1740)	P076-ND	18.45	—	182.04/12	LC-RB124P	PS: PS-1242
12 5.0	3.54 x 2.76 x 4.02 (90.0 x 70.0 x 102.0)	4.25 (1930)	P077-ND	19.35	—	190.92/12	LC-R125P	—
12 6.5	5.95 x 2.54 x 3.70 (151.0 x 64.5 x 94.0)	5.00 (2270)	P173-ND	22.39	—	199.00/10	LC-RB126R5P	EP: CFM12V6; YU: NP6-12; PS: PS-1265
12 7.2	5.95 x 2.54 x 3.70 (151.0 x 64.5 x 94.0)	5.45 (2470)	P078-ND	22.95	—	188.70/10	LC-R127R2P	YU: NP7-12
12 17	7.13 x 3.00 x 6.58 (181.0 x 76.0 x 167.0)	14.3 (65kg)	P174-ND	53.55	—	528.36/12	LC-RC1217P	EP: CFM12V18; YU: NP15-12; PS: PS-12150
12 28	6.50 x 4.92 x 7.07 (165.0 x 125.0 x 179.5)	24.30 (11kg)	P049-ND	71.78	638.00	—	LC-X1228P	—
12 33	7.70 x 5.12 x 7.09 (195.6 x 130.0 x 180.0)	26.5 (12kg)	P259-ND	77.06	685.00	—	LC-LA1233P	PS: PS-12330
12 42	7.76 x 6.50 x 7.09 (197.0 x 165.0 x 180.0)	35.3 (16kg)	P153-ND	110.25	980.00	—	LC-X1242P	—
VCR/Camcorder Batteries								
12 2.0	7.90 x 0.98 x 2.43 (201.0 x 25.0 x 62.0)	1.54 (700)	P178-ND#	26.53	—	306.99/12	LC-S122BU	PA: LCS-2012P; LCS-2012VBNC
12 2.3	7.17 x 0.94 x 2.43 (182.0 x 24.0 x 62.0)	1.40 (635)	P179-ND#	31.30	—	308.80/12	LC-SA122R3EU	PA: LCS-2012AP; LCS-2012AVBNC; PV-BP80; LCS-2312NC; LCS-2312AVBNC
12 2.0	5.65 x .93 x 2.55 (143.5 x 24.0 x 65.0)	1.30 (590)	P263-ND#	28.69	—	283.05/12	LC-SD122EU	PA: AG-BP20P; LCS-2012DVBNC
Trickle Charge Series (for communications, micro UPS, emergency lights, etc.)								
12 1.8	5.65 x 0.94 x 2.56 (143.5 x 24.0 x 65.0)	1.30 (590)	P050-ND#	26.46	—	282.24/12	LC-T121R8PU	P260
12 2.0	7.17 x 0.94 x 2.43 (182.0 x 24.0 x 62.0)	1.40 (635)	P052-ND#	22.28	—	396.00/20	LC-TA122PU	P261
12 2.0	6.97 x 0.94 x 2.60 (177.0 x 24.0 x 66.0)	1.40 (635)	P053-ND	22.28	—	396.00/20	LC-T122PU	
Terminal Clip for P178, P179, P263, P050, and P052			P260-ND	4.73	42.00	1396.50/500	VJA01R0	
Mating Connector for Clip (P260)			P261-ND	4.86	43.20	2721.60/1M	LCRCRCP-1	

* See "How To Order" for note on shipping charges on prepaid orders. # Pressure contact terminals. † Has 250" (7.1mm) Faston terminals.

PATCO Battery Charger/Maintainer

INTELTENDER MODELS 150 & 300



The IntelliTender brings the battery to full optimum charge. Then, under the control of its computer, monitors the battery's voltage, supplying only what is needed to maintain the ideal charge. Model 300 charges 2 batteries.

Volt	Amp	Model	Digi-Key Part No.	Price Each
Battery Chargers				
6	.75	150	PATC-02-ND	69.93
6	1.5	150	PATC-01-ND1	69.93
12	.75	150	PATC-04-ND	69.93
12	1.5	150	PATC-03-ND1	69.93
12 x 2	1.5 x 2	300	PATC-08-ND1	124.88
Cable (Must Order Separately)				
Battery Hook-up, Spring Clamp.....				
			PATC-07-ND	7.49
Motorcycle Hook-up, Ring Lugs.....				
			PATC-06-ND	5.00
Marine Hook-up, Ring Lugs.....				
			PATC-05-ND	5.00

* Recommended for 2.0 to 3.4 Ah batteries. † Recommended for 4.0 Ah & above batteries.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

Panasonic **NEW!** Nickel-Metal Hydride Batteries and Tabbed Versions

Features: • **Superior Energy Density:** Nickel-metal hydride batteries originally double the capacity compared with Panasonic's standard Ni-Cad batteries • **High Cycle Life:** Like Ni-Cad batteries, nickel-metal hydride batteries can be repeatedly charged and discharged up to approx. 500 cycles (under ideal conditions). **Because a specially designed charger will be necessary,** please consult the Panasonic Technical Handbook (P001-ND) regarding the charge system • **Flat trickle charge cannot be used.** • **Excellent Discharge Characteristics:** Since the internal resistance of nickel-metal hydride batteries is low, continuous high-rate discharge up to 3C is possible in the same way as for Ni-Cad batteries • **Excellent Reliability:** Self-discharge performance is the same or better than that of nickel-cadmium

batteries. In addition, charging batteries after extended storage restores original battery capacity. Battery safety has also been improved and verified through testing under a wide range of conditions of use.

Applications: • Communication • Office Automation • Audio Visual Equipment • Other High-Tech Products.

Caution for Safety: Improper usage may cause battery liquid leakage, heat generation or explosion, resulting in equipment failure or injury • Do not disassemble or rework the battery • Do not solder the battery directly • Do not use new batteries together with old batteries, or different type batteries mixed together • Follow the specified charge conditions.

NOTE: Nickel-metal hydride batteries are not a drop-in replacement for Ni-Cad batteries. It is the responsibility of each user to ensure that each battery application system is adequately designed safe and compatible with all conditions encountered during use, and in conformance with existing standards and requirements. **Not designed for power tool applications.**



P001-ND NIMH Technical Handbook..... \$2.95

Size	Capacity C/5 (mAh)	Dimensions Inch (mm) Dia. x Height	Weight* Oz. (gram)	Std. Chg @ 15hrs (mA)	(Control Required) Quick Charge (mA) (hrs.)	(Regular Version)			(Solder Tabbed Version)			Panasonic Part No.				
						Digi-Key Part No.	1	10	Carton	Digi-Key Part No.	1		10	Carton		
AAA	1.2	550	.41 x 1.75 (10.5 x 44.5)	0.42 (12)	55	550	1.2	P011-ND†	2.75	24.75	2633.40/1800	P011T-ND	3.05	27.45	2920.68/1800	HHR-55AAA
L-AAA	1.2	650	.41 x 1.97 (10.5 x 50.0)	0.49 (14)	65	650	1.2	P012-ND†	3.58	32.18	2670.27/1404	P012T-ND	3.88	34.88	2894.35/1404	HHR-65TA
4/5 AA	1.2	1150	.57 x 1.69 (14.5 x 43.0)	0.81 (23)	115	1150	1.2	P013-ND†	2.83	25.43	1356.00/800	P013T-ND	3.13	28.13	1500.00/800	HHR-120AA
AA	1.2	1300	.57 x 1.97 (14.5 x 50.0)	0.92 (26)	130	1300	1.2	P014-ND†	3.23	29.03	1548.00/800	P014T-ND	3.53	31.73	1692.00/800	HHR-130AA
AA	1.2	1500	.57 x 1.97 (14.5 x 50.0)	0.92 (26)	150	1500	1.2	P015-ND†	3.25	29.25	1491.75/765	P015T-ND	3.55	31.95	1629.45/765	HHR-150AAB05
4/5 A	1.2	1700	.67 x 1.71 (17.0 x 43.0)	1.09 (31)	170	1700	1.2	P016-ND†	4.63	41.63	1998.00/720	P016T-ND	4.93	44.33	2127.60/720	HHR-170A
A	1.2	2100	.67 x 1.97 (17.0 x 50.0)	1.34 (38)	210	2100	1.2	P017-ND†	5.35	48.15	2311.20/720	P017T-ND	5.65	50.85	2440.80/720	HHR-210A
4/3 A	1.2	3700	.67 x 2.64 (17.0 x 67.0)	1.87 (53)	370	2000	2.2	P018-ND†	7.38	66.38	2369.50/540	P018T-ND	7.68	69.08	2486.70/540	HHR-380A

† Non-extending positive terminals. * See "How To Order" for note on shipping charges on prepaid orders.

Panasonic Nickel Cadmium Batteries



The Panasonic nickel-cadmium battery is a rechargeable sealed nickel-cadmium alkaline cell.

FEATURES: • Long Life • Excellent Discharge Characteristics • Long Shelf Life • High-Rate Charging • Wide Temperature Range • Reliable, Self-Resealing Vent • Sealed, Strong, Leakproof Construction.

APPLICATIONS: For Cyclic Use: • Consumer Applications • Office Equipment • Tools • Photography • Toys & Hobby. For Trickle or Float Charge Use: • Emergency Devices • Memory Back-up.

SPECIAL PURPOSE BATTERIES: Rapid-Charge "R" Type: The "R" type cell has a specially improved negative plate with increased gas absorption characteristics. It can be subjected to uncontrolled charging at the 1C rate & rapid-charge in 1 to 1.5 hours is possible. High-temperature "H" Type: By using a polypropylene separator, the "H" type cell can withstand a temp. of 65°C (149°F) during use. When charging is conducted at a low charging current of C/20 to C/30 in a high-temp. ambient, the "H" type cell has a sharply improved capacity compared to a standard cell, due to special electrolyte. High-capacity "E" Type: The extra capacity cells combine a high-

capacity density positive plate with a high-density paste negative plate. These cells have 20-30% more capacity than equivalent standard cells. Super High Capacity & Rapid Charge "S" Type: Super high capacity & rapid charge "S" type batteries are ideal for today's high capacity needs. They feature increased capacity & rapid charging within approx. 1 hr. The high-density positive base material of foam nickel is combined with the pasted negative plate to produce a capacity approximately 40% greater than that of the rapid-charge "R" type battery of the same size. High Rate Discharge & Rapid Charge "RP" Type: This rapid charge, high rate discharge type has been developed through the integration of all Panasonic battery technology. It employs unique plates featuring unsurpassed gas absorption characteristics & a current-collecting system to provide charging in just 1 to 1.5 hours. The internal resistance is also greatly reduced for improved voltage characteristics during high rate discharge at approximately 10CmA.

Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.

CROSS REFERENCE ABBREVIATIONS: SF = SAFT USA (France); VA = VARTA Germany; ER = Ever-Ready; SA = SANYO Japan; TO = Toshiba; DY = Dynacharge

Panasonic 6-Hour Nickel Cadmium Battery Charger

FEATURES:

- True full charge in just 6 hours (9V in 15 hours)
- Quickly recharges up to 4 rechargeable nickel-cadmium batteries to 100% power!
- UL approved. With anti-reversal polarity protection system
- Simultaneous charging of any pair of nickel-cadmium batteries: D, C, AA, AAA, or single 9V. No special adaptor needed for AAA!
- Not for use with flat top batteries indicated by /FT.

P292-ND (4 unit)..... \$18.75
P293-ND Same charger as above except this one handles 8 batteries!.... \$33.75

Size	Capacity C/5 (mAh)	Dimensions Inch (mm) Dia. x Height	Weight* Oz. (gram)	Std. Chg @ 15hrs (mA)	Quick Charge (mA) (hrs.)	Digi-Key Part No.	1	10	Pkg.	Carton	Panasonic Part No.	Panasonic Replacement Battery Cross Reference (see above for manufacture abbreviations)
Standard Type												
N	1.2	150	0.45 x 1.16 (11.5 x 29.5)	0.28 (8.0)	15	38	6.0	P110-ND	2.39	21.47	381.60/200	1522.58/1200
AA	1.2	220	0.41 x 1.75 (10.5 x 44.5)	0.35 (10)	22	66	5.0	P110-ND	2.49	22.39	398.00/200	2382.03/1800
AAA	1.2	250	0.41 x 1.75 (10.5 x 44.5)	0.35 (10)	25	75	5.0	P254-ND	2.49	22.39	398.00/200	2382.03/1800
AA	1.2	500	0.57 x 1.97 (14.5 x 50.0)	0.74 (21)	50	150	5.0	P116-ND	2.16	19.40	68.96/40	1034.40/800
AA	1.2	500	0.57 x 1.90 (14.5 x 48.3)	0.74 (21)	50	150	5.0	P227-ND†	2.38	21.42	76.18/40	1142.40/800
2/3SC	1.2	600	0.89 x 1.02 (22.5 x 26.0)	1.02 (29)	60	180	6.0	P118-ND†	5.17	46.49	619.80/150	1859.40/600
2/C	1.2	1000	1.02 x 1.22 (25.8 x 31.0)	1.59 (45)	100	333	4.5	P238-ND†	6.21	55.91	248.50/50	1118.25/300
C	1.2	2200	1.00 x 1.94 (25.3 x 49.3)	2.65 (75)	220	730	4.5	P163-ND	6.34	57.08	101.48/20	913.32/240
C	1.2	4000	1.02 x 1.97 (25.8 x 50.0)	2.65 (75)	240	1500	2.4	P108-ND†	7.47	67.21	119.48/20	1075.32/240
D	1.2	4000	1.30 x 2.36 (33.0 x 60.0)	4.90 (139)	400	—	—	P124-ND	11.31	90.46	90.46/10	678.45/100
9 Volt	8.4	120	1.043 x 1.949 x 0.689 (26.5x49.5x17.5)	1.54 (43.7)	12	—	—	P148-ND	10.63	—	114.75/12	114.75/12
High Temperature "H" Type												
1/3AA	1.2	110	0.57 x 0.69 (14.5 x 17.5)	0.23 (6.5)	11	—	—	P109-ND†	1.96	17.64	188.16/20	2502.53/2400
AA	1.2	500	0.57 x 1.90 (14.5 x 48.3)	0.74 (21)	50	—	—	P161-ND	2.28	20.52	72.96/40	1094.40/800
SC	1.2	1200	0.89 x 1.67 (22.5 x 42.5)	1.69 (48)	120	—	—	P091-ND†	3.76	33.86	301.00/100	903.00/400
C	1.2	1800	1.02 x 1.97 (25.8 x 50.0)	2.55 (73)	180	—	—	P122-ND†	6.84	61.58	109.48/20	985.32/240
C	1.2	2300	1.02 x 1.97 (25.8 x 50.0)	2.75 (78)	230	—	—	P090-ND†	7.12	64.06	113.88/20	1024.92/240
D	1.2	4000	1.30 x 2.42 (33.0 x 61.5)	4.90 (139)	400	—	—	P258-ND	10.78	86.26	86.26/10	646.95/100
High Capacity "E" Type												
SC	1.2	1500	0.89 x 1.67 (22.5 x 42.5)	1.69 (48)	150	500	4.5	P156-ND†	4.19	37.69	402.00/120	1265.00/480
D	1.2	4400	1.27 x 2.36 (32.3 x 59.9)	4.93 (140)	440	—	—	P158-ND	10.91	87.26	87.26/10	654.45/100
High Rate Discharge and Rapid Charge "R/P" Type												
4/5SC	1.2	1200	0.91 x 1.30 (23.0 x 33.0)	1.38 (38)	120	1000	1.6	P232-ND†	3.64	32.74	291.00/100	1309.50/600
CSC	1.2	1300	0.91 x 1.65 (23.0 x 42.0)	1.66 (47)	130	1300	1.5	P098-ND†	2.56	23.06	205.00/100	615.00/400
SC	1.2	1200	0.91 x 1.69 (23.0 x 43.0)	1.66 (47)	120	1200	1.5	P240-ND†	3.64	32.74	291.00/100	873.00/400
SC	1.2	1300	0.91 x 1.69 (23.0 x 43.0)	1.66 (47)	130	1300	1.5	P159-ND†	2.56	23.06	205.00/100	615.00/400
SC	1.2	1400	0.91 x 1.69 (23.0 x 43.0)	1.69 (48)	140	1400	1.5	P233-ND†	2.81	25.31	225.00/100	810.00/480
Rapid Charge "R" Type												
2/3AA	1.2	300	0.57 x 1.11 (14.5 x 28.2)	0.42 (12)	30	300	1.5	P234-ND†	2.19	19.71	350.40/200	2330.16/2000
AA	1.2	600	0.57 x 1.97 (14.5 x 50.0)	0.78 (22)	60	600	1.5	P272-ND	2.48	22.32	79.36/40	1190.40/800
AA	1.2	600	0.57 x 1.97 (14.5 x 50.0)	0.74 (21)	60	600	1.5	P229-ND†	1.87	16.83	59.84/40	897.60/800
AA	1.2	700	0.57 x 1.90 (14.5 x 48.3)	0.78 (22)	70	700	1.5	P253-ND†	1.91	17.15	60.96/40	914.40/800
2/3AF	1.2	450	0.65 x 1.10 (16.5 x 28.0)	0.63 (18)	45	450	1.5	P150-ND†	4.08	36.68	163.00/50	1956.00/800
4/5AF	1.2	700	0.65 x 1.67 (16.5 x 42.5)	0.95 (27)	70	700	1.5	P152-ND†	4.64	41.72	185.40/50	1390.50/500
2/3SC	1.2	600	0.89 x 1.02 (22.5 x 26.0)	0.95 (27)	60	600	1.5	P181-ND†	4.54	40.96	435.84/120	1634.40/600
SC	1.2	1800	0.91 x 1.69 (23.0 x 43.0)	1.73 (49)	180	1800	1.5	P088-ND†	4.69	42.19	450.00/120	1350.00/480
C	1.2	2800	1.02 x 1.97 (26.0 x 50.0)	2.79 (79)	280	2800	1.5	P190-ND†	7.84	70.58	125.48/20	1129.32/240
D	1.2	5000	1.30 x 2.42 (33.0 x 61.5)	5.10 (145)	500	5000	1.5	P257-ND	12.93	—	103.46/10	1775.95/100
Super High Capacity and Rapid Charge "S" Type												
AA	1.2	800	0.57 x 1.90 (14.5 x 48.3)	0.71 (20)	80	800	1.5	P097-ND†	2.21	19.85	70.56/40	1058.40/800
AA	1.2	1000	0.57 x 1.97 (14.5 x 50.0)	0.81 (23)	100	1000	1.5	P092-ND†	3.16	28.40	100.96/40	1514.40/800
5/4AA	1.2	1100	0.57 x 2.56 (14.5 x 65.0)	1.02 (29)	110	1100	1.5	P160-ND†	4.04	36.36	161.60/50	1212.00/500
5/4AA	1.2	1200	0.57 x 2.56 (14.5 x 65.0)	1.09 (31)	120	1200	1.5	P093-ND†	4.42	39.74	176.60/50	1589.40/600
2/3AF	1.2	600	0.67 x 1.12 (17.0 x 28.5)	0.63 (18)	60	600	1.5	P235-ND†	2.78	25.02	400.32/180	1200.96/720
4/5AF	1.2	1100	0.67 x 1.69 (17.0 x 43.0)	0.88 (25)	110	1100	1.5	P239-ND†	3.66	32.94	527.04/180	1581.12/720
4/5AF	1.2	1200	0.67 x 1.69 (17.0 x 43.0)	0.92 (26)	120	1200	1.5	P094-ND†	3.54	31.82	509.04/180	1527.12/720
4/5AF	1.2	1500	0.67 x 1.69 (17.0 x 43.0)	0.95 (27)	140	1400	1.5	P255-ND†	4.16	37.44	599.04/180	1797.12/720
AF	1.2	1400	0.67 x 1.97 (17.0 x 50.0)	1.16 (33)	140	1400	1.5	P095-ND†	3.67	33.01	528.12/180	1584.36/720
AF	1.2	1600	0.67 x 1.97 (17.0 x 50.0)	1.16 (33)	160	1600	1.5	P256-ND†	4.22	37.96	607.32/180	1821.96/720
SC	1.2	1800	0.89 x 1.67 (22.5 x 42.5)	1.65 (47)	180	1500	1.6	P237-ND†	5.52	50.06	445.00/100	1335.00/400
5/4SC	1.2	2300	0.91 x 1.97 (23.0 x 50.0)	2.24 (57)	230	2000	1.6	P096-ND†	7.93	71.37	761.28/120	1712.88/360

† Non-extending positive terminals. * See "How To Order" for note on shipping charges on prepaid orders.

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