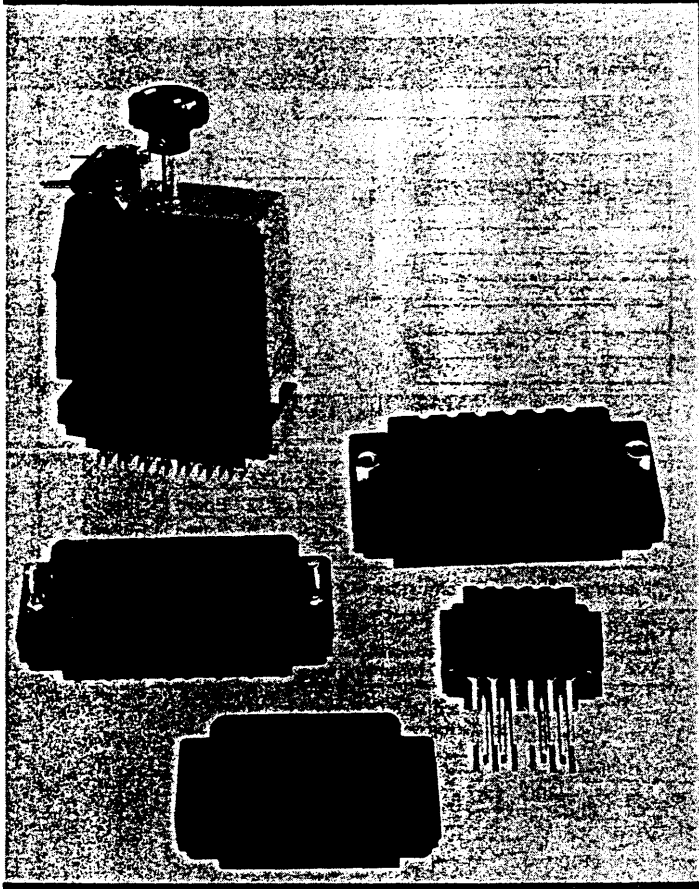


145-150

145-151-159

SERIES 516 RACK AND PANEL CONNECTORS



FEATURES

Cable to panel and cable to cable applications

Five standard sizes available: 20, 38, 56, 90 and 120 positions

Insertable/removable EDACON contacts

Tapered solder eyelet, Wire Wrap* and crimp style terminations. (See ordering code for styles and dimensions)

All contacts recessed for maximum protection against mishandling

All contacts will fit both plug and receptacle

Each EDACON contact will withstand an axial load of 31 lbs. after initial insertion into the insulator. The crimp barrel will accommodate wire sizes from AWG No. 18 to No. 30. (For complete crimp characteristics, please refer to chart)

All the equipment necessary to crimp contacts is available from stock. Semi-automatic crimping machines, for production applications, as well as the hand operated crimping pliers, are designed to realize the full electrical and mechanical advantages of the crimp contact. For complete details on this equipment, please refer to pages on Tools

Actuating screw eases mating and unmating of connectors, and secures mated connectors together

All hardware can be mounted to plug or receptacle

Polarizing hardware permits 288 polarizing combinations per contact pair and can be easily reset by user

Guide pins and sockets ensure perfect alignment of mating pairs

New, Polycarbonate covers with top or side entry clamp, or Zinc covers with universal top or side clamp are available

* Wire-Wrap is a registered Trade-Mark of Gardner-Denver Co.

SPECIFICATIONS

CURRENT RATING: 8.5 Amperes, maximum

CONTACT RESISTANCE: 6 milliohms, maximum

CONTACT MATERIAL: Phosphor Bronze, per QQ-B-750, composition A

CONTACT PLATING: Gold, 10-20 microinches over Nickel, 30-150 microinches

INSULATOR MATERIAL: Glass-filled, flame resistant Diallyl Phthalate per MIL-M-14F, Type SDG-F. Also 20,38,56 and 90 pin available in U.L. Approved Polycarbonate

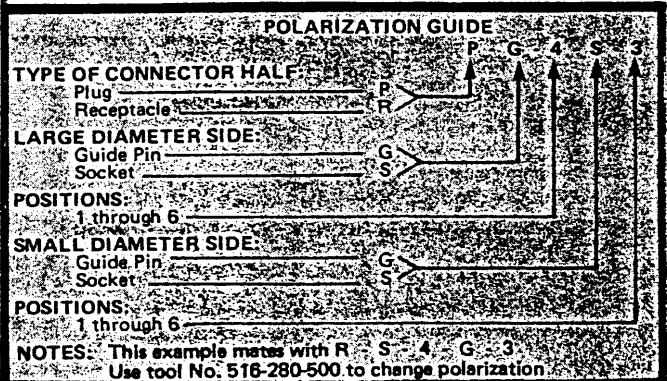
DIELECTRIC WITHSTANDING VOLTAGE:
2000†/1800 volts RMS at sea level
750†/675 volts RMS at 3.4" (86.4 mm) High

WITHDRAWAL FORCE:
2-16oz. (.56 to 4.45N) per contact pair

INSULATION RESISTANCE
25,000 Megohms at 500 V.D.C.

COVERS

Green, Polycarbonate Cover and Cable Clamp
Or
Metal With Universal-Top or Side Clamp

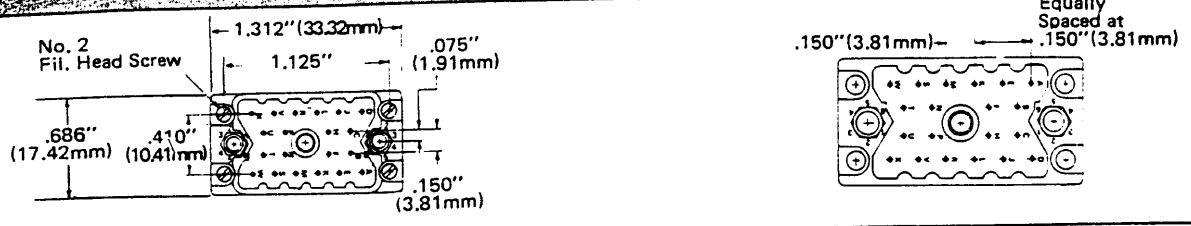


EDAC INC.

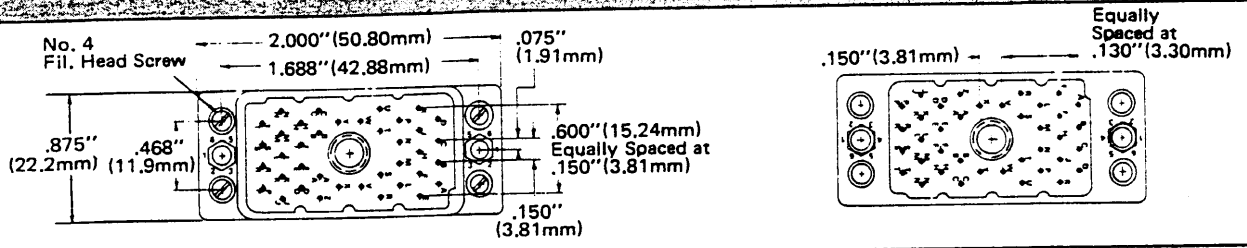
SERIES 516 RACK AND PANEL CONNECTORS

516 SERIES RACK AND PANEL PIN-OUT PATTERNS

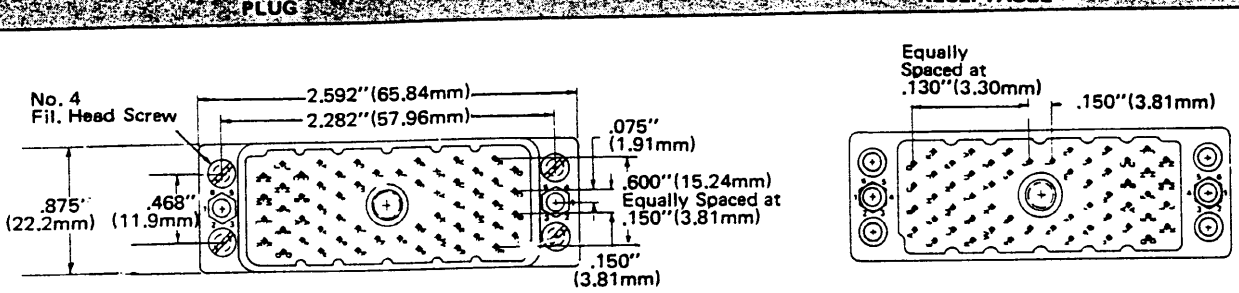
PLUG 20 PIN RECEPTACLE



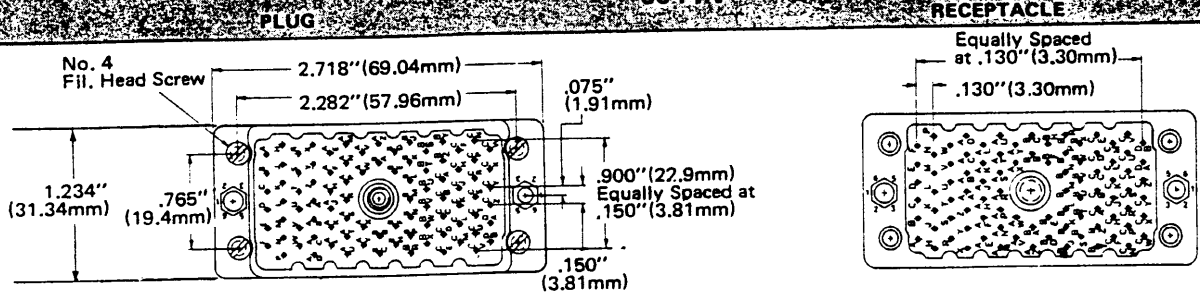
PLUG 38 PIN RECEPTACLE



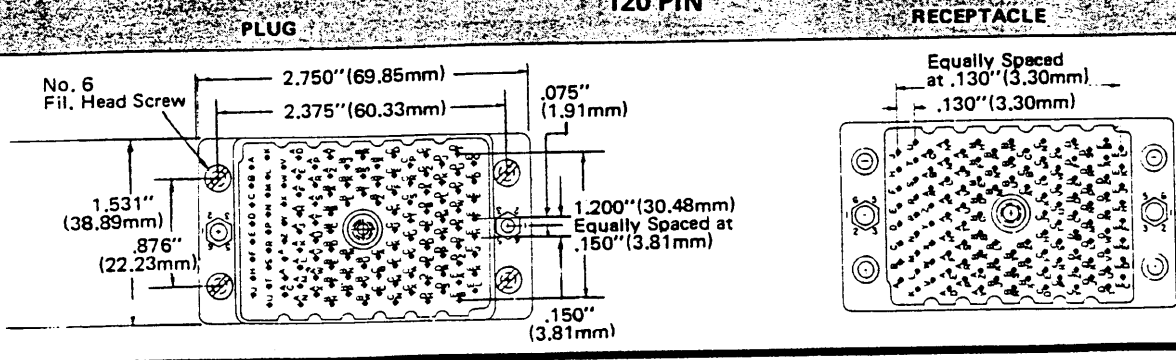
PLUG 56 PIN RECEPTACLE



PLUG 90 PIN RECEPTACLE

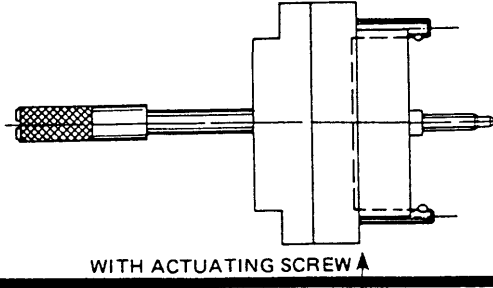
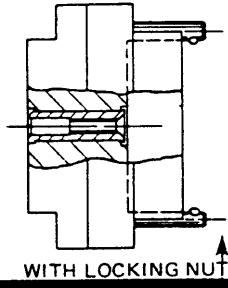
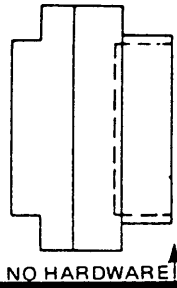


PLUG 120 PIN RECEPTACLE

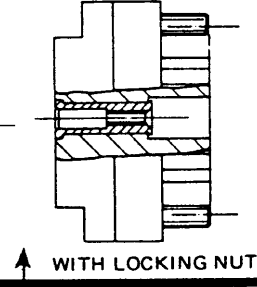
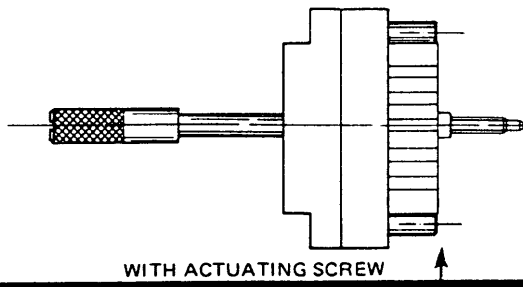
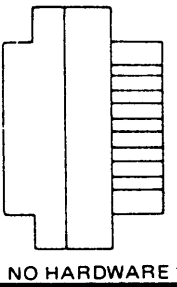


SERIES 516 RACK AND PANEL CONNECTORS

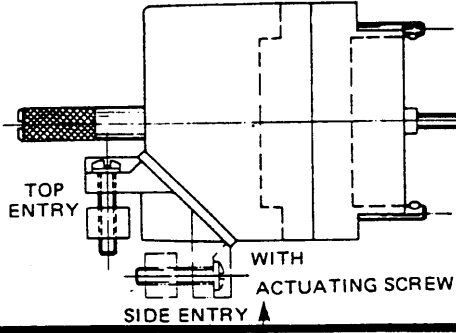
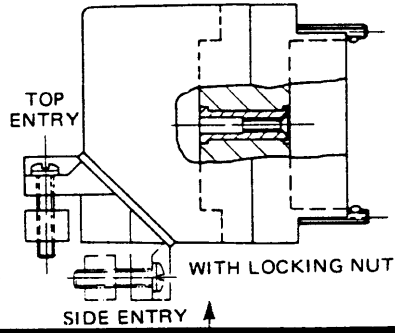
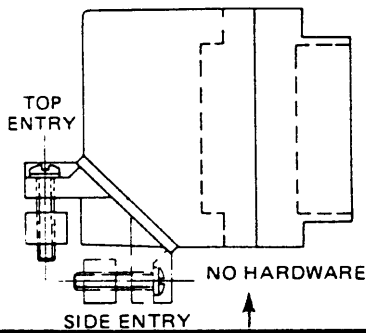
PLUG



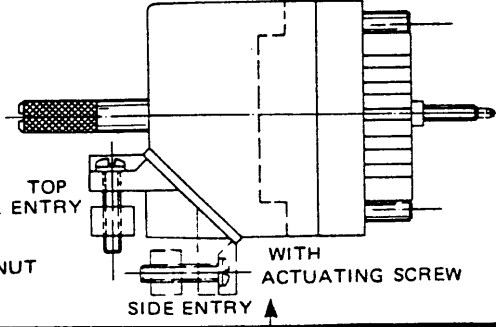
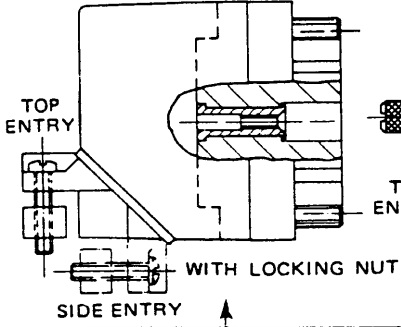
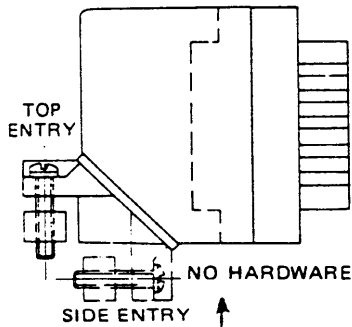
RECEPTACLE



PLUG WITH COVER



RECEPTACLE WITH COVER



EDAC INC.

SERIES 516 RACK AND PANEL CONNECTORS

ORDERING CODE 516 056 540 102

SERIES

NUMBER OF CONTACTS (20, 38, 56, 90, 120)

CONTACT CODE

NOTE: Contacts may be either factory installed or supplied loose for installation by customer. For factory installed contacts, use corresponding three digit Code No. For loose contacts, use Code No. 000 and order contacts separately by Part Number shown below. (Crimp type contacts must be ordered separately.)

| CODE | PART NUMBER | DESCRIPTION |
|-------|-------------|--|
| * 500 | 516-290-500 | SOLDER EYELET .098" (2.49mm) |
| 520 | 516-290-520 | P.C. TAB .024"x .025"x .170" (.610 x .635 x 4.32mm) |
| * 540 | 516-290-540 | WIRE WRAP .024"x .050"x .567" (.61 x 1.27 x 14.40mm) |
| * 541 | 516-290-541 | WIRE WRAP .024"x .026"x .580" (.61 x .66 x 14.73mm) |
| * 542 | 516-290-542 | WIRE WRAP .024"x .050"x .760" (.61 x 1.27 x 19.30mm) |
| 590 | 516-290-590 | CRIMP (Loose) |
| 591 | 516-290-591 | CRIMP (1800 per Reel) |

*Insulation on contact termination is recommended because of protrusion from top of insulator. Also note that whether or not a cover can be used depends on wire size, insulation thickness, number of contacts, etc.

VARIATION CODE

| D.A.P. CODE | STYLE | DESCRIPTION | POLYCARBONATE CODE |
|-------------|------------|-----------------|--------------------|
| 101 | PLUG | ACTUATING SCREW | - 301 |
| 102 | | LOCKING NUT | - 302 |
| 100 | | NO HARDWARE | 300 |
| 202 | RECEPTACLE | LOCKING NUT | - 402 |
| 201 | | ACTUATING SCREW | - 401 |
| 200 | | NO HARDWARE | 400 |

POLYCARBONATE AVAILABLE IN 20, 38, 56 and 90 PIN ONLY.

VARIATION CODE D.A.P. (WITH COVERS)

| CODE | STYLE | DESCRIPTION | CODE |
|----------------|------------------------------|------------------------------|----------------------------|
| STANDARD CLAMP | | | LARGE CLAMP |
| 111 | PLUG | ACTUATING SCREW, TOP ENTRY | 131 |
| 121 | | ACTUATING SCREW, SIDE ENTRY | 141 |
| 151 | | ACTUATING SCREW, METAL COVER | 151 |
| 112 | | LOCKING NUT, TOP ENTRY | 132 |
| 122 | | LOCKING NUT, SIDE ENTRY | 142 |
| 152 | | LOCKING NUT, METAL COVER | 152 |
| 110 | | NO HARDWARE, TOP ENTRY | 130 |
| 120 | | NO HARDWARE, SIDE ENTRY | 140 |
| 150 | | NO HARDWARE, METAL COVER | 150 |
| 211 | | RECEPTACLE | ACTUATING SCREW, TOP ENTRY |
| 221 | ACTUATING SCREW, SIDE ENTRY | | 241 |
| 251 | ACTUATING SCREW, METAL COVER | | 251 |
| 212 | LOCKING NUT, TOP ENTRY | | 232 |
| 222 | LOCKING NUT, SIDE ENTRY | | 242 |
| 252 | LOCKING NUT, METAL COVER | | 252 |
| 210 | NO HARDWARE, TOP ENTRY | | 230 |
| 220 | NO HARDWARE, SIDE ENTRY | | 240 |
| 250 | NO HARDWARE, METAL COVER | | 250 |

CRIMP CHARACTERISTICS

| TENSILE STRENGTH | | | | |
|------------------|----------|----------|----------|----------|
| WIRE SIZE (AWG) | No. 18 | No. 20 | No. 22 | No. 24 |
| SOLID WIRE | 41 lbs. | 23 lbs. | 16.5lbs. | 11.5lbs. |
| | 18.6Kg. | 10.4Kg. | 7.49Kg. | 5.22Kg. |
| STRANDED WIRE | 42 lbs. | 24 lbs. | 17 lbs. | 12 lbs. |
| | 19.0Kg. | 10.9Kg. | 7.72Kg. | 5.45Kg. |
| WIRE SIZE (AWG) | No. 26 | No. 28 | No. 30 | |
| SOLID WIRE | 7.5 lbs. | 2.5 lbs. | 2 lbs. | |
| | 3.40Kg. | 1.14Kg. | .908Kg. | |
| STRANDED WIRE | 8 lbs. | 3 lbs. | 2.5lbs. | |
| | 3.63Kg. | 1.36Kg. | 1.134Kg. | |

CRIMP RESISTANCE (IN MILLIOHMS)

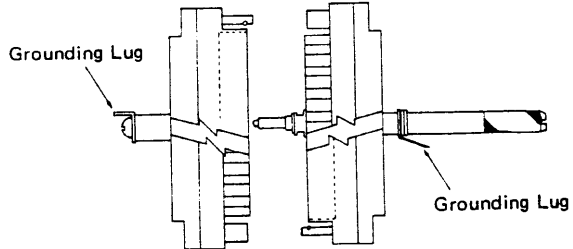
| WIRE SIZE (AWG) | No. 18 | No.20 | No.22 | No.24 | No.26 | No.28 | No.30 |
|-----------------|--------|-------|-------|-------|-------|-------|-------|
| AVERAGE | .47 | .50 | .58 | .73 | .98 | 1.22 | 1.64 |
| MAXIMUM | .52 | .54 | .68 | .78 | 1.15 | 1.135 | 1.88 |

| WIRE SIZES(AWG) | INSULATOR | | |
|-------------------|-------------|------------------------------|----------------------------|
| | SINGLE WIRE | CONDUCTOR DIAMETER (MINIMUM) | DIAMETER (MAXIMUM OVERALL) |
| No. 18 | .058" | 1.47mm | .071" |
| No. 20 | .038" | .97mm | .062" |
| No. 22 | .031" | .79mm | .056" |
| No. 24 | .023" | .59mm | .049" |
| No. 26 | .021" | .53mm | .039" |
| No. 28 | .015" | .38mm | .037" |
| No. 30 (stranded) | .013" | .33mm | .038" |
| No. 30 (solid) | .010" | .25mm | .019" |

VARIATION CODE POLYCARBONATE (WITH COVERS)

WHEN USING THE VARIATION CODE (WITH COVERS) FOR ORDERING POLYCARBONATE INSULATORS, CHANGE THE FIRST DIGIT FROM 1 TO 3 FOR PLUGS, AND 2 TO 4 FOR RECEPTACLES.

GROUNDING FEATURE

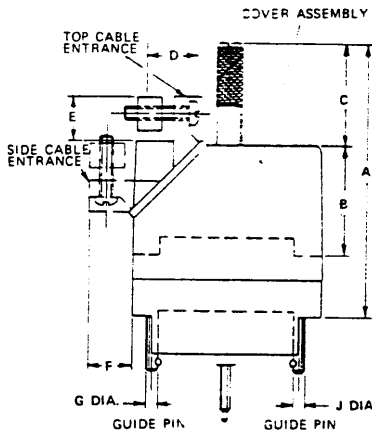


VARIATION CODE WITH GROUNDING FEATURE

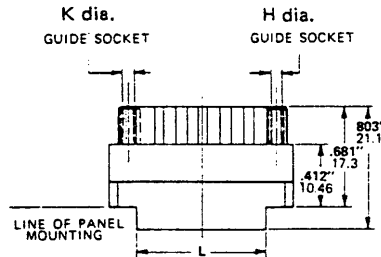
WHEN ORDERING INSULATORS WITH GROUNDING FEATURE (D.A.P. OR POLYCARBONATE) CHANGE THIRD DIGIT FROM 1 TO 3 FOR ACTUATING SCREWS AND 2 TO 4 FOR LOCKNUTS

NOTES: 90 and 120 pin connectors not available in 100 and 200 variation. Covers for 20 pin connectors may not be used with *Wire-Wrap contacts. Large clamp covers are available for 38 and 56 pin connectors only.

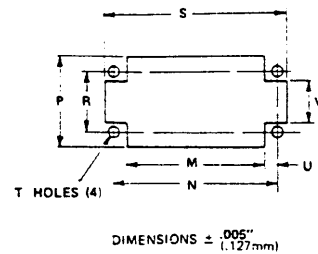
SERIES 516 RACK AND PANEL CONNECTORS



RECEPTACLE



MOUNTING PATTERN

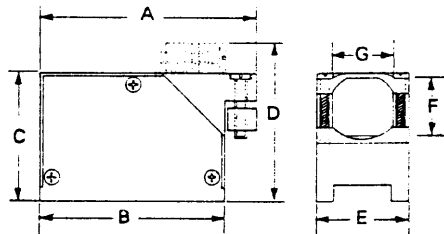


DIMENSIONS CHART FOR PLASTIC COVERS

| Connector Size | A | | B | | C | | D | | E | | F | | G | | H | | J | |
|----------------|-------|------|-------|------|-------|------|-------------|-----------|-------|------|-------|------|-------|------|-------|------|-------|------|
| | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm |
| 20 PIN | 1.875 | 47.6 | .750 | 19.1 | .713 | 18.1 | .454 DIA. | 11.5 DIA. | .343 | 8.71 | .343 | 8.71 | .090 | 2.28 | .100 | 2.54 | .076 | 1.93 |
| 38 PIN | 2.312 | 58.7 | 1.375 | 34.9 | .525 | 13.3 | .650x.500 | 16.5x12.7 | .453 | 11.5 | .453 | 11.5 | .110 | 2.79 | .120 | 3.04 | .090 | 2.28 |
| 56 PIN | 2.312 | 58.7 | 1.375 | 34.9 | .525 | 13.3 | .650x.500 | 16.5x12.7 | .453 | 11.5 | .453 | 11.5 | .110 | 2.79 | .120 | 3.04 | .090 | 2.28 |
| 90 PIN | 3.168 | 80.5 | 1.625 | 41.3 | 1.131 | 28.7 | .800 DIA. | 20.3 DIA. | .406 | 10.3 | .406 | 10.3 | .140 | 3.55 | .150 | 3.81 | .120 | 3.04 |
| 120 PIN | 3.168 | 80.5 | 1.875 | 47.6 | .881 | 22.4 | 1.080x.800. | 27.4x20.3 | .453 | 11.5 | .453 | 11.5 | .140 | 3.55 | .150 | 3.81 | .120 | 3.04 |

| Connector Size | K | | L | | M | | N | | P | | R | | S | | T Dia. | | U | | V | |
|----------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|--------|------|-------|------|-------|------|
| | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm |
| 20 PIN | .086 | 2.18 | .920 | 23.4 | .960 | 24.4 | 1.126 | 28.6 | .640 | 16.3 | .410 | 10.4 | 1.275 | 32.4 | .096 | 2.44 | .084 | 2.13 | .275 | 6.99 |
| 38 PIN | .100 | 2.54 | 1.380 | 35.1 | 1.420 | 36.1 | 1.688 | 42.9 | .780 | 19.8 | .468 | 11.9 | 1.940 | 49.2 | .136 | 3.45 | .134 | 3.40 | .250 | 6.35 |
| 56 PIN | .100 | 2.54 | 1.900 | 48.3 | 1.940 | 49.3 | 2.282 | 57.9 | .780 | 19.8 | .468 | 11.9 | 2.530 | 64.2 | .136 | 3.45 | .171 | 4.34 | .250 | 6.35 |
| 90 PIN | .130 | 3.30 | 2.010 | 51.1 | 2.050 | 52.1 | 2.282 | 57.9 | 1.125 | 28.6 | .765 | 19.4 | 2.670 | 67.8 | .136 | 3.45 | .116 | 2.95 | .312 | 7.92 |
| 120 PIN | .130 | 3.30 | 2.010 | 51.1 | 2.050 | 52.1 | 2.375 | 60.2 | 1.420 | 36.1 | .875 | 22.2 | 2.687 | 68.2 | .149 | 3.78 | .162 | 4.11 | .312 | 7.92 |

DIMENSIONS CHART FOR METAL COVERS



Metal Covers shown as Side Entry. For Top Entry remove Side Plate and reverse fixed clamp.

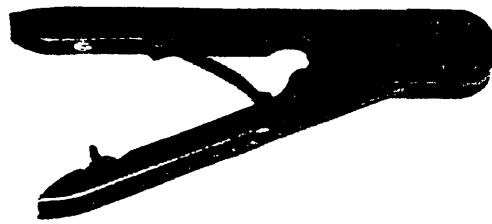
| Connector Size | A | | B | | C | | D | | E | | F | | G | |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm | Inch. | mm |
| 20 PIN | 1.539 | 39.09 | 1.325 | 33.66 | .906 | 23.01 | 1.120 | 28.45 | .686 | 12.42 | .446 | 11.33 | .490 | 12.45 |
| 38 PIN | 2.206 | 56.03 | 2.006 | 50.95 | 1.566 | 39.78 | 1.766 | 44.86 | .875 | 22.23 | .720 | 18.29 | .575 | 14.61 |
| 56 PIN | 2.802 | 71.17 | 2.602 | 66.09 | 1.566 | 39.78 | 1.766 | 44.86 | .875 | 22.23 | .720 | 18.29 | .575 | 14.61 |
| 90 PIN | 3.118 | 79.20 | 2.718 | 69.04 | 1.775 | 45.09 | 2.175 | 55.25 | 1.234 | 31.34 | .880 | 22.35 | .900 | 22.86 |
| 120 PIN | 3.175 | 80.65 | 2.750 | 69.85 | 2.020 | 51.31 | 2.445 | 62.10 | 1.531 | 38.89 | .890 | 22.61 | 1.080 | 27.43 |

ORDERING CODE FOR COVERS ONLY

| TYPE | SIZE | WITH STANDARD CLAMP | | WITH LARGE CLAMP | |
|---------|---------|---------------------|-------------|------------------|---------------|
| | | SIDE | TOP | SIDE | TOP |
| Plastic | 20 PIN | 516-230-120 | 516-230-220 | Not Available | Not Available |
| Metal | | 516-230-520 | | 516-230-520 | |
| Plastic | 38 PIN | 516-230-138 | 516-230-238 | 516-230-338 | 516-230-438 |
| Metal | | 516-230-538 | | 516-230-538 | |
| Plastic | 56 PIN | 516-230-156 | 516-230-256 | 516-230-356 | 516-230-456 |
| Metal | | 516-230-556 | | 516-230-556 | |
| Plastic | 90 PIN | 516-230-190 | 516-230-290 | Not Available | Not Available |
| Metal | | 516-230-590 | | 516-230-590 | |
| Plastic | 120 PIN | 516-230-112 | 516-230-212 | Not Available | Not Available |
| Metal | | 516-230-512 | | 516-230-512 | |

EDAC INC.

TOOLS



HAND OPERATED CRIMPING TOOL

A precision engineered tool for hand crimping contacts. It is designed to give fast, trouble-free operation. This tool has a built-in ratchet, to prevent under-crimping.

516-280-200 for Rack and Panel - 516 & 519 Series



CONTACT EJECTION TOOL

This tool will locate accurately on the contact tails to give convenient ejection of contacts without damage to the insulator.

516-280-200 for SERIES: 333, 337, 342, 345, 346, 387, 392, 395, 396

018 Square, 025 Square, 018, 030 Contact tails



CONTACT EJECTION TOOL

This tool releases the contacts from the insulator. It will provide quick, easy, positive ejection of the contact without damage to the insulator.

516-280-300 for Rack and Panel - 516 & 519 Series



CONTACT INSERTION TOOL

This tool is recommended for the insertion of crimp contacts into the insulator. The wire groove locates the tool onto the back of the crimp form for a positive non-slip action.

516-280-400 for Rack and Panel - 516 & 519 Series



POLARIZING HARDWARE WRENCH

This tool will simplify the procedure for the user when changing the orientation of polarizing pins and sockets.

516-280-500 for Rack and Panel - 516 & 519 Series



CONTACT INSERTION TOOL

This tool was especially designed for wire wrap tail contact insertion. The tubular shroud positively covers the slender tail and gives all-round support when applying insertion pressure. It is designed to eliminate distortion and bending.

516-280-600 for Rack and Panel - 516 & 519 Series