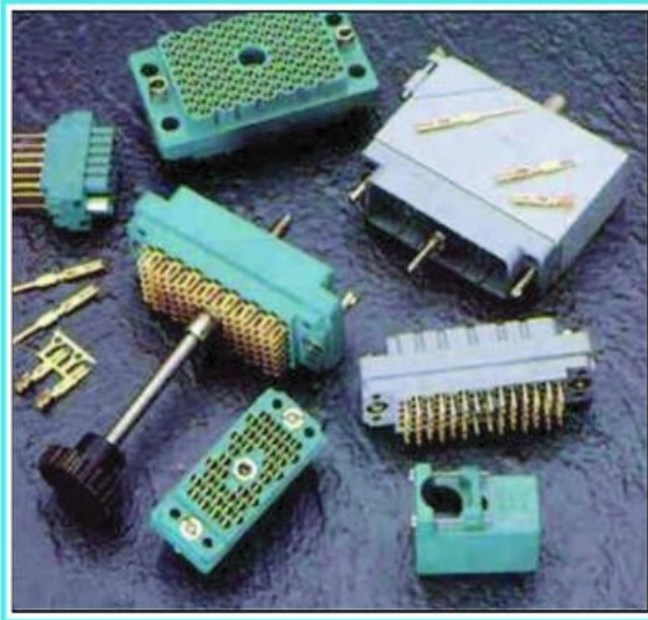


# 516 SERIES RACK & PANEL CONNECTOR

Plug and Receptacle



## FEATURES

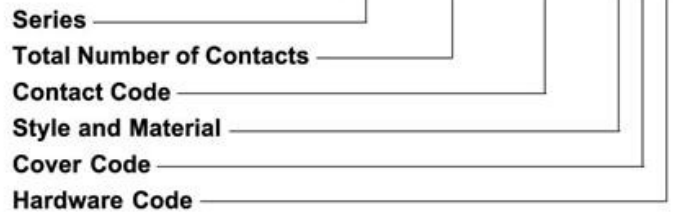
- UL Recognized
- .150 (3.81) Contact Spacing x .130 (3.30) or .150 (3.81) Row Spacing with Staggered Grid
- Plug and Receptacle in 20, 38, 56, 90 or 120 Contact Sizes
- Edacon Hermaphroditic Contact Mating Design
- Contact Termination Options include Crimp, P.C. Tail, Wire Hole and Wire Wrap
- Mating and Unmating Simplified with use of Actuating Screws
- Optional Covers with Side or Top Entry Cable Clamp in Plastic or Metal Material Available for all Connector Sizes
- Versatile Metal Cover Design permits Assembly or Disassembly After Cabling is Complete plus Cable Entry Style Flexibility
- Actuating Screws, Locknuts, Polarizing Hardware, Covers and Contacts Suitable for either Plug or Receptacle
- Polarizing Hardware Adjustable for 288 Mating Combinations
- Tools Available for Contact Installation, Removal and Crimping and Polarizing Changes

## SPECIFICATIONS

- ◆ Insulator Material: Diallyl Phthalate or Thermoplastic Polyester, UL 94V-0, Colour: Green, or Polycarbonate, Colour: Grey
- ◆ Contact Material: Phosphor Bronze Alloy CA-510
- ◆ Contact Plating: Gold over Nickel for Entire Contact
- ◆ Cover Material: Polycarbonate, Colour: Green, or Die-Cast Zinc, Finished with Grey Enamel Paint
- ◆ Current Rating: 8.5 Amperes
- ◆ Contact Resistance: 10 Milliohms Maximum
- ◆ Dielectric Withstanding Voltage: 2000 V AC rms at Sea Level
- ◆ Insulation Resistance: 5000 Megohms Minimum
- ◆ Operating Temperature: -65 to +125 Degrees C
- ◆ Insertion and Withdrawal Force: 2 to 16 oz (0.56 to 4.45 N) per Contact Position

## 516 SERIES ORDERING CODE

Example Part Number **516 - 038 - 500 - 2 1 2**



Series 516

### Total Number of Contacts

020, 038, 056, 090 or 120

Contact Code <sup>1,2</sup>	Description & Tail Size	Tail Length "G"
000	No Contacts Assembled	— —
500	Wire Hole .110 x .024 (2.79 x 0.61)	.245 (6.22)
520	P.C. Tail .025 x .024 (0.64 x 0.61)	.215 (5.46)
540	Wire Wrap .050 x .024 (1.27 x 0.61)	.600 (15.24)
541	Wire Wrap .026 x .024 (0.66 x 0.61)	.620 (15.75)
542	Wire Wrap .050 x .024 (1.27 x 0.61)	.790 (20.07)

Style and Material <sup>3</sup>	Style	Insulator Material
1	Plug	Green Diallyl Phthalate
2	Receptacle	Green Diallyl Phthalate
3	Plug	Grey Polycarbonate
4	Receptacle	Grey Polycarbonate
5	Plug	Green Polyester
6	Receptacle	Green Polyester

Cover Code <sup>4,5,6,7</sup>	Description
0	No Cover Assembled
1	Plastic Cover, Top Entry Standard Clamp
2	Plastic Cover, Side Entry Standard Clamp
3	Plastic Cover, Top Entry Large Clamp
4	Plastic Cover, Side Entry Large Clamp
5	Metal Cover, Side Entry
6	Metal Cover, Top Entry

Hardware Code <sup>8</sup>	Description
0	No Hardware Assembled
1	Actuating Screw and Polarizing Hardware
2	Locknut and Polarizing Hardware
5	Actuating Screw with No Polarizing Hardware
6	Locknut with No Polarizing Hardware

### Ordering Code Notes

- 1) Crimp contacts are also available for the 516 series connectors. Contacts may be ordered separately for pre-wired or select position assembly.

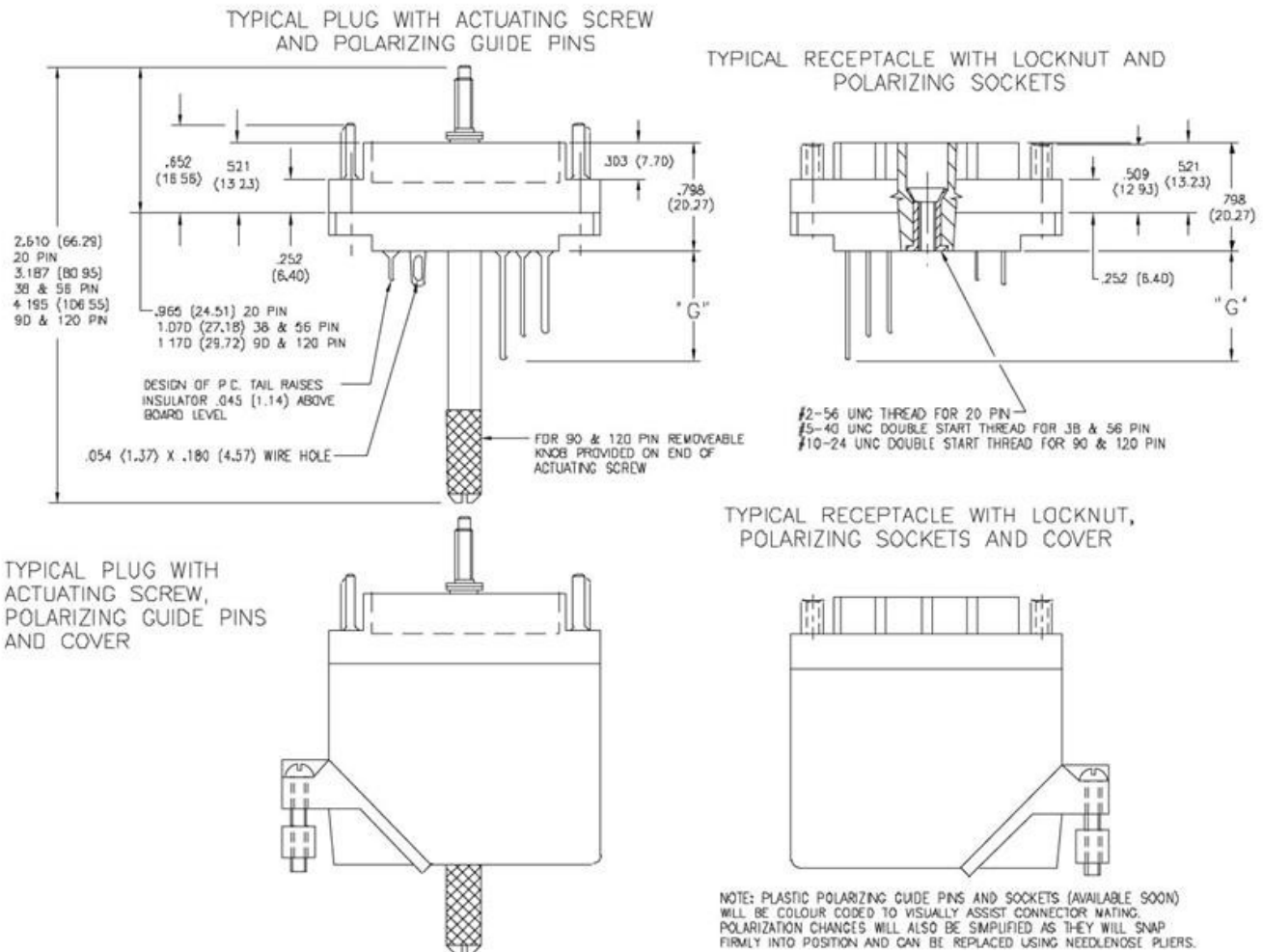
Part Number	Description	Silhouette
516-290-500	Wire Hole	
516-290-520	P.C. Tail	
516-290-540	Wire Wrap	
516-290-541	Wire Wrap	
516-290-542	Wire Wrap	
516-290-590	Crimp - Loose	
516-290-591	Crimp - 1800 Contacts per reel	

Continued on next page



# RACK & PANEL CONNECTOR SERIES 516

Plug and Receptacle



NOTE: PLASTIC POLARIZING GUIDE PINS AND SOCKETS (AVAILABLE SOON) WILL BE COLOUR CODED TO VISUALLY ASSIST CONNECTOR MATING. POLARIZATION CHANGES WILL ALSO BE SIMPLIFIED AS THEY WILL SNAP FIRMLY INTO POSITION AND CAN BE REPLACED USING NEEDLENOSE PLIERS.

## ORDERING CODE NOTES (Continued)

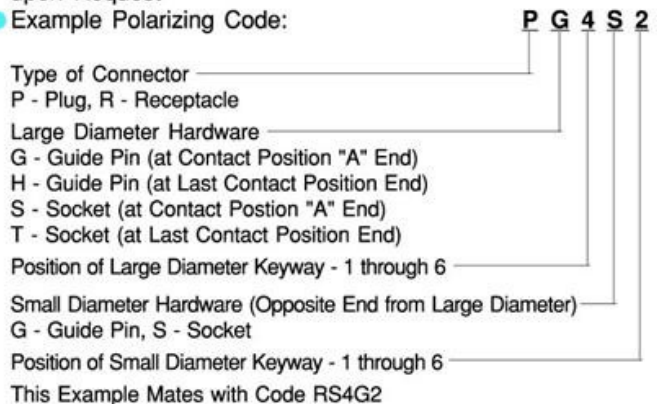
- 2) For contact installation, removal and crimping tools, refer to page 72.
- 3) Grey polycarbonate insulator material is not available for the 120 pin size connector.
- 4) The 20 pin connector cover will not accept the length of the wire wrap contacts.
- 5) Plastic covers with large clamps are only available for the 38 and 56 pin size connectors.
- 6) Metal covers with side entry may be converted to top entry by removing side plate and changing clamp orientation.
- 7) Covers may be ordered separately. Refer to page 88.
- 8) Insulator design prevents improper mating of individual plug and receptacle. Polarizing hardware enables specific plug and receptacle mating combinations.

## CRIMP CHARACTERISTICS

- Contacts and Crimp Tools Accommodate from 28 AWG to 18 AWG, Solid or Stranded Conductor Diameters from .012 (0.30) to .049 (1.25) and an Insulation Diameter up to .074 (1.88)
- Multiple Smaller Gauge Wires may be Crimped Together
- Crimp Resistance from 0.5 Milliohms (18 AWG) to 1.5 Milliohms (28AWG)

## POLARIZING CODES

- Polarizing Hardware Changes allow 288 Mating Combinations
- Standard Code Supplied for Plugs PG1G1, for Receptacles RS1S1. Connectors with Special Polarizing Codes Available upon Request
- Example Polarizing Code:



- Crimp Tensile Strength for Wire Sizes

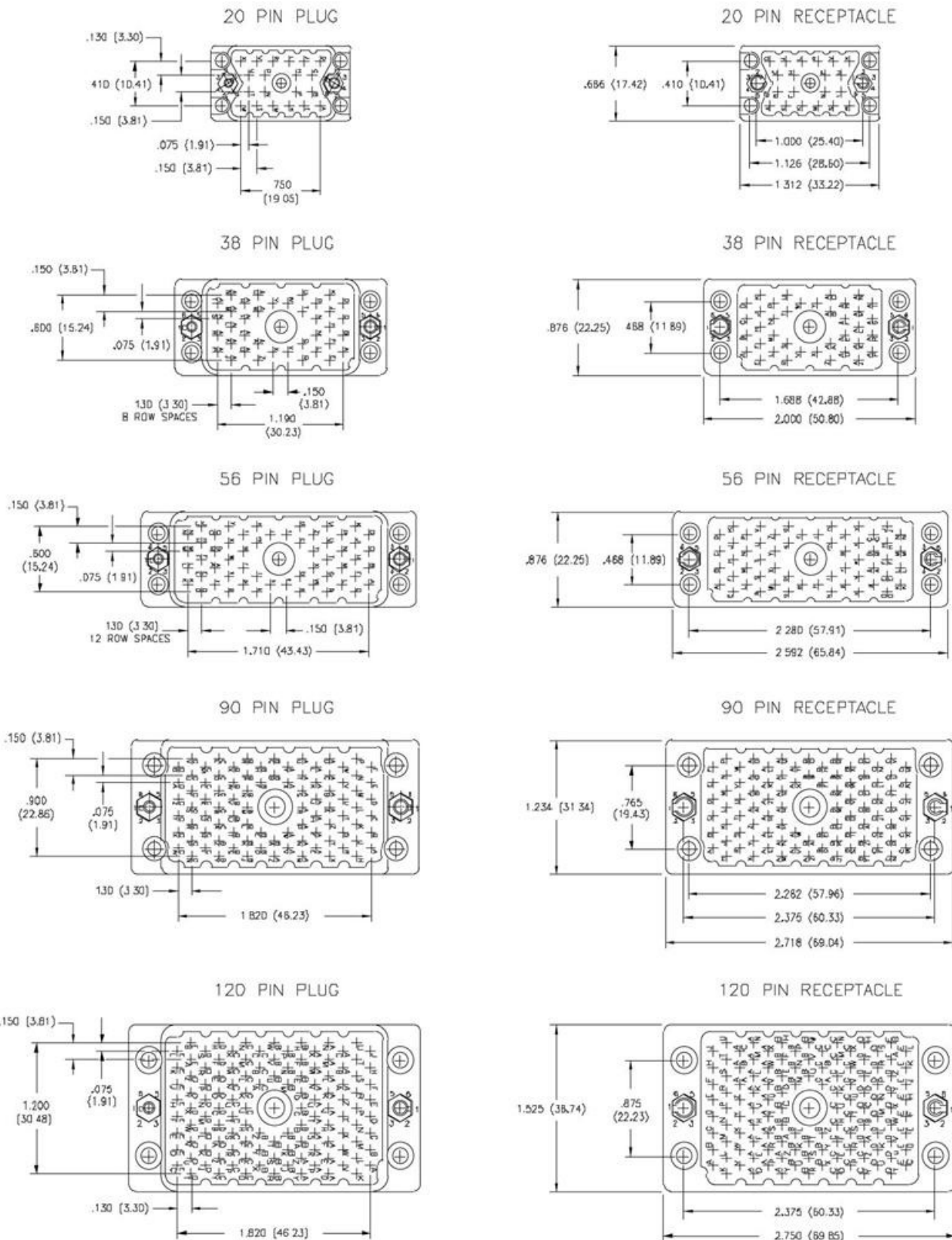
18 AWG - 40 lbs (178 N)	20 AWG - 25 lbs (111 N)
22 AWG - 15 lbs (67 N)	24 AWG - 10 lbs (44 N)
26 AWG - 5 lbs (22 N)	28 AWG - 3 lbs (13 N)

# 516 SERIES RACK & PANEL CONNECTOR

## Plug and Receptacle

### CONNECTOR MATING FACE VIEWS

DIMENSIONS INDICATED FOR EACH SIZE APPLY TO BOTH PLUG AND RECEPTACLE





# RACK & PANEL CONNECTOR SERIES 516

Metal and Plastic Covers

## 516 SERIES COVER ORDERING CODE

Example Part Number **516 - 230 - 5 56**

Series \_\_\_\_\_  
 Cover Identification Code \_\_\_\_\_  
 Cover Type \_\_\_\_\_  
 Cover Size \_\_\_\_\_

Series 516

Cover Identification Code 230

Cover Type <sup>1,2</sup>	Description
1	Plastic Cover, Side Entry Standard Clamp
2	Plastic Cover, Top Entry Standard Clamp
3	Plastic Cover, Side Entry Large Clamp
4	Plastic Cover, Top Entry Large Clamp
5	Metal Cover, Side Entry
6	Metal Cover, Top Entry
7	Metal Cover, Large Clamp

Cover Size	Fits Connector
12	516 Series 120 Pin
20	516 Series 20 Pin and 519 Series 14 Pin
38	516 Series 38 Pin and 519 Series 36 Pin
56	516 Series 56 Pin
90	516 Series 90 Pin

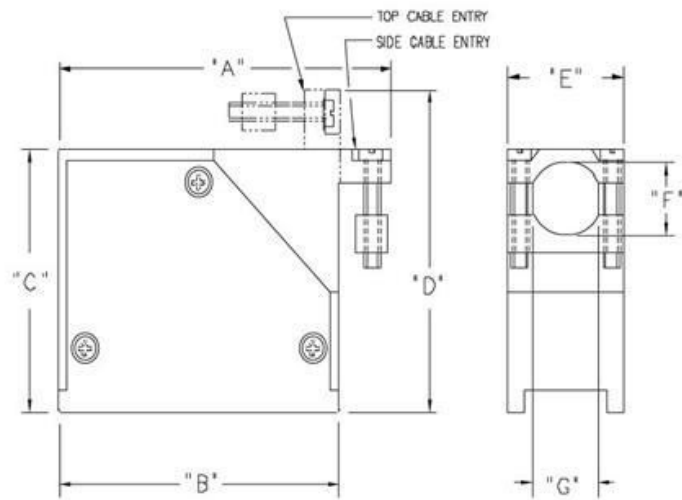
### Ordering Code Notes

- 1) Plastic covers with large clamps are only available for the 38 and 56 pin size connectors.
- 2) Metal covers with side entry may be converted to top entry by removing side plate and changing clamp orientation.

## FEATURES

- Available in Metal (Die-Cast Zinc Finished with Grey Enamel Paint) or Plastic (Green Polycarbonate) Material
- Covers with Top or Side Entry Cable Clamp. Orientation of Clamp on Metal Covers may be changed by the Customer
- Versatile Metal Cover Design permits Assembly or Disassembly after Cabling is Complete
- Screws for Securing Cover to 516 or 519 Series Connectors Supplied

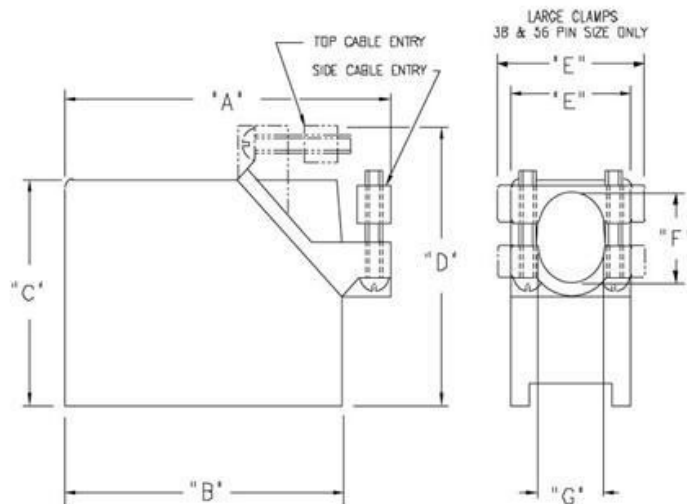
### METAL COVERS



NEW COVER DESIGN (AVAILABLE SOON) WILL ELIMINATE 3 SCREWS FOR SIDE TO SIMPLIFY ASSEMBLY, DISASSEMBLY AND CLAMP ORIENTATION CHANGES

SCREWS FOR SECURING THE COVER TO THE CONNECTOR ARE SUPPLIED BY EDAC

### PLASTIC COVERS

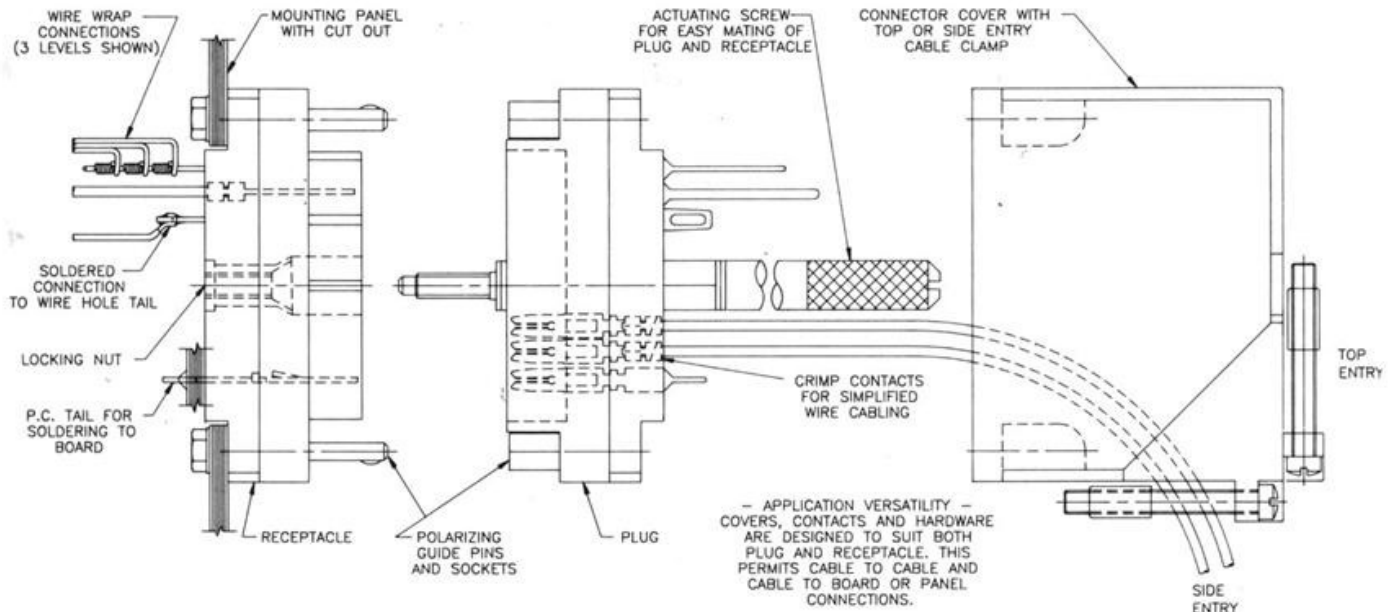


COVER FOR CONNECTOR	COVER MATERIAL	CLAMP SIZE	"A"		"B"		"C"		"D"		"E"		"F"		"G"	
			Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)
20 Pin	Plastic	Standard	1.605	(40.77)	1.325	(33.66)	.906	(23.01)	1.190	(30.23)	.715	(18.16)	.450	(11.43)	.450	(11.43)
20 Pin	Metal	Standard	1.539	(39.09)	1.325	(33.66)	.906	(23.01)	1.120	(28.45)	.686	(17.42)	.446	(11.33)	.490	(12.45)
38 Pin	Plastic	Standard	2.460	(62.48)	2.010	(51.05)	1.530	(38.86)	1.985	(50.42)	.910	(23.11)	.650	(16.51)	.500	(12.70)
38 Pin	Plastic	Large	2.460	(62.48)	2.010	(51.05)	1.530	(38.86)	1.985	(50.42)	1.110	(28.19)	.650	(16.51)	.608	(15.44)
38 Pin	Metal	Standard	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	Plastic	Standard	3.052	(77.52)	2.602	(66.09)	1.530	(38.86)	1.985	(50.42)	.910	(23.11)	.650	(16.51)	.500	(12.70)
56 Pin	Plastic	Large	3.052	(77.52)	2.602	(66.09)	1.530	(38.86)	1.985	(50.42)	1.110	(28.19)	.650	(16.51)	.608	(15.44)
56 Pin	Metal	Standard	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	Plastic	Standard	3.124	(79.35)	2.718	(69.04)	1.775	(45.09)	2.181	(55.40)	1.250	(31.75)	.800	(20.32)	.800	(20.32)
90 Pin	Metal	Standard	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	Plastic	Standard	3.156	(80.16)	2.750	(69.85)	2.020	(51.31)	2.426	(61.62)	1.530	(38.86)	.800	(20.32)	1.080	(27.43)
120 Pin	Metal	Standard	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)

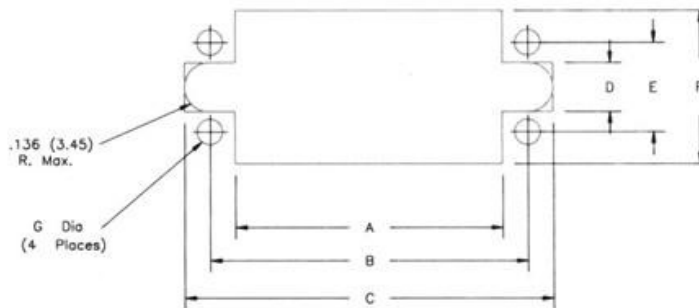
# 516 SERIES RACK & PANEL CONNECTOR

## Mounting Information

### RACK AND PANEL CONNECTORS



### 516 / 519 SERIES CONNECTOR PANEL MOUNTING CUT-OUT



### 516 SERIES CONNECTOR CUT OUTS

CONNECTOR SIZE	A	B	C	D	E	F	G Dia
20 pin	.960 (24.38)	1.126 (28.6)	1.270 (32.26)	.260 (6.60)	.410 (10.41)	.640 (16.26)	.104 (2.64)
38 pin	1.420 (36.07)	1.688 (42.87)	1.958 (49.73)	.260 (6.60)	.468 (11.89)	.816 (20.73)	.136 (3.45)
56 pin	1.940 (49.28)	2.280 (57.91)	2.550 (64.77)	.260 (6.60)	.468 (11.89)	.816 (20.73)	.136 (3.45)
90 pin	2.050 (52.07)	2.282 (57.96)	2.675 (67.95)	.300 (7.62)	.765 (19.43)	1.120 (36.07)	.136 (3.45)
120 pin	2.050 (52.07)	2.375 (60.32)	2.675 (67.95)	.300 (7.62)	.875 (22.22)	1.420 (36.07)	.156 (3.96)

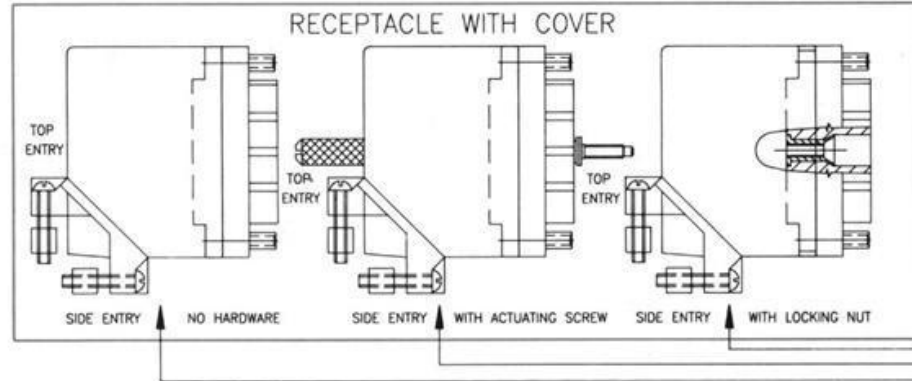
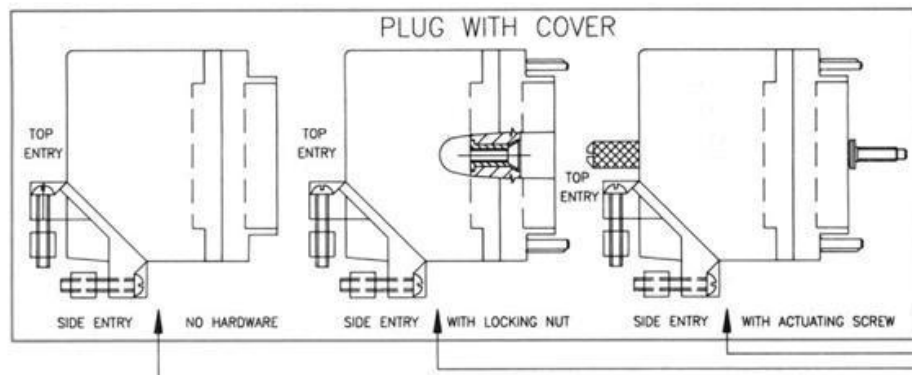
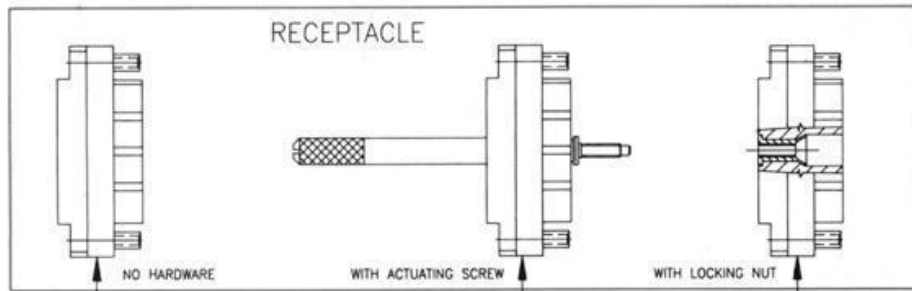
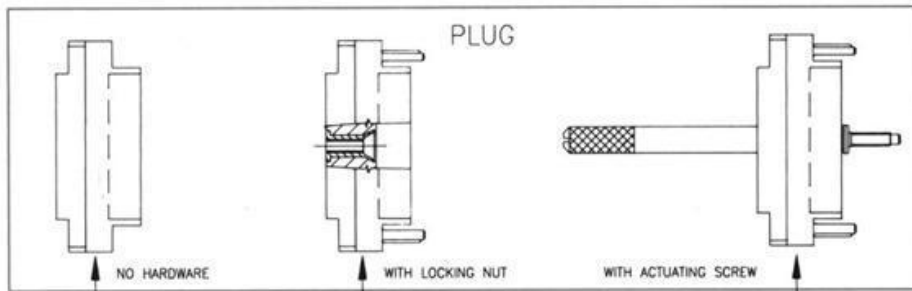
### 519 SERIES CONNECTOR CUT OUTS

CONNECTOR SIZE	A	B	C	D	E	F	G Dia
14 pin	.960 (24.38)	1.126 (28.6)	1.270 (32.26)	.260 (6.60)	.410 (10.41)	.640 (16.26)	.104 (2.64)
36 pin	1.420 (36.07)	1.688 (42.87)	1.958 (49.73)	.260 (6.60)	.468 (11.89)	.816 (20.73)	.136 (3.45)



# 516 SERIES RACK & PANEL CONNECTORS

Ordering Information



ORDERING CODE

516 056 540 102

SERIES

NUMBER OF CONTACTS

CONTACT CODE

DAP CODE	STYLE	DESCRIPTION	POLYCARB CODE	POLYESTER CODE
101	P L U G	ACTUATING SCREW	301	501
102		LOCKING NUT	302	502
100		NO HARDWARE	300	500
202	R E C E P T A C L E	LOCKING NUT	402	602
201		ACTUATING SCREW	401	601
200		NO HARDWARE	400	600

POLYCARBONATE CONNECTORS AVAILABLE IN 20,38,56 AND 90 PINS SIZES ONLY

CODE	STYLE	DESCRIPTION	CODE	
111	P L U G	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		R E C E P T A C L E	ACTUATING SCREW, TOP ENTRY	231
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	

LARGE CLAMP AVAILABLE IN 38 & 56 PIN SIZES ONLY



### CONTACT HAND CRIMP TOOL (1)

- Part Number 516-280-201
- Crimps Contact Part Number 516-290-590
- Precise Tool for Hand Crimping Loose Contacts
- Built-in Ratchet to Prevent Under Crimping

### CONTACT EJECTION TOOL (2)

- Part Number 516-280-300
- For Use with All 516 Series Contact Styles
- Provides Easy Positive Ejection without Damage to the Insulator

### CRIMP CONTACT INSERTION TOOL (3)

- Part Number 516-280-400
- For Installing 516-290-590 & -591 Crimp Contacts
- Wire Groove Locates the Tool onto the End of the Crimp Form

### POLARIZING HARDWARE ROUND NUT DRIVER (4)

- Part Number 516-280-500
- For Removing and Tightening Round Nuts when Changing Orientation of Metal Polarizing Guide Pins and Sockets

### WIRE WRAP & P.C. TAIL CONTACT INSERTION TOOL (5)

- Part Number 516-280-600
- For Installing 516-290-520, -540, -541 & -542 Contacts
- Slender Tube Protects Contact Tail during Insertion without Interfering with Adjacent Contacts