

## Series 516 Two-Piece Connector

**.150" (3.81mm) Contact Spacing, Rack-and-Panel, Plug and Receptacle**



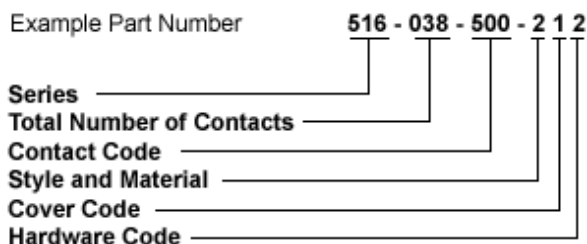
### FEATURES

- UL Recognized
- .150" (3.81mm) Contact Spacing x .130" (3.30mm) or .150" (3.81mm) 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, PC Tail, Wire Hole, Wire Wrap and Taper Tail
- Mating and Unmating Simplified with use of Actuating Screws
- Optional Covers with Cable Clamp Available in Plastic or Zinc Material for all Connector Sizes with Side or Top Cable Entry
- Versatile Metal Cover Design permits Assembly or Dis-assembly 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

### ORDERING CODE



## 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" (2.79mm x 0.61mm)	.245" (6.22mm)
501	Taper Tail	.245" (6.22mm)
520	PC Tail .025" x .024" (0.64mm x 0.61mm)	.215" (5.46mm)
540	Wire Wrap .050" x .024" (1.27mm x 0.61mm)	.600" (15.24mm)
541	Wire Wrap .050" x 0.24" (0.64mm x 0.61mm)	.620" (15.75mm)
542	Wire Wrap .050" x .024" (1.27mm x 0.61mm)	.790" (20.07mm)

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	
516-290-501	Taper Tail	
516-290-520	PC 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	

2) For contact installation, removal and crimping tools click [here](#).

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.

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" (0.30mm) to .049" (1.25mm) and an Insulation Diameter up to .074" (1.88mm)
- Multiple Smaller Gauge Wires may be Crimped Together
- Crimp Resistance from 0.5 Milliohms (18 AWG) to 1.5 Milliohms (28AWG)
- 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)

### 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: **P G 4 S 2**

Type of Connector = **P**

P - Plug, R - Receptacle

Large Diameter Hardware = **G**

G - Guide Pin (at Contact Position "A" End)

H - Guide Pin (at Last Contact Position End)

S - Socket (at Contact Position "A" End)

T - Socket (at Last Contact Position End)

Position of Large Diameter Keyway - 1 through 6 = **4**

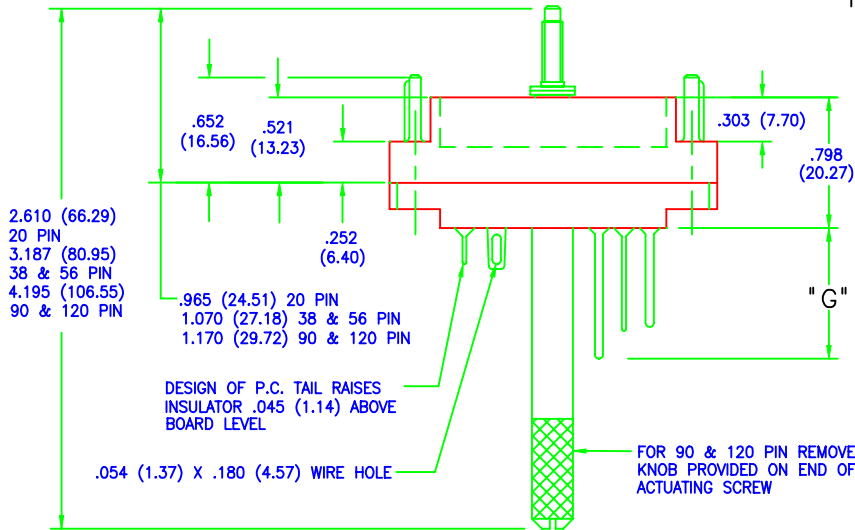
Small Diameter Hardware (Opposite End from Large Diameter) = **S**

G - Guide Pin, S - Socket

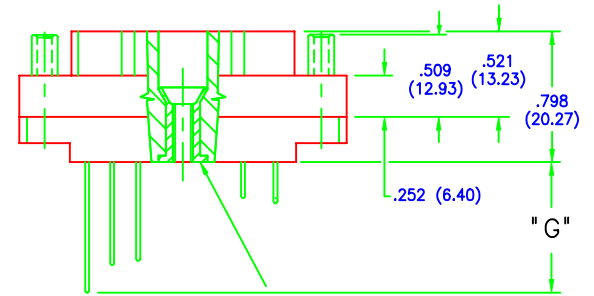
Position of Small Diameter Keyway - 1 through 6 = **2**

This Example Mates with Code RS4G2

TYPICAL PLUG WITH ACTUATING SCREW  
AND POLARIZING GUIDE PINS

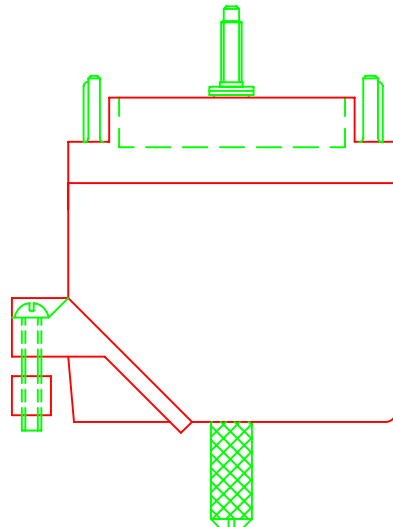


TYPICAL RECEPTACLE WITH LOCKNUT AND  
POLARIZING SOCKETS

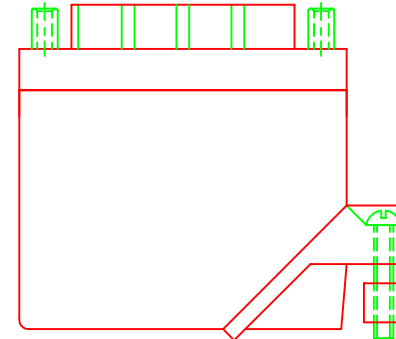


#2-56 UNC THREAD FOR 20 PIN  
#5-40 UNC DOUBLE START THREAD FOR 38 & 56 PIN  
#10-24 UNC DOUBLE START THREAD FOR 90 & 120 PIN

TYPICAL PLUG WITH  
ACTUATING SCREW,  
POLARIZING GUIDE PINS  
AND COVER



TYPICAL RECEPTACLE WITH LOCKNUT,  
POLARIZING SOCKETS AND COVER

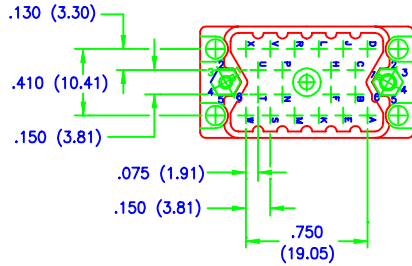


NOTE: PLASTIC POLARIZING GUIDE PINS AND SOCKETS (AVAILABLE SOON)  
WILL BE COLOUR CODED TO VISUALLY ASSIST CONNECTOR MATING.  
POLARIZATION CHANGES WILL ALSO BE SIMPLIFIED AS THEY WILL SNAP  
FIRMLY INTO POSITION AND CAN BE REPLACED USING NEEDLENOSE PLIERS.

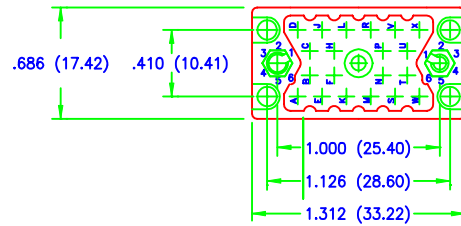
# CONNECTOR MATING FACE VIEWS

DIMENSIONS INDICATED FOR EACH SIZE APPLY TO BOTH PLUG AND RECEPTACLE

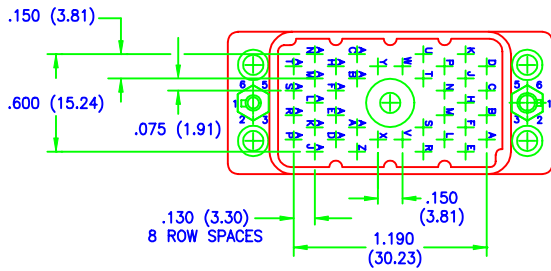
## 20 PIN PLUG



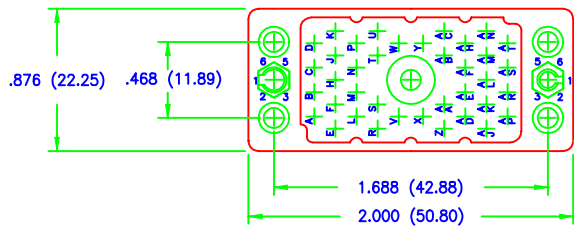
## 20 PIN RECEPTACLE



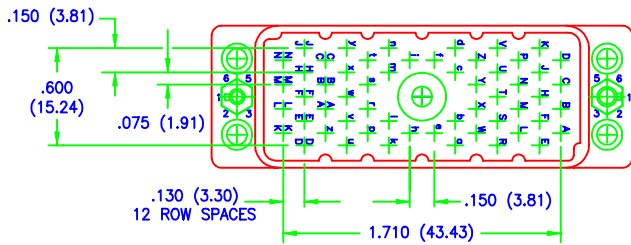
## 38 PIN PLUG



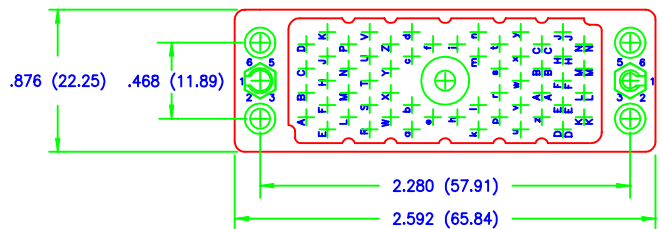
## 38 PIN RECEPTACLE



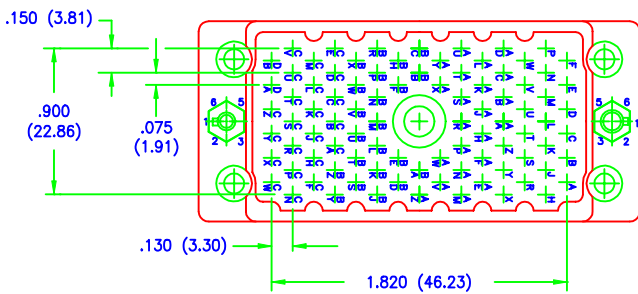
## 56 PIN PLUG



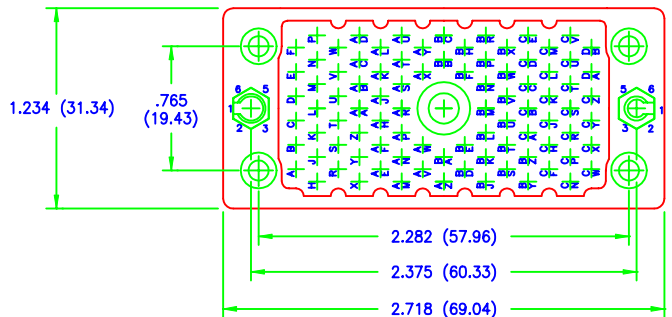
## 56 PIN RECEPTACLE



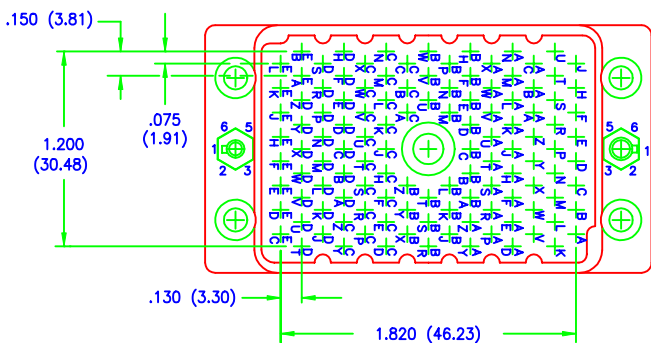
## 90 PIN PLUG



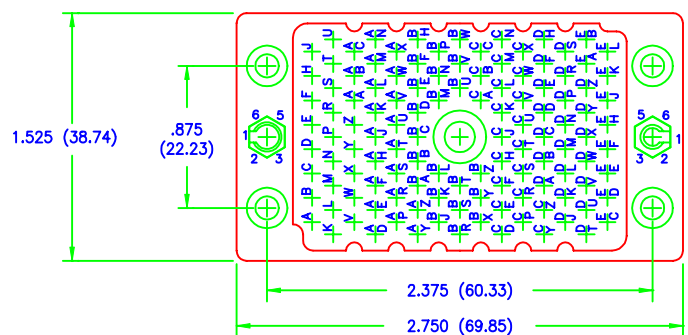
## 90 PIN RECEPTACLE



## 120 PIN PLUG



## 120 PIN RECEPTACLE



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