

# 516 SERIES



## Rack And Panel Connectors

### Features:

- 0.150" (3.81mm) contact spacing x 0.130" (3.30mm) or 0.150" (3.81mm) row spacing with staggered grid
- Plug and receptacle in 20, 38, 56, 90 and 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, crimping and polarizing changes
- RoHS Compliant & UL Certified



### Specifications:

|                                 |  |
|---------------------------------|--|
| Insulator Material              | Diallyl Phthalate, Thermoplastic Polyester or Polycarbonate UL 94V-0 |
| Color                           | Green or Grey (For 120 Pin Only)                                     |
| Contact Material                | Copper Alloy   |
| Contact Plating                 | Gold Plating over Nickel over entire contact                         |
| Current Rating                  | 8.5 amps   |
| Contact Resistance              | 10 milliohms maximum   |
| Dielectric Withstanding Voltage | 2000 V AC rms at sea level   |
| Insulation Resistance           | 5000 megaohms minimum  |
| Operating Temperature           | -40°C to +125°C (Diallyl Phthalate Only)                             |
| Operating Temperature           | -40°C to +105°C  |
| Insertion & Withdrawal Force    | 2 to 16 oz (0.56 to 4.45N) per contact position                      |



|                                  |   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
|----------------------------------|---|-------------------------|-----------------------|-------------------------|-----------|------------|-------------------------|-----|-----------|--------------------|-----------|------------|--------------------|-----|-----------|-----------------|---|------------|-----------------|
| <b>Series:</b>                   | 516   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| <b>Total Number of Contacts:</b> | 020, 038, 056, 090 or 120   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| <b>Contact Code:</b>             | <table border="0"> <tr> <td>000</td> <td>No Contacts Assembled</td> </tr> <tr> <td>500</td> <td>Wire Hole</td> </tr> <tr> <td>501</td> <td>Taper Tail</td> </tr> <tr> <td>520</td> <td>P.C. Tail</td> </tr> <tr> <td>540</td> <td>Wire Wrap</td> </tr> <tr> <td>541</td> <td>Wire Wrap</td> </tr> <tr> <td>542</td> <td>Wire Wrap</td> </tr> </table>   | 000                     | No Contacts Assembled | 500                     | Wire Hole | 501        | Taper Tail              | 520 | P.C. Tail | 540                | Wire Wrap | 541        | Wire Wrap          | 542 | Wire Wrap |                 |   |            |                 |
| 000                              | No Contacts Assembled   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| 500                              | Wire Hole   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| 501                              | Taper Tail  |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| 520                              | P.C. Tail   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| 540                              | Wire Wrap   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| 541                              | Wire Wrap   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| 542                              | Wire Wrap   |                         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |
| <b>Style &amp; Material:</b>     | <table border="0"> <tr> <td>1</td> <td>Plug</td> <td>Green Diallyl Phthalate</td> </tr> <tr> <td>2</td> <td>Receptacle</td> <td>Green Diallyl Phthalate</td> </tr> <tr> <td>3</td> <td>Plug</td> <td>Grey Polycarbonate</td> </tr> <tr> <td>4</td> <td>Receptacle</td> <td>Grey Polycarbonate</td> </tr> <tr> <td>5</td> <td>Plug</td> <td>Green Polyester</td> </tr> <tr> <td>6</td> <td>Receptacle</td> <td>Green Polyester</td> </tr> </table> | 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 |
| 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         |                       |                         |           |            |                         |     |           |                    |           |            |                    |     |           |                 |   |            |                 |

|                       |   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
|-----------------------|---|---|-------------------|---|---|---|--|---|---|---|---------------------------------------|---|-------------------------|---|------------------------|
| <b>Cover Code:</b>    | <table border="0"> <tr> <td>0</td> <td>No Cover Assembly</td> </tr> <tr> <td>1</td> <td>Plastic Cover, Top Entry Standard Clamp</td> </tr> <tr> <td>2</td> <td>Plastic Cover, Side Entry Standard Clamp</td> </tr> <tr> <td>3</td> <td>Plastic Cover, Top Entry Large Clamp</td> </tr> <tr> <td>4</td> <td>Plastic Cover, Side Entry Large Clamp</td> </tr> <tr> <td>5</td> <td>Metal Cover, Side Entry</td> </tr> <tr> <td>6</td> <td>Metal Cover, Top Entry</td> </tr> </table> | 0 | No Cover Assembly | 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 |
| 0                     | No Cover Assembly   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
| 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  |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
| <b>Hardware Code:</b> | <table border="0"> <tr> <td>0</td> <td>No Hardware</td> </tr> <tr> <td>1</td> <td>Actuating Screw &amp; Polarizing Hardware</td> </tr> <tr> <td>2</td> <td>Locknut &amp; Polarizing Hardware</td> </tr> <tr> <td>5</td> <td>Actuating Screw with No Polarizing Hardware</td> </tr> <tr> <td>6</td> <td>Locknut with No Polarizing Hardware</td> </tr> </table>  | 0 | No Hardware       | 1 | Actuating Screw & Polarizing Hardware   | 2 | Locknut & Polarizing Hardware            | 5 | Actuating Screw with No Polarizing Hardware | 6 | Locknut with No Polarizing Hardware   |   |                         |   |                        |
| 0                     | No Hardware   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
| 1                     | Actuating Screw & Polarizing Hardware   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
| 2                     | Locknut & Polarizing Hardware   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
| 5                     | Actuating Screw with No Polarizing Hardware   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |
| 6                     | Locknut with No Polarizing Hardware   |   |                   |   |   |   |  |   |   |   |                                       |   |                         |   |                        |

## Rack And Panel Connectors

### Ordering Code Notes:

1) Crimp contacts are also available for 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 | P.C. Tail                     |            |
| 516-290-540 | Wire Wrap                     |            |
| 516-290-541 | Wire Wrap                     |            |
| 516-290-542 | Wire Wrap                     |            |
| 516-290-590 | Crimp (Loose)                 |            |
| 516-294-571 | Crimp - 1800 Contact Per Reel |            |

- For contact installation, removal and crimping tools, please contact EDAC.
- Grey Polycarbonate and Polyester insulator material is not available for 120 pin size connector. 120 pin size connector can only be supplied in DAP (Green and Grey). 120 pin part number ends with 3XX or 4XX are supplied in grey DAP.
- 20 pin connector cover will not accept the length of the wire wrap contacts
- Plastic covers with large clamps are only available for 38 and 56 pin sizes only
- Metal covers with side entry may be converted to top entry by removing side plate and changing clamp orientation
- Covers may be ordered separately
- Insulator design prevents improper mating of individual plug and receptacle. Polarizing hardware enables specific plug and receptacle combinations

### Crimp Characteristics

- Contacts and Crimp Tool Accommodate from 28AWG to 18AWG, Solid or Stranded Conductor Diameters from .012 (0.30) to .049 (1.25) and an Insulation diameter up to 0.074 (1.88)
- Multiple Smaller Gauge Wires may be Crimped Together
- Crimp Resistance from 0.5 Milliohms (18AWG) to 1.5 Milliohms(28AWG)
- Crimp Tensile Strength for Wire Sizes:
  - 18AWG - 40 lbs (178 N)
  - 20AWG - 25 lbs (111 N)
  - 22AWG - 15 lbs (67 N)
  - 24AWG - 10 lbs (44 N)
  - 26AWG - 5 lbs (22 N)
  - 28AWG - 3 lbs (13 N)

### Polarizing Codes

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

### Example Polarizing Code:

P G 4 S 2

Type of Connector \_\_\_\_\_  
 P - Plug, R - Receptacle

Large Diameter Hardware \_\_\_\_\_  
 G - Guidepin (at Contact Position "A" end)  
 H - Guidepin (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 \_\_\_\_\_

Small Diameter Hardware (Opposite end From Large Diameter) \_\_\_\_\_  
 G - Guidepin, S - Socket

Position of Small Diameter Keyway - 1 Through 6 \_\_\_\_\_

This Example mates with Code RS4G2

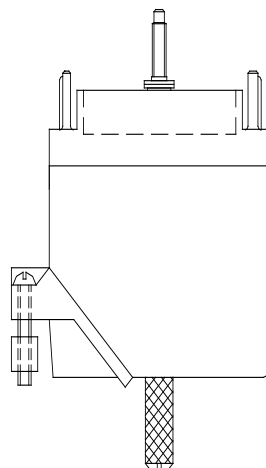
TYPICAL PLUG WITH ACTUATING SCREW AND POLARIZING GUIDE PINS



TYPICAL RECEPTACLE WITH LOCKNUT AND POLARIZING SOCKETS



TYPICAL PLUG WITH ACTUATING SCREW, POLARIZING GUIDE PINS AND COVER



TYPICAL RECEPTACLE WITH LOCKNUT, POLARIZING SOCKETS AND COVER

