



# Harsh Environment Power Connectors

**COOPER** Interconnect



**MIL-DTL-55181  
MIL-DTL-12520  
and Commercial  
Versions for  
Mid-Range Power  
Operations**

# Power Connectors



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**Innovation You Can Trust  
In The Most Challenging Conditions**

# Introduction



Cooper Interconnect's line of QPL qualified and Commercial-Off-The-Shelf (COTS) mid-range power connectors offer exceptional durability and versatile configurations for virtually any military or industrial need.

The QPL versions have endured over 30 years of ground support field use in the most demanding conditions. Weatherproof seals, rugged construction, and premium quality components have allowed Cooper Interconnect's products to excel when the requirement is mission-critical in a harsh environment.

The value-engineered COTS family offers the same outstanding performance as our QPL military workhorse, at a more economical price. Along with direct equivalents for our most popular QPL configurations, Cooper Interconnect offers cable adaptor configurations that provide flexibility to connect various cable sizes in the field or factory.

# CONNECTIVITY

For your toughest mid-range power connector applications, look to **Cooper Interconnect** for the right solution.

|                         |                                                                                                                                    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| M55181 Series           | QPL qualified to MIL-DTL-55181, latest version.<br>Follows U.S. government part number designation.                                |
| MW Series               | Same as M55181 Series.<br>Follows Cooper Interconnect's part number designation.                                                   |
| GC55181 Standard Series | COTS version of the MW (or M55181) Series.<br>GC before the 55181 represents the COTS version.                                     |
| GC55181 Adaptor Series  | Similar to the GC55181 Standard Series, but is a variation providing three cable inlet adaptors to support a wide range of cables. |
| UW Series               | Meets all the requirements of MIL-DTL-12520.<br>Follows Cooper Interconnect's part number designation                              |

# INNOVATION

# M55181 Power Connectors



## Product Overview

With over 30 years of field-proven reliability, Cooper Interconnect's MIL-DTL-55181 (MW Series) power connectors are designed to meet the most stringent specifications while withstanding the extreme range of environmental conditions encountered by ground support equipment.

Resistant to contamination of dust, dirt, and water, these workhorse connectors also are engineered to provide the ultimate resistance to shock and vibration via the center-locking screw, which is easily secured by turning the mechanized fold-down, wing-blade handle.

## Features and Benefits

**QPL certified** - The M55181 and MW connectors are government qualified per MIL-DTL-55181.

**Versatile Configurations** - The M55181 series are available in 4-, 9- and 18-contact versions, as plugs or receptacles. They support cable-to-cable, cable-to-panel, and jam nut panel mounting.

**Weatherproof** - Heavy-duty gaskets and O-rings provide a watertight seal to prevent moisture, dust and dirt contamination and maximize reliability.

**Durable Construction** - Time-tested, field-proven reliability for over 30 years. Corrosion-resistant, aluminum alloy receptacles and high-impact solid brass plug construction resist impact damage. Heat-tempered nosepiece is made of hardened alloy steel for enhanced impact protection in the event of mishandling.

**Superior Electrical Connections** - Precision contacts are gold over copper or nickel providing positive electrical connection with minimum voltage drop.

**Easy to Use** - Receptacle and plug mating is accomplished quickly and easily by turning a center-locking, double lead screw with easy-to-grasp wing-blade handle. Vibration-resistant, secure locking mechanism will not back out.

**Reliable** - Worry-free 500 mate/unmate cycle rating.



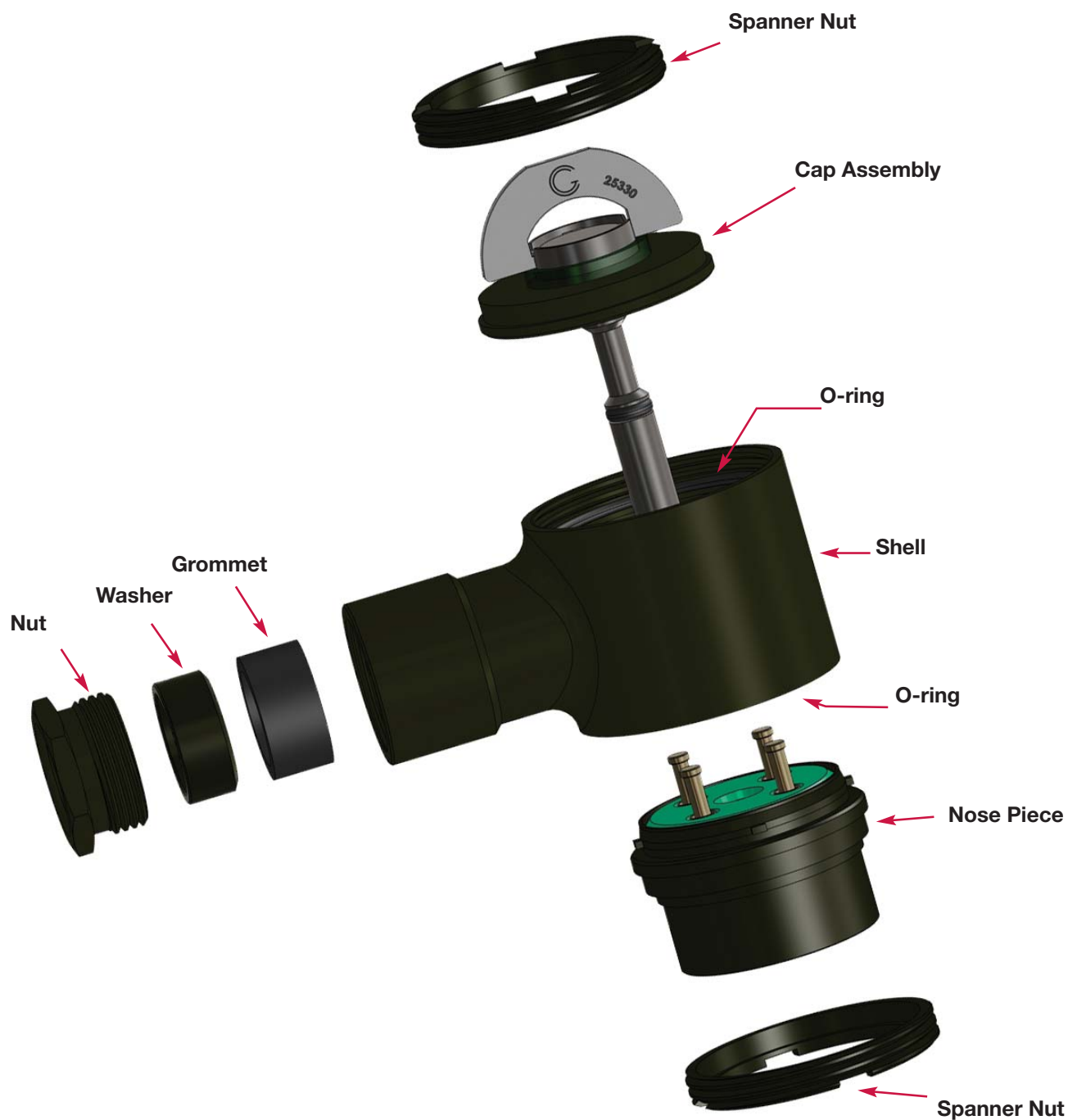
M55181 Plug



# M55181 Power Connectors

## Features Overview

### M55181 Plug



# M55181 Power Connectors



M55181 Connectors

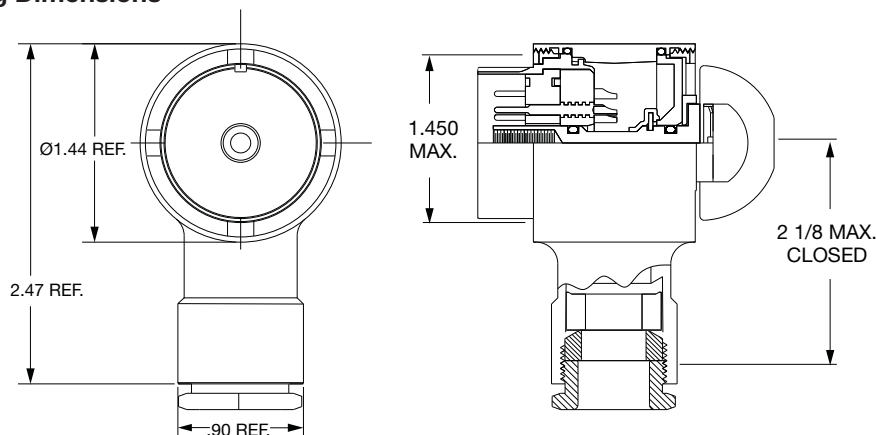
## Specifications

| MATERIALS AND FINISHES |                                                                                                        |
|------------------------|--------------------------------------------------------------------------------------------------------|
| <b>SHELLS</b>          |                                                                                                        |
| Plugs                  | Aluminum alloy body, steel alloy nosepiece 0.0003 cadmium plate with olive-drab chromate.              |
| Receptacles            | Brass, 0.0003 cadmium plate with olive-drab chromate.                                                  |
| Nose Pieces            | Alloy steel, 0.0003 cadmium plate with olive-drab chromate.                                            |
| Draw Screws            | Stainless steel.                                                                                       |
| <b>CONTACTS</b>        |                                                                                                        |
| Socket                 | High-conductivity copper alloy with beryllium copper spring element, 0.000030 gold over 10-100 nickel. |
| Pin                    | Yellow brass, 0.000030 gold over 50-100 nickel.                                                        |
| Insulator              | Glass-filled diallyl phthalate, type GDI-30 F or SDG-F.                                                |

| ELECTRICAL                 |                                   |
|----------------------------|-----------------------------------|
| <b>Dielectric Strength</b> |                                   |
| 4 Contacts                 | 2000 Volts RMS                    |
| 9, 18 Contacts             | 1500 Volts RMS                    |
| Insulation Resistance      | 1000 Megohms min. at 500 Volts DC |
| <b>Voltage Drop</b>        |                                   |
| 4 Contact                  | 20 mV at 35 Amps                  |
| 9, 18 Contact              | 25 mV at 7.5 Amps                 |

| MECHANICAL        |                                                  |
|-------------------|--------------------------------------------------|
| Air Pressure      | 2.5 PSI                                          |
| Water Immersion   | 6 ft., 48 hours                                  |
| Durability        | 500 cycles with a coupling torque of 25 in.-lbs. |
| Contact Retention | 10 lbs.                                          |
| Insert Strength   | 400 lbs.                                         |

## Plug Dimensions



The MW connectors meet all requirements of MIL-DTL-55181 for the latest revision.

# M55181 Power Connectors

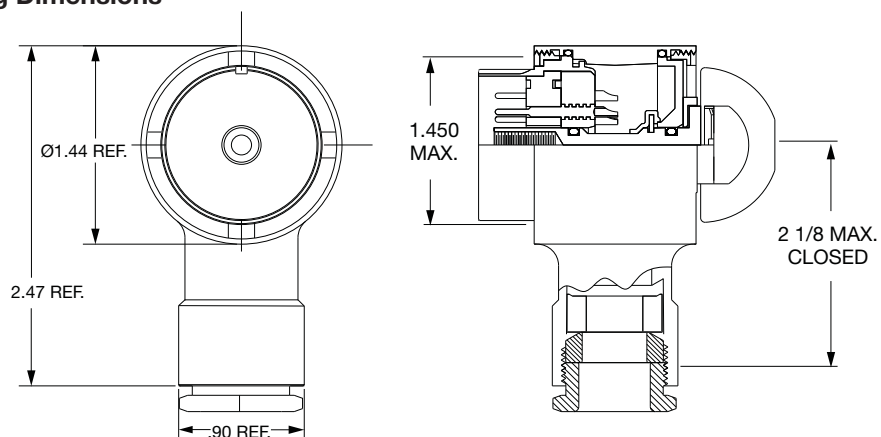
## M55181 Connectors

The MW connectors meet all requirements of MIL-DTL-55181 for the latest revision.

### M55181 Connectors (MW Series)



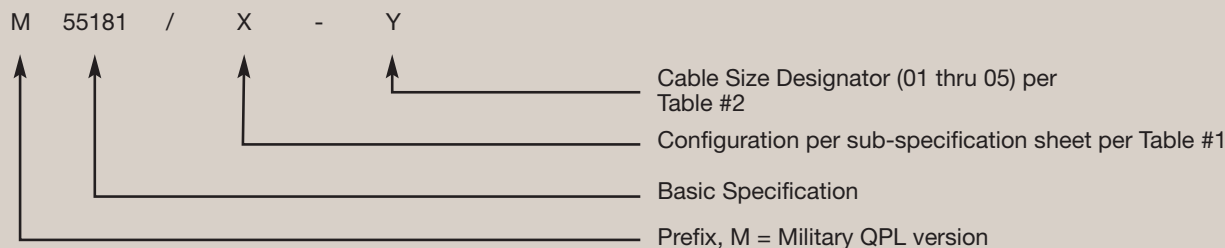
### Plug Dimensions



# M55181 Power Connectors



## Ordering Information - Part Numbering System



| TABLE #1               |           |            |       |                |              |      |              |             |
|------------------------|-----------|------------|-------|----------------|--------------|------|--------------|-------------|
| CI GENERAL PART NUMBER | "X" VALUE | TYPE       | MOUNT | CONTACT NUMBER | CONTACT TYPE | AMPS | CONTACT SIZE | TERMINATION |
| M55181/1- Y*           | 1         | Plug       | Cable | 4              | Socket       | 35   | 12           | Turret      |
| M55181/2- Y*           | 2         | Receptacle | Panel | 4              | Pin          | 35   | 12           | Turret      |
| M55181/3- Y*           | 3         | Plug       | Cable | 4              | Pin          | 35   | 12           | Turret      |
| M55181/4- Y*           | 4         | Receptacle | Panel | 4              | Socket       | 35   | 12           | Turret      |
| M55181/5- Y*           | 5         | Plug       | Cable | 9              | Pin          | 7.5  | 20           | Solder Cup  |
| M55181/6- Y*           | 6         | Receptacle | Panel | 9              | Socket       | 7.5  | 20           | Solder Cup  |
| M55181/7- Y*           | 7         | Plug       | Cable | 18             | Pin          | 7.5  | 20           | Solder Cup  |
| M55181/8- Y*           | 8         | Receptacle | Panel | 18             | Socket       | 7.5  | 20           | Solder Cup  |

\*Cable diameter specification not applicable to receptacles.

| TABLE #2  |                         |
|-----------|-------------------------|
| "Y" VALUE | CABLE DIAMETER (INCHES) |
| 01        | 0.292 ± 0.005           |
| 02        | 0.323 ± 0.005           |
| 03        | 0.448 ± 0.005           |
| 04        | 0.511 ± 0.005           |
| 05        | 0.386 ± 0.005           |

| GOVERNMENT DESIGNATION | MANUFACTURER'S DESIGNATION | NSN           |
|------------------------|----------------------------|---------------|
| M55181/1-01            | MW10F(M)A11                | 5935006036952 |
| M55181/1-02            | MW10F(M)A13                | 5935012047312 |
| M55181/1-03            | MW10F(M)A17                | 5935009213399 |
| M55181/1-04            | MW10F(M)A19                | 5935012497559 |
| M55181/1-05            | MW10F(M)A15                | 5935013294190 |
| M55181/2-01            | MW20M(M)A00                | 5935013789152 |
| M55181/3-01            | MW10M(M)A11                | 5935012082345 |
| M55181/3-02            | MW10M(M)A13                | 5935011249341 |
| M55181/3-03            | MW10M(M)A17                | 5935011676095 |
| M55181/4-01            | MW20F(M)A00                | 5935011997156 |
| M55181/5-01            | MW10M(M)B11                | 5935011841460 |
| M55181/5-02            | MW10M(M)B13                | 5935011491162 |
| M55181/5-03            | MW10M(M)B17                | 5935010816484 |
| M55181/6-01            | MW20F(M)B00                | 5935008535942 |
| M55181/7-01            | MW10M(M)D11                | 5935011119956 |
| M55181/7-02            | MW10M(M)D13                | 5935011163608 |
| M55181/7-03            | MW10M(M)D17                | 5935008152325 |
| M55181/7-04            | MW10M(M)D19                | 5935013003701 |
| M55181/7-05            | MW10M(M)D15                | 5935013298690 |
| M55181/8-01            | MW20F(M)D00                | 5935001330394 |

# COTS GC55181 Power Connectors



Standard COTS GC55181



GC55181/1-AD1

## Product Overview

For military and industrial power applications in harsh environments where cost containment is more important than government certification, Cooper Interconnect's Commercial-Off-the-Shelf (COTS) version of the M55181 family provides the same performance as the certified version of the M55181 power connectors, but at an economical price.

## Features and Benefits

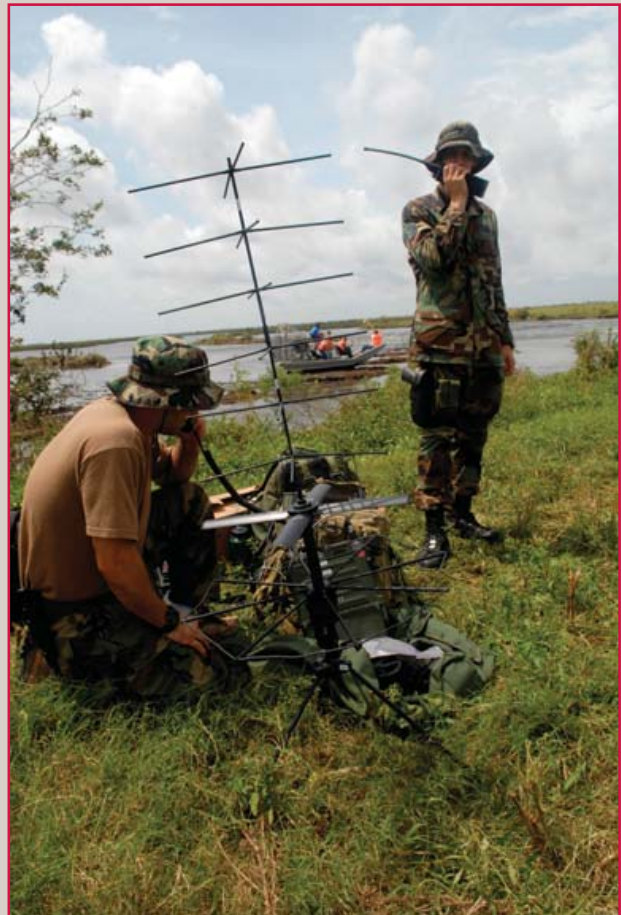
**Value-Engineered Solution** - Same performance as Cooper Interconnect's MIL-DTL-55181 power connector family, but at a more economical price.

**Configuration Options** - Available in two primary configurations:

1. Standard COTS 55181 for seamless integration into M55181 type applications.
2. Cable adaptor COTS 55181 for a wide range of input cable configurations.

**Rugged Construction** - High-strength aluminum alloy maximizes corrosion resistance and tempered nose piece minimizes damage from high impact forces. Provides weather and waterproof seals for protection against environmental contaminants, with secure mating options.

- Center-locking, double-lead screws allow easy, positive, and secure mating.
- Mounting flexibility for cable-to-cable, and cable-to-panel applications.
- Gold over copper contacts provide positive, efficient, electrical connections.
- Worry-free, 500 mate/unmate cycle rating.



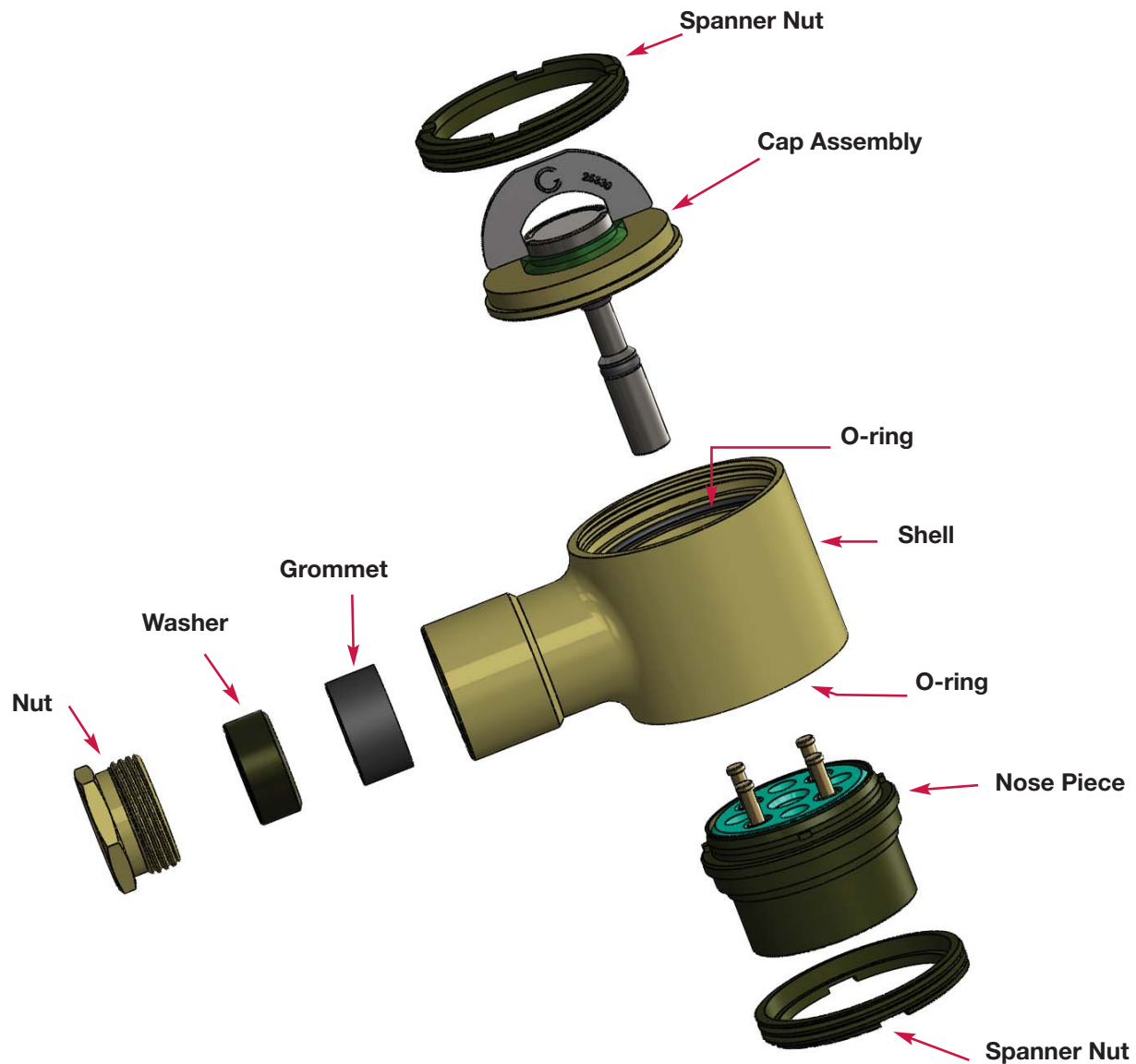
COTS power connectors excel in the harshest conditions.

# COTS GC55181 Power Connectors



## Features Overview

### Standard COTS 55181



# COTS GC55181 Power Connectors

These power connectors are used in ruggedized applications requiring waterproofing and extended life for communication equipment and industrial instrumentation.

Specifications are for both COTS and Adaptor versions.

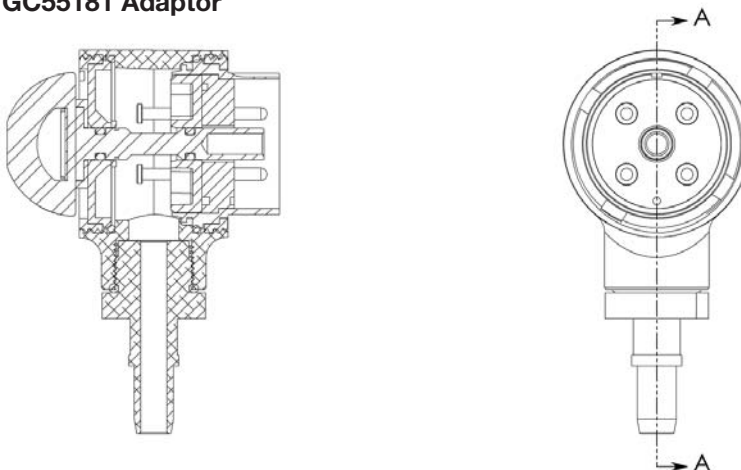
## Specifications

| MATERIALS AND FINISHES |                                                                                                        |
|------------------------|--------------------------------------------------------------------------------------------------------|
| <b>SHELLS</b>          |                                                                                                        |
| Plugs                  | Aluminum alloy body, chemical film per MIL-C-5541.                                                     |
| Nose pieces            | Alloy steel, 0.0003 cadmium plate with olive-drab chromate.                                            |
| Draw Screws            | Stainless steel.                                                                                       |
| <b>CONTACTS</b>        |                                                                                                        |
| Socket                 | High-conductivity copper alloy with beryllium copper spring element, 0.000030 gold over 10-100 nickel. |
| Pin                    | Yellow brass, 0.000030 gold over 50-100 nickel.                                                        |
| Insulator              | Glass-filled diallyl phthalate, type GDI-30 F or SDG-F.                                                |

| ELECTRICAL                 |                                   |
|----------------------------|-----------------------------------|
| <b>Dielectric Strength</b> |                                   |
| 4 Contacts                 | 2000 Volts RMS                    |
| 9, 18 Contacts             | 1500 Volts RMS                    |
| Insulation Resistance      | 1000 Megohms min. at 500 Volts DC |
| <b>Voltage Drop</b>        |                                   |
| 4 Contact                  | 20 mV at 35 Amps                  |
| 9, 18 Contact              | 21 mV at 7.5 Amps                 |

| MECHANICAL        |                                                  |
|-------------------|--------------------------------------------------|
| Air Pressure      | 2.5 PSI                                          |
| Water Immersion   | 6 ft., 48 hours                                  |
| Durability        | 500 cycles with a coupling torque of 25 in.-lbs. |
| Contact Retention | 15 lbs.                                          |
| Insert Strength   | 400 lbs.                                         |

## COTS GC55181 Adaptor



# COTS GC55181 Power Connectors



## Ordering Information - Part Numbering System

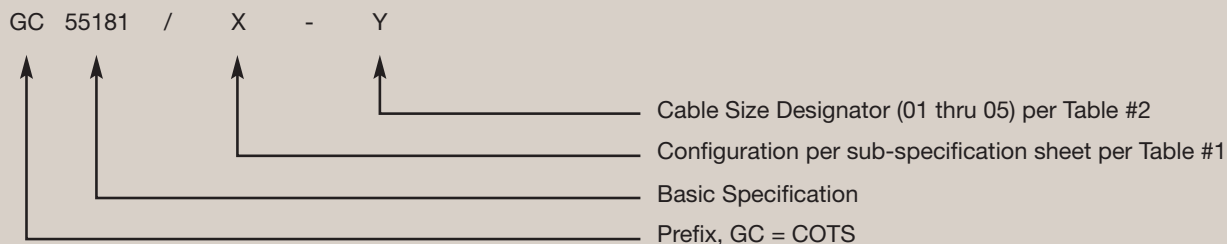


TABLE #1

| CI GENERAL PART NUMBER | TYPE | MOUNT | CONTACT NUMBER | CONTACT TYPE | AMPS | TERMINATION |
|------------------------|------|-------|----------------|--------------|------|-------------|
| GC55181/1- 03          | Plug | Cable | 4              | Socket       | 35   | Turret      |
| GC55181/3- 03          | Plug | Cable | 4              | Pin          | 35   | Turret      |
| GC55181/5- 03          | Plug | Cable | 9              | Pin          | 7.5  | Solder Cup  |
| GC55181/7- 03          | Plug | Cable | 18             | Pin          | 7.5  | Solder Cup  |

TABLE #2\*

| "Y" VALUE | CABLE DIAMETER (INCHES) |
|-----------|-------------------------|
| 01        | 0.292 ± 0.005           |
| 02        | 0.323 ± 0.005           |
| 03        | 0.448 ± 0.005           |
| 04        | 0.511 ± 0.005           |
| 05        | 0.386 ± 0.005           |

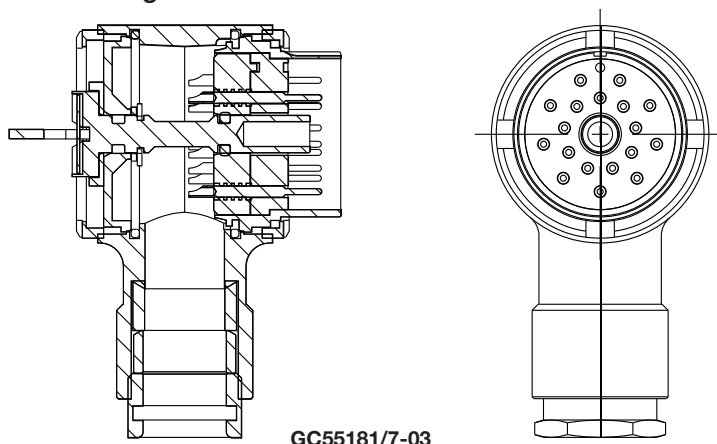
\*COTS plugs mate with 55181 receptacles. See Receptacles section on page 22.

CI COTS PART NUMBER

|              |
|--------------|
| GC55181/1-01 |
| GC55181/1-02 |
| GC55181/1-03 |
| GC55181/1-04 |
| GC55181/1-05 |
| GC55181/3-01 |
| GC55181/3-02 |
| GC55181/3-03 |
| GC55181/3-04 |
| GC55181/3-05 |
| GC55181/5-01 |
| GC55181/5-02 |
| GC55181/5-03 |
| GC55181/5-04 |
| GC55181/5-05 |
| GC55181/7-01 |
| GC55181/7-02 |
| GC55181/7-03 |
| GC55181/7-04 |
| GC55181/7-05 |

COTS Connectors

## COTS GC55181 Plug

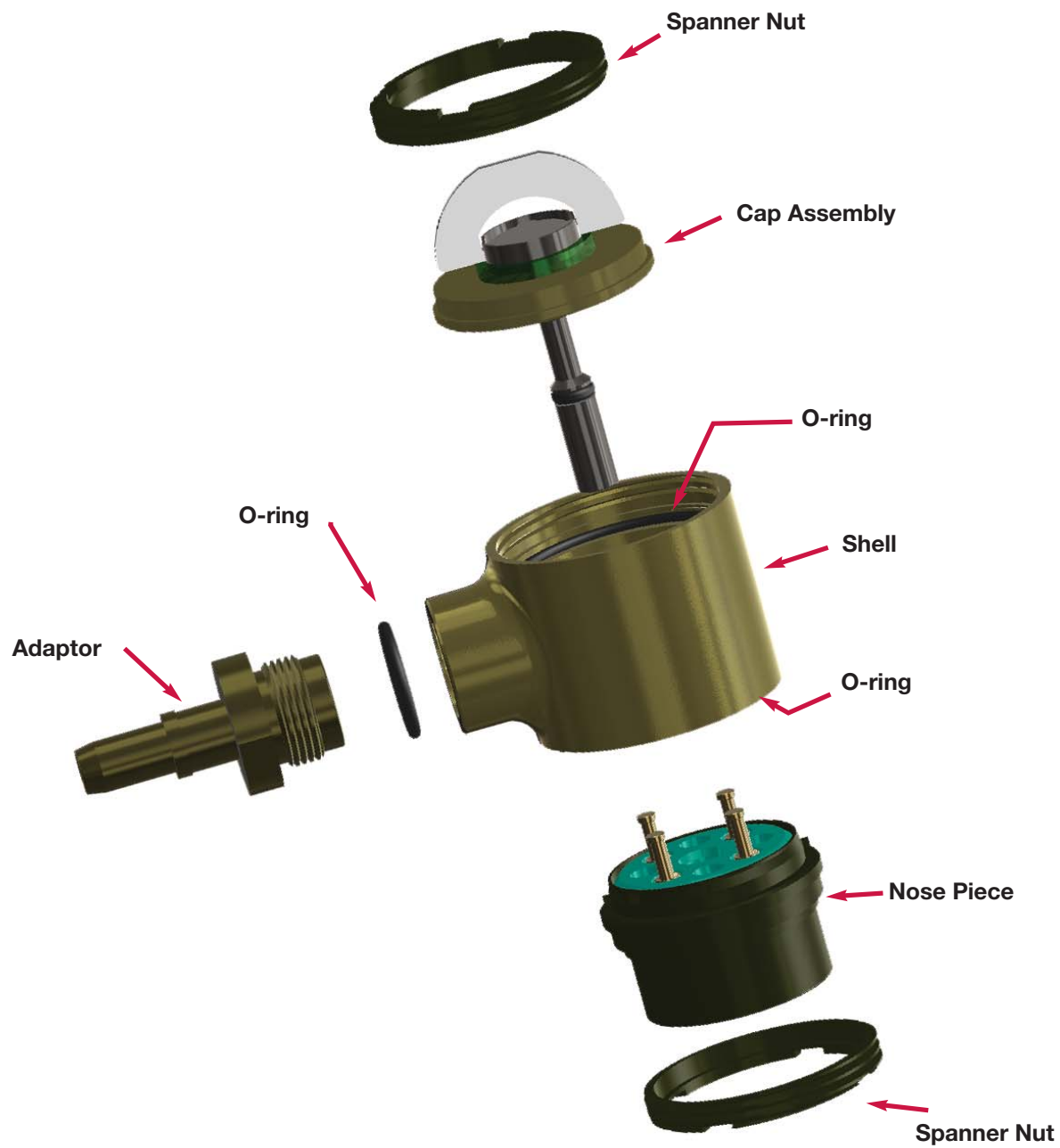


GC55181/7-03

# COTS GC55181 Adaptors

## Features Overview

### COTS 55181 Adaptor



# COTS GC55181 Adaptors



## Ordering Information - Part Numbering System

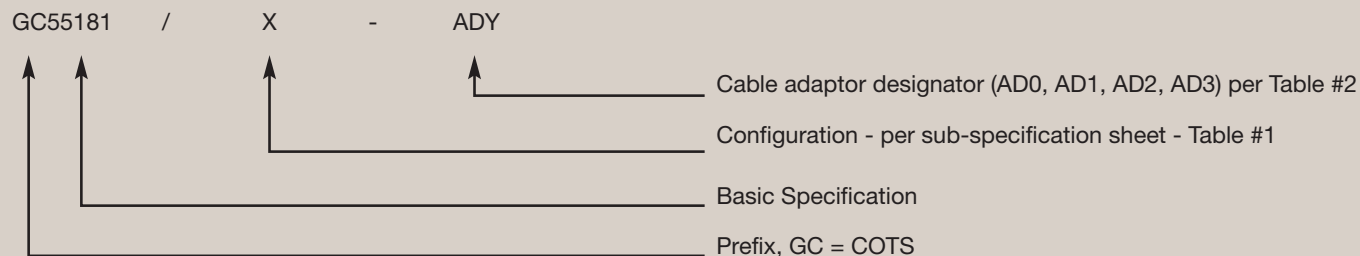


TABLE #1

| CI GENERAL PART NUMBER | TYPE | MOUNT | CONTACT NUMBER | CONTACT TYPE | AMPS | TERMINATION |
|------------------------|------|-------|----------------|--------------|------|-------------|
| GC55181/1- ADY         | Plug | Cable | 4              | Socket       | 35   | Turret      |
| GC55181/3- ADY         | Plug | Cable | 4              | Pin          | 35   | Turret      |
| GC55181/7- ADY         | Plug | Cable | 18             | Pin          | 7.5  | Solder Cup  |

\*COTS plugs mate with 55181 receptacles. See Receptacles section on page 23.



GC55181/1-AD2

TABLE #2

| ADAPTOR TYPE | DESCRIPTION        | CI PART NUMBER | CECOM NUMBER | SIMILAR TO QPL PART NUMBER | ADAPTOR ID (INCHES) | ADAPTOR OD (INCHES) |
|--------------|--------------------|----------------|--------------|----------------------------|---------------------|---------------------|
| AD0          | Base Only          | GC55181/1-AD0  | A3316635-4   | M55181/1                   | n/a                 | n/a                 |
|              |                    | GC55181/3-AD0  | A3316636-4   | M55181/3                   |                     |                     |
|              |                    | GC55181/7-AD0  | A3316634-4   | M55181/7                   |                     |                     |
| AD1          | Base + AD1 Adaptor | GC55181/1-AD1  | A3316635-1   | M55181/1                   | 0.203               | 0.303               |
|              |                    | GC55181/3-AD1  | A3316636-1   | M55181/3                   |                     |                     |
|              |                    | GC55181/7-AD1  | A3316634-1   | M55181/7                   |                     |                     |
|              | AD1 Adaptor Only   | 33-18          | n/a          | n/a                        |                     |                     |
| AD2          | Base + AD2 Adaptor | GC55181/1-AD2  | A3316635-3   | M55181/1                   | 0.297               | 0.397               |
|              |                    | GC55181/3-AD2  | A3316636-2   | M55181/3                   |                     |                     |
|              |                    | GC55181/7-AD2  | A3316634-2   | M55181/7                   |                     |                     |
|              | AD2 Adaptor Only   | 33-19          | n/a          | n/a                        |                     |                     |
| AD3          | Base + AD3 Adaptor | GC55181/1-AD3  | A3316635-3   | M55181/1                   | 0.390               | 0.490               |
|              |                    | GC55181/3-AD3  | A3316636-3   | M55181/3                   |                     |                     |
|              |                    | GC55181/7-AD3  | A3316634-3   | M55181/7                   |                     |                     |
|              | AD3 Adaptor Only   | 33-20          | n/a          | n/a                        |                     |                     |



GC55181/3-AD3



GC55181/7AD3

COTS Adaptors

# COTS GC55181 Adaptors

## Product Ordering by CECOM Number

| CI COTS PART NUMBER | CI QPL PART NUMBER                   | CABLE DIAMETER (INCHES) | ADAPTOR THROUGH DIA. (INCHES) | CECOM NUMBER | EXPORT EQUIVALENT |
|---------------------|--------------------------------------|-------------------------|-------------------------------|--------------|-------------------|
| GC55181/1-AD2       | M55181/1-03                          | 0.390                   | 0.297                         | A3014039-1   |                   |
|                     |                                      | 0.420                   | 0.297                         | A3014040-2   | 8164396-2         |
|                     |                                      | 0.395                   | 0.297                         | A3014041-1   | 8164396-1         |
|                     |                                      | 0.395                   | 0.297                         | A3014042-1   |                   |
|                     |                                      | 0.435                   | 0.297                         | A3014043-1   |                   |
|                     |                                      | 0.435                   | 0.297                         | A3154857-1   |                   |
|                     |                                      | 0.435                   | 0.297                         | A3191153-2   |                   |
|                     |                                      | 0.420                   | 0.297                         | A3014040-5   |                   |
|                     |                                      | 0.435                   | 0.297                         | A3014043-6   |                   |
|                     |                                      | 0.400                   | 0.297                         | A3014040-4   | 8164396-4         |
| GC55181/3-AD2       | M55181/3-03                          | 0.420                   | 0.297                         | A3014040-2   | 8164396-2         |
|                     |                                      | 0.435                   | 0.297                         | A3154857-1   |                   |
|                     |                                      | 0.420                   | 0.297                         | A3014040-5   |                   |
|                     |                                      | 0.400                   | 0.297                         | A3014040-4   | 8164396-4         |
| GC55181/7-AD1       | M55181/7-03                          | 0.400                   | 0.203                         | A3014038-14  | 8164394-14        |
|                     |                                      | 0.400                   | 0.203                         | A3014038-8   |                   |
|                     |                                      | 0.430                   | 0.203                         | A3014038-8   | 8164394-8         |
|                     |                                      | 0.435                   | 0.297                         | A3014044-6   |                   |
|                     |                                      | 0.435                   | 0.297                         | SM-D-415553  |                   |
|                     |                                      | 0.435                   | 0.297                         | A3014044-1   |                   |
| GC55181/3-AD3       | For Larger Cable Diameters As Req'd. | .593                    | 0.390                         |              |                   |
| GC55181/7-AD3       | For Larger Cable Diameters As Req'd. | .593                    | 0.390                         |              |                   |
| GC55181/1-AD0       | Connector without cable adaptor      | n/a                     | n/a                           |              |                   |
| GC55181/3-AD0       | Connector without cable adaptor      | n/a                     | n/a                           |              |                   |
| GC55181/7-AD0       | Connector without cable adaptor      | n/a                     | n/a                           |              |                   |

## COTS 55181 Adaptors



# COTS GC55181 Adaptors



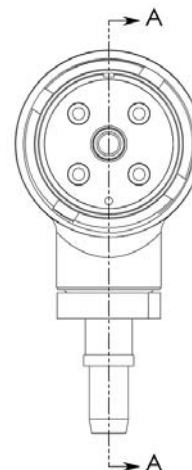
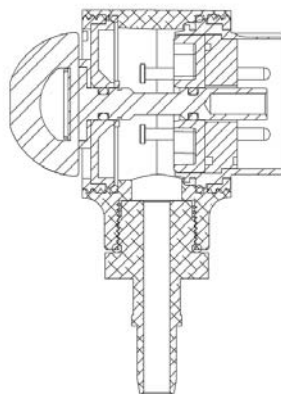
## Product Ordering - Communications Electronics Command (CECOM) Cross Reference

| CECOM CROSS REFERENCE TO CI PART NUMBER |                                |                         |                            |                         |                               |                   |
|-----------------------------------------|--------------------------------|-------------------------|----------------------------|-------------------------|-------------------------------|-------------------|
| CECOM CABLE NUMBER                      | USE CI PART NUMBER             | CECOM CONNECTOR NUMBER  | SIMILAR TO QPL PART NUMBER | CABLE DIAMETER (INCHES) | ADAPTOR THROUGH DIA. (INCHES) | EXPORT EQUIVALENT |
| A3014038-14                             | GC55181/7-AD1                  | A3316634-1              | M55181/7-03                | 0.400                   | 0.203                         | 8164394-14        |
| A3014038-8                              | GC55181/7-AD1                  | A3316634-1              | M55181/7-03                | 0.400                   | 0.203                         |                   |
| A3014038-8                              | GC55181/7-AD1                  | A3316634-1              | M55181/7-03                | 0.430                   | 0.203                         | 8164394-8         |
| A3014039-1                              | GC55181/1-AD2                  | A3316635-2              | M55181/1-03                | 0.390                   | 0.297                         |                   |
| A3014040-2                              | GC55181/1-AD2 & GC55181/3-AD2  | A3316635-2 & A3316636-2 | M55181/1-03 & M55181/3-03  | 0.420                   | 0.297                         | 8164396-2         |
| A3014040-4                              | GC55181/1-AD2, & GC55181/3-AD2 | A3316635-2 & A3316636-2 | M55181/1-03 & M55181/3-03  | 0.400                   | 0.297                         | 8164396-4         |
| A3014040-5                              | GC55181/1-AD2 & GC55181/3-AD2  | A3316635-2 & A3316636-2 | M55181/1-03 & M55181/3-03  | 0.420                   | 0.297                         |                   |
| A3014041-1                              | GC55181/1-AD2                  | A3316635-2              | M55181/1-03                | 0.395                   | 0.297                         | 8163430-1         |
| A3014042-1                              | GC55181/1-AD2                  | A3316635-2              | M55181/1-03                | 0.395                   | 0.297                         |                   |
| A3014043-1                              | GC55181/1-AD2                  | A3316635-2              | M55181/1-03                | 0.435                   | 0.297                         |                   |
| A3014043-6                              | GC55181/1-AD2                  | A3316635-2              | M55181/1-03                | 0.435                   | 0.297                         |                   |
| A3014044-1                              | GC55181/7-AD2                  | A3316634-2              | M55181/7-03                | 0.435                   | 0.297                         |                   |
| A3014044-6                              | GC55181/7-AD2                  | A3316634-2              | M55181/7-03                | 0.435                   | 0.297                         |                   |
| A3154857-1                              | GC55181/1-AD2 & GC55181/3-AD2  | A3316635-2 & A3316636-2 | M55181/3-03 & M55181/1-03  | 0.435                   | 0.297                         |                   |
| A3191153-2                              | GC55181/1-AD2                  | A3316635-2              | M55181/1-03                | 0.435                   | 0.297                         |                   |
| SM-D-415553                             | GC55181/7-AD2                  | A3316634-2              | M55181/7-03                | 0.435                   | 0.297                         |                   |

COTS Adaptors

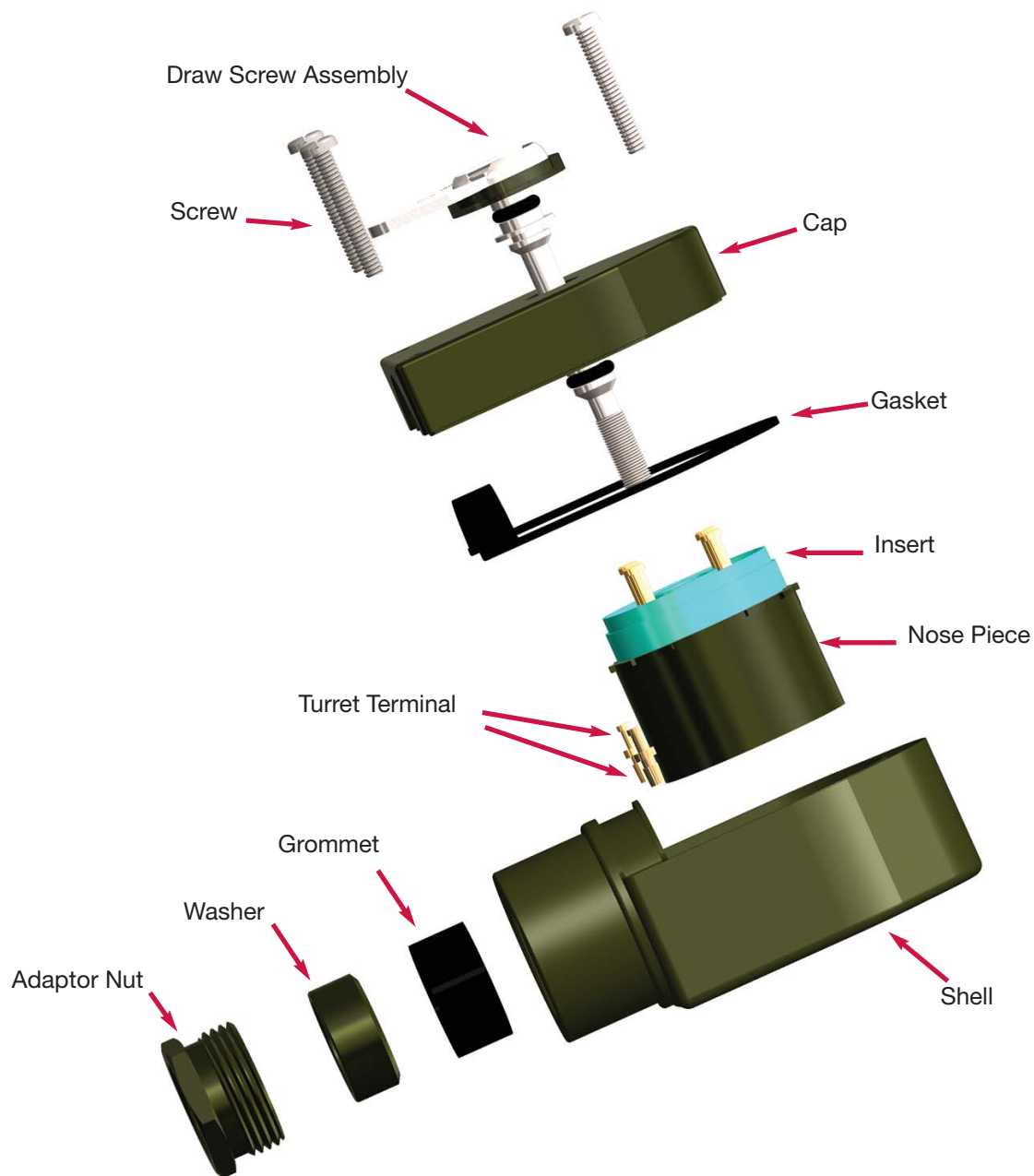
\*COTS plugs mate with 55181 receptacles. See Receptacles section on page 23.

### GC55181/3-AD1



# UW Power Connectors

## UW Connectors



# UW Power Connectors



## UW Connectors

The UW connectors meet all requirements of MIL-DTL-12520 for the latest revision. These connectors are rugged, proven reliable, and are designed for power and control interconnections. Featured is a center-locking, double-lead screw for maximum reliability, with a fold-down, wing-blade handle. They are waterproof and can withstand the extreme range of environmental conditions encountered by ground support equipment.

## Features and Benefits

**Versatile Configurations** – Available in three plug shell sizes styles (small round, small cathedral and large cathedral). The UW series available in 4-, 9-, 14-, 19- and 30-contact versions configured to support cable-to-cable, cable-to-panel, and jam nut panel mounting.

**Weatherproof** - Heavy-duty gaskets and O-rings provide a watertight seal to prevent moisture, dust and dirt contamination and maximize reliability.

**Durable Construction** – Time-tested, field-proven reliability for over 30 years. Corrosion-resistant, aluminum alloy receptacles and high-impact solid brass plug construction resist impact damage. Heat-tempered nose piece is made of hardened alloy steel for enhanced impact protection in the event of mishandling.

**Superior Electrical Connections** - Precision contacts are gold over copper or nickel providing positive electrical connection with minimum voltage drop.

**Easy to Use** - Receptacle and plug mating is accomplished quickly and easily by turning a center-locking, double lead screw with easy-to-grasp wing-blade handle. Vibration-resistant, secure locking mechanism will not back out.

**Reliable** - Worry-free 500 mate/unmate cycle rating.



UW Connectors



UW Connectors

UW Connectors



UW power connectors support military communication systems.

# UW Power Connectors

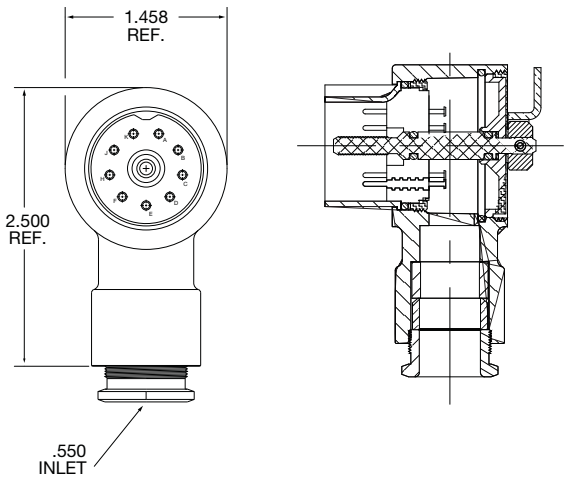


UW Connector Rear View

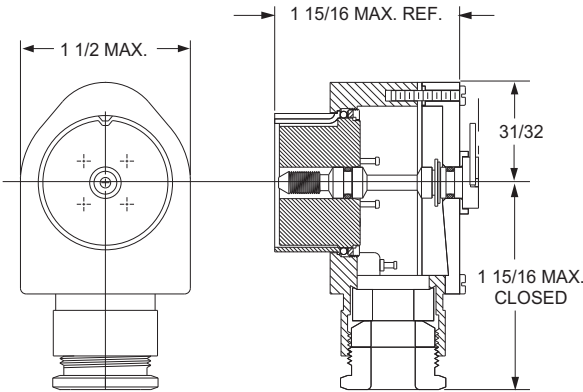
## Specifications

| ELECTRICAL                 |                                                  |
|----------------------------|--------------------------------------------------|
| <b>Dielectric Strength</b> |                                                  |
| 4, 9 & 14 Contacts         | 2800 Volts RMS                                   |
| 19 Contacts                | 2000 Volts RMS                                   |
| Insulation Resistance      | 1000 Megohms min. at 500 Volts DC                |
| <b>Voltage Drop</b>        |                                                  |
| 4 Contact                  | 20 MV at 35 Amps                                 |
| 9, 19 Contact              | 21 MV at 20 Amps                                 |
| MECHANICAL                 |                                                  |
| Air Pressure               | 2.5 PSI                                          |
| Water Immersion            | 6 ft., 48 hours                                  |
| Durability                 | 500 cycles with a coupling torque of 25 in.-lbs. |
| Contact Retention          | 15 lbs.                                          |
| Insert Strength            | 400 lbs.                                         |

### UW 1220 Plug



### UW 1320 Plug



# UW Power Connectors



## Ordering Information

UW 1220 M A XX

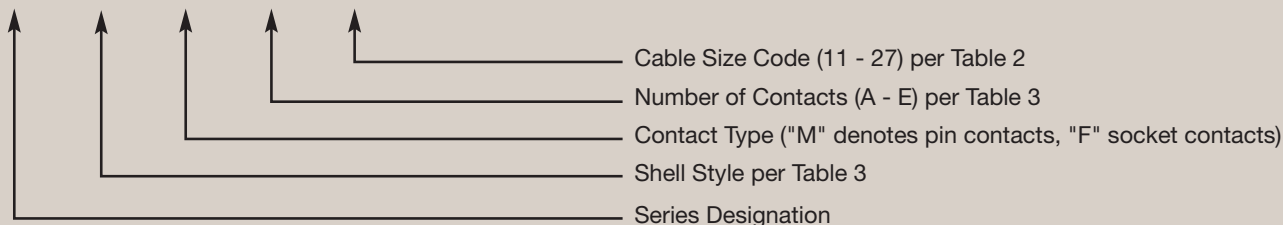


TABLE 1

| TABLE 1        |                      |              |                |                                  |              |    |
|----------------|----------------------|--------------|----------------|----------------------------------|--------------|----|
| CI PART NUMBER | STYLE                | CONTACT TYPE | MOUNTING STYLE | NUMBER OF CONTACTS (CODE LETTER) | CONTACT SIZE |    |
| UW1220FAXX     | Round Plug           | Socket       | Cable          | 4 (A)                            | 12           |    |
| UW1220FBXX     |                      | Pin          |                | 9 (B)                            |              |    |
| UW1220MAXX     |                      |              |                | 4 (A)                            |              |    |
| UW1220MBXX     |                      |              |                | 9 (B)                            |              |    |
| UW1320FAXX     | Small Cathedral Plug | Socket       |                | 4 (A)                            |              | 16 |
| UW1320FBXX     |                      | Pin          |                | 9 (B)                            |              |    |
| UW1320MAXX     |                      |              |                | 4 (A)                            |              |    |
| UW1320MBXX     |                      |              |                | 9 (B)                            |              |    |
| UW1326FCXX     | Large Cathedral Plug | Socket       | 14 (C)         | 20                               |              |    |
| UW1326FDXX     |                      | Pin          | 19 (D)         |                                  |              |    |
| UW1326FEXX     |                      |              | 30 (E)         |                                  |              |    |
| UW1326MCXX     |                      |              | 14 (C)         | 16                               |              |    |
| UW1326MDXX     |                      | 19 (D)       |                |                                  |              |    |
| UW1326MEXX     |                      | 30 (E)       |                |                                  |              |    |
| UW2020FA00     | Small Receptacle     | Socket       | Panel          | 4 (A)                            | 12           |    |
| UW2020FB00     |                      | Pin          |                | 9 (B)                            |              |    |
| UW2020MA00     |                      |              |                | 4 (A)                            |              |    |
| UW2020MB00     |                      |              |                | 9 (B)                            |              |    |
| UW2026FC00     | Large Receptacle     | Socket       |                | 14 (C)                           | 16           |    |
| UW2026FD00     |                      | Pin          |                | 19 (D)                           |              |    |
| UW2026FE00     |                      |              |                | 30 (E)                           |              |    |
| UW2026MC00     |                      |              |                | 14 (C)                           | 16           |    |
| UW2026MD00     |                      | 19 (D)       |                |                                  |              |    |
| UW2026ME00     |                      | 30 (E)       |                |                                  |              |    |

TABLE 2

| "XX" VALUE | CABLE DIAMETER (INCHES) | NUMBER OF CONTACTS |
|------------|-------------------------|--------------------|
| 11         | 0.292 to 0.343          | 4, 9               |
| 13         | 0.323 to 0.406          | 4, 9               |
| 15         | 0.386 to 0.486          | 4, 9               |
| 17         | 0.448 to 0.531          | 4, 9               |
| 19         | 0.511 to 0.593          | 4, 9, 14, 19, 30   |
| 21         | 0.573 to 0.656          | 4, 9, 14, 19, 30   |
| 23         | 0.636 to 0.718          | 14, 19, 30         |
| 25         | 0.698 to 0.781          | 14, 19, 30         |
| 27         | 0.761 to 0.843          | 14, 19, 30         |

UW Connectors

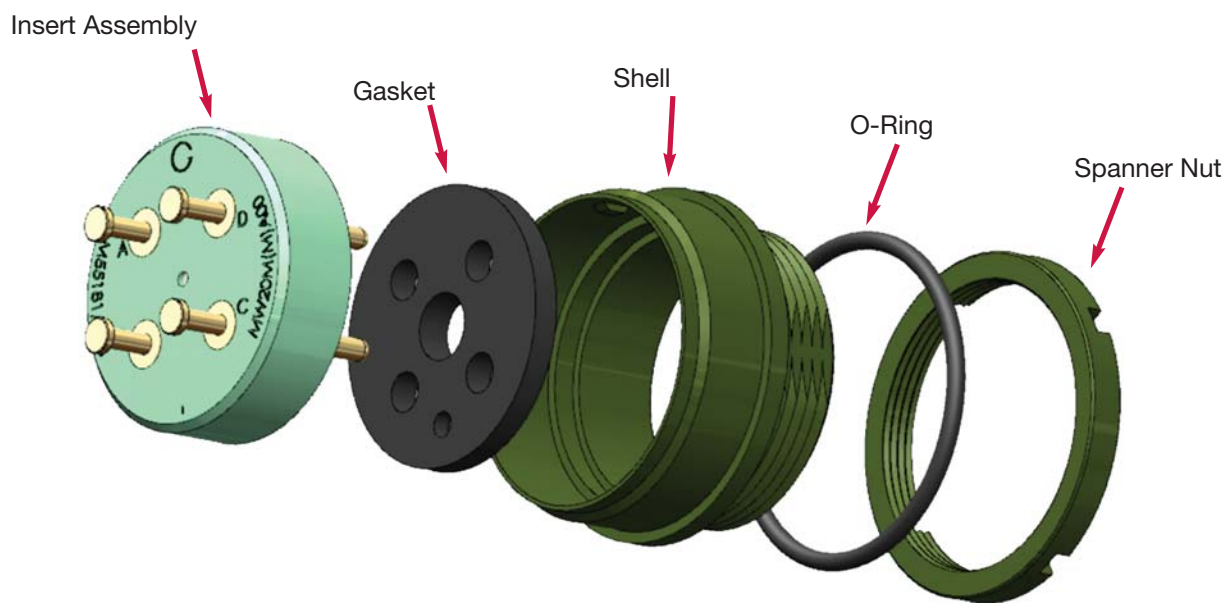
TABLE 3

| CONTACTS DESIGNATION | SHELL STYLE DESIGNATION |                      |
|----------------------|-------------------------|----------------------|
| A = 4                | 1220                    | Round Plug           |
| B = 9                | 1320                    | Small Cathedral Plug |
| C = 14               | 1326                    | Large Cathedral Plug |
| D = 19               | 2020                    | Small Receptacle     |
| E = 30               | 2026                    | Large Receptacle     |

# Power Receptacles

## Features Overview

M55181/2-01 Rear View



# Power Receptacles



M55181/2-01

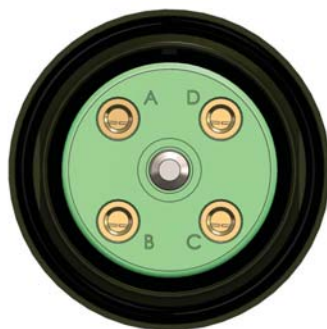


Receptacles are available for all mid-range Power Connectors. M55181 Receptacles support Mil-Spec and COTS versions of the 55181 Power Connector Family.

UW Receptacles support the UW Plugs.

Consult factory for your specific needs.

M55181/4-01



M55181/6-01



M55181/8-01



# Power Receptacles

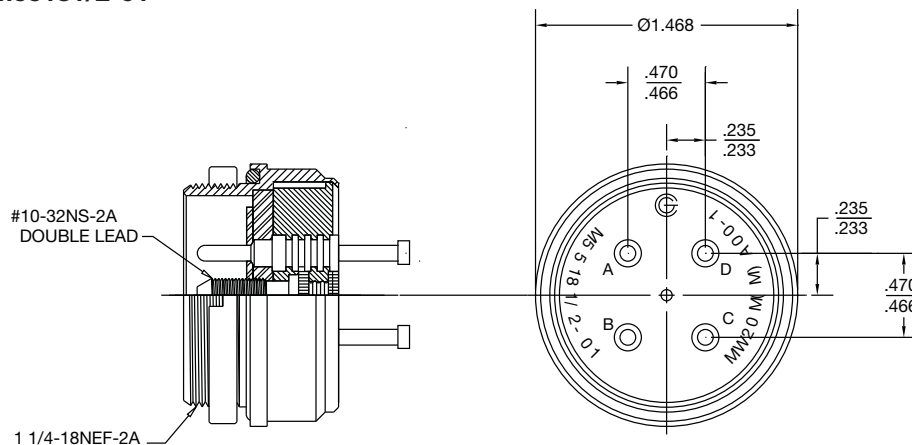
| MW RECEPTACLES         |                    |              |              |              |             |       |                             |
|------------------------|--------------------|--------------|--------------|--------------|-------------|-------|-----------------------------|
| CI GENERAL PART NUMBER | NUMBER OF CONTACTS | CONTACT TYPE | AMPS CONTACT | CONTACT SIZE | TERMINATION | MOUNT | MATES WITH PLUGS            |
| M55181/2- 01           | 4                  | Pin          | 35           | 12           | Turret      | Panel | M55181/1-, GC55181/1-series |
| M55181/4- 01           |                    | Socket       |              |              |             |       | M55181/3-, GC55181/3-series |
| M55181/6- 01           | 9                  |              | 7.5          | 20           | Solder Cup  |       | M55181/5-series             |
| M55181/8- 01           | 18                 |              |              |              |             |       | M55181/7-, GC55181/7-series |

## MW Receptacle

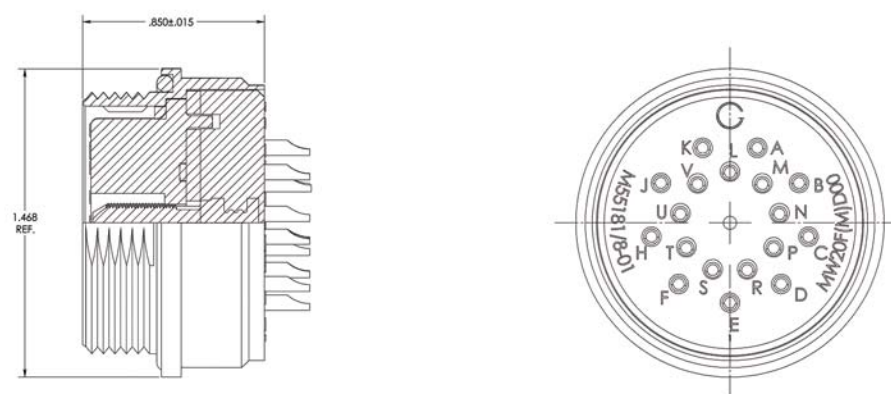


MW Receptacles fit all COTS versions of the power plugs.

### M55181/2-01



### M55181/8-01



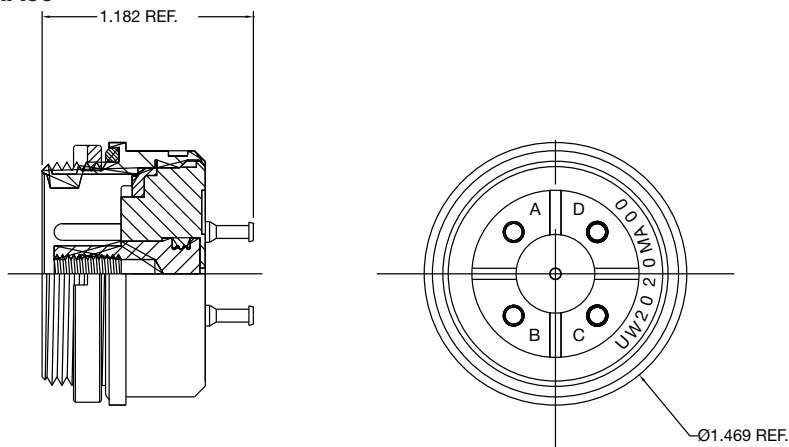
Representative sample shown.  
Consult factory.

# Power Receptacles



| UW RECEPTACLES |                    |                  |              |              |       |                       |
|----------------|--------------------|------------------|--------------|--------------|-------|-----------------------|
| CI PART NUMBER | NUMBER OF CONTACTS | TYPE             | CONTACT TYPE | CONTACT SIZE | MOUNT | MATES WITH PLUG       |
| UW2020FA00     | 4                  | Small Receptacle | Socket       | 12           | Panel | UW1220, UW1320 series |
| UW2020FB00     | 9                  |                  | Pin          |              |       |                       |
| UW2020MA00     | 4                  |                  |              |              |       |                       |
| UW2020MB00     | 9                  |                  |              |              |       |                       |
| UW2026FC00     | 14                 | Large Receptacle | Socket       | 16           |       | UW2026 series         |
| UW2026FD00     | 19                 |                  |              | 20           |       |                       |
| UW2026FE00     | 30                 |                  | Pin          | 16           |       |                       |
| UW2026MC00     | 14                 |                  |              | 20           |       |                       |
| UW2026MD00     | 19                 |                  |              |              |       |                       |
| UW2026ME00     | 30                 |                  |              |              |       |                       |

**UW2020MA00**



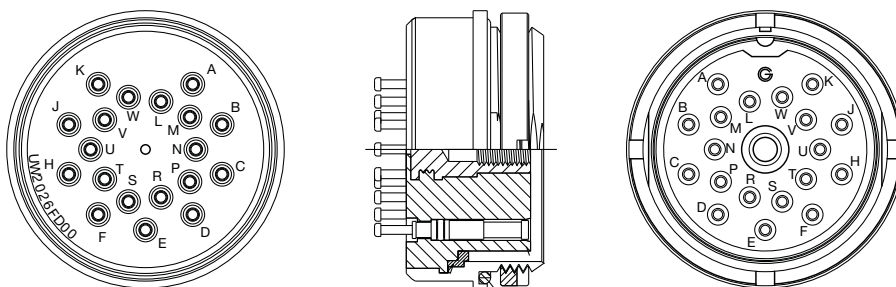
**UW Receptacles**



Rear View

Receptacles

**UW2026FD00**



Representative sample shown.  
Consult factory.

# Power Connectors

# Power Connectors



## 55181 Power Connectors are Manufactured at

### Cooper Interconnect

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P: 856-935-7560  
F: 856-935-0102

### Cooper Interconnect

222 Williams Street  
Chelsea, MA 02150  
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F: 617-889-6980

### Cooper Interconnect

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F: 252-566-9337

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