

# Amphenol

MW Series

MIL-DTL-55181



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**Amphenol**



# Introduction

Amphenol MW series power connectors are MIL Qualified & listed in QPL & meets the requirement of MIL-DTL-55116.

MW series power connectors are with center lock coupling screw, waterproof & polarized. Connectors used for interconnection of power & control circuit electric equipment specially in U.S. Army Communication System.

These connectors are designed to withstand high shock & vibrations ensured with center locking screw mechanism.

Military Radios



Harsh Environment Communications



Ground Vehicles



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## Materials & Finish

Part	Material	Finishes
Plug Shell	Aluminum Alloy	Cadmium Plate with Olive drab chromate finish
Receptacle Shell	Brass	Cadmium Plate with Olive drab chromate finish
Nose Piece	Alloy Steel	Cadmium Plate with Olive drab chromate finish
Draw Screws	Stainless Steel	Passivation
Pin Contact	Brass	1.27 Micron Gold over Nickel
Socket Contact	Copper Alloy with BeCu Spring Element	1.27 Micron Gold over Nickel
Insulator	Glass-filled dially phthalate, type GDF-30F or SDG-F	

## Mechanical

Contact Retention	10 lbs
Durability	500 Cycle
Insert Strength	400 lbs

## Electrical

Operating Current 4 Contacts (12 AWG)	35 Amp
Operating Current 9 & 18 Contacts (20 AWG)	7.5 Amp
Contact Resistance 4 Contacts (12 AWG)	<0.57 milli Ohms (20 m V drop at 35 A)
Contact Resistance 9 & 18 Contacts (20 AWG)	<3.33 milli Ohms(20 m V drop at 7.5 A)
Insulation Resistance	1000 M Ohms min at 500 Vdc
Dielectric with Standing Voltage- 4 Contacts (12 AWG)	2000 V RMS
Dielectric with Standing Voltage- 18 Contacts(20 AWG)	1500 V RMS

## Environmental

Operating Temperature	-55 Deg C To + 85 Deg C
Air Pressure	2.5 PSI
Water Immersion	6 Feet, 48 Hours



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DSCC-VQP-09-019067 (Mr. Funk/614-692-6608/jf)
SUBJECT: Qualification for MIL-DTL-55181
DSCC Test Report Number 55181-2284-08
FSC 5935, Preparing Activity: DLA-CC

OCT 6 2009

Ms. Seema Tiwari
Sr. Deputy Manager QA
Amphenol Interconnect India Pvt. Ltd.
105, Bhosari Industrial Estate
Pune-411026 (INDIA)

Dear Ms. Tiwari:

We have received Amphenol Interconnect India's test report and supporting data dated August 18, 2009. Qualification of your products is granted under the Military Specification Sheets listed below as a result of providing exhibit samples that demonstrate your capability to manufacture these products to Military Specification MIL-DTL-55181.

Table with 4 columns: GOVERNMENT DESIGNATION, MANUFACTURER'S DESIGNATION OR TYPE NUMBER, TEST OR QUALIFICATION REFERENCE, SUPPLIER'S NAME. Contains 20 rows of product qualification data.

A detailed listing of the connector type under the Military Specification Sheet will be listed on the Qualified Products List (QPL) 55181. This qualification is subject to the conditions stated in DoD 4120.24-M and SD-6.

Because we are held responsible for the accuracy and currency of this QPL, please let us know if your company discontinues production of these products.

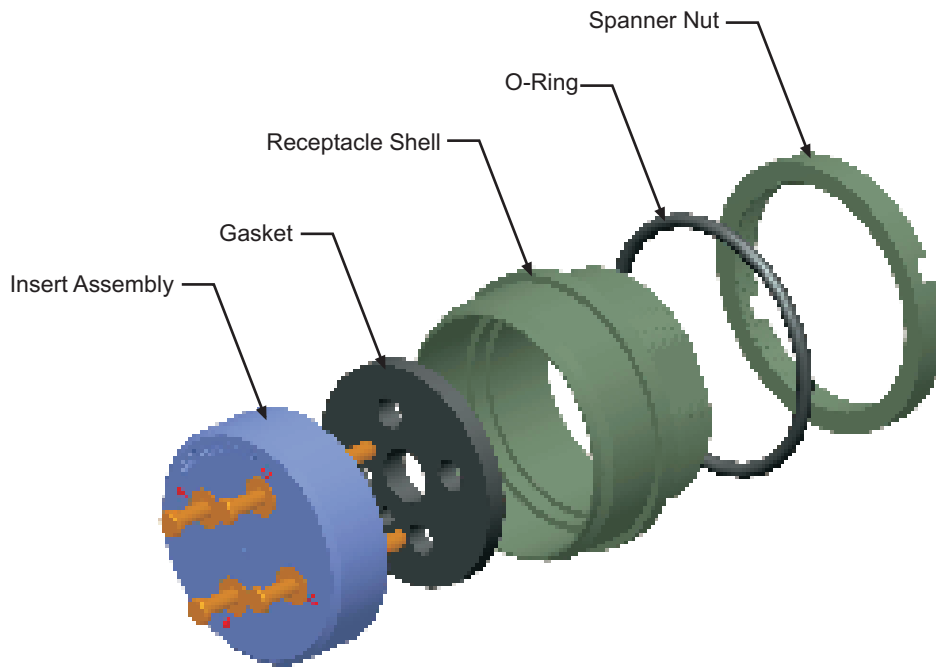
If you have any questions concerning this letter, please contact Mr. Funk at 614-692-6608 or email Jeremy.Funk@dla.mil.

Sincerely,

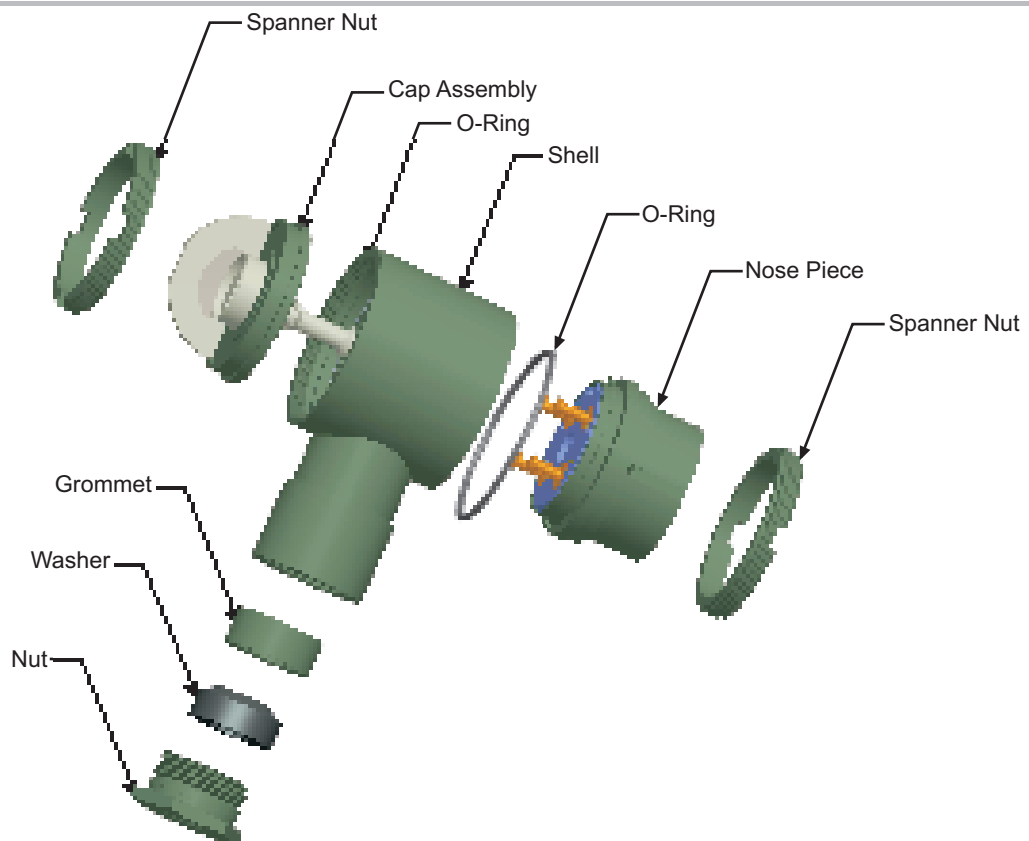
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Division

## Receptacle Assembly



## Plug Assembly

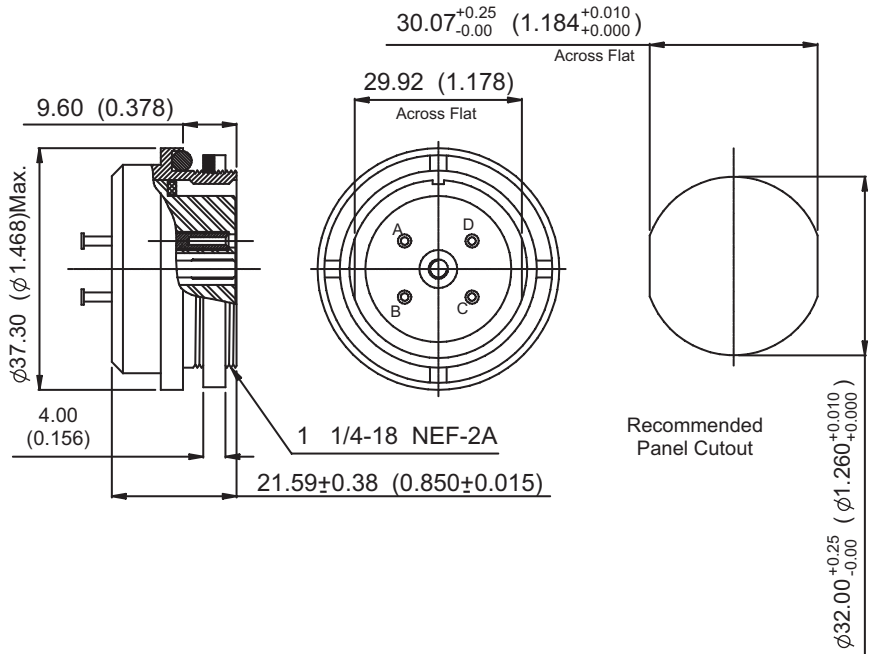
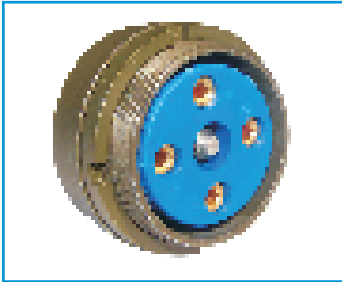


## Receptacle Connector

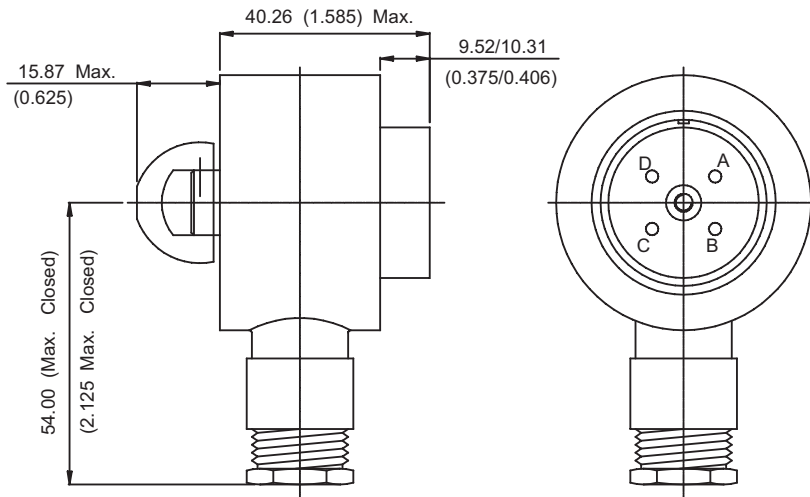
### MW20M(M)AXX (M55181/2-XX)



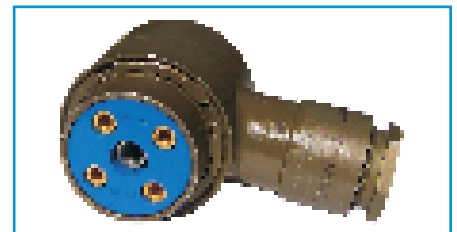
### MW20F(M)AXX (M55181/4-XX)



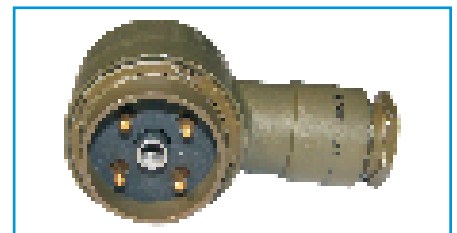
## Plug Connector



### MW10F(M)AXX (M55181/1-XX)



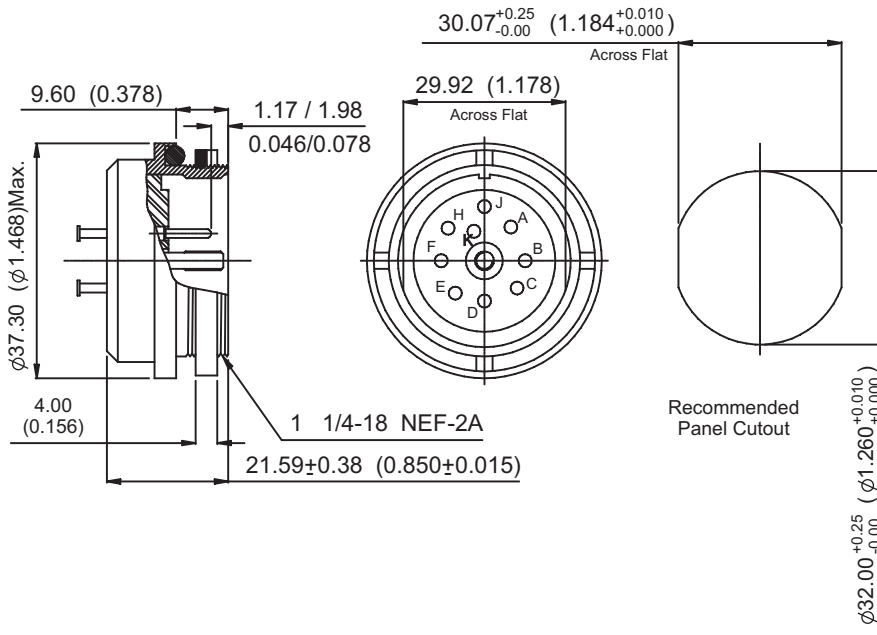
### MW10M(M)AXX\* (M55181/3-XX)



\* For Complete Part No. Replace "XX" With Cable Clamp Code Shown In The Table-2 (page 8)

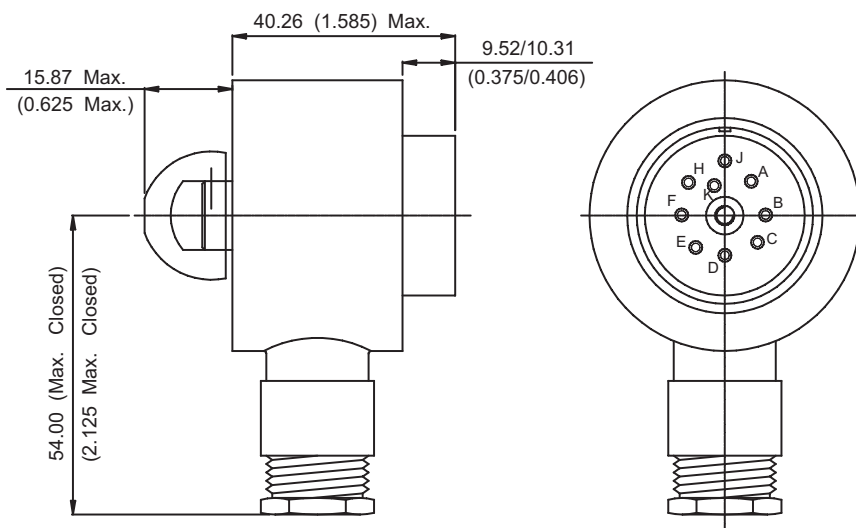
## Receptacle Connector

### MW20F(M)BXX (M55181/6-XX)



## Plug Connector

### MW10M(M)BXX (M55181/5-XX)



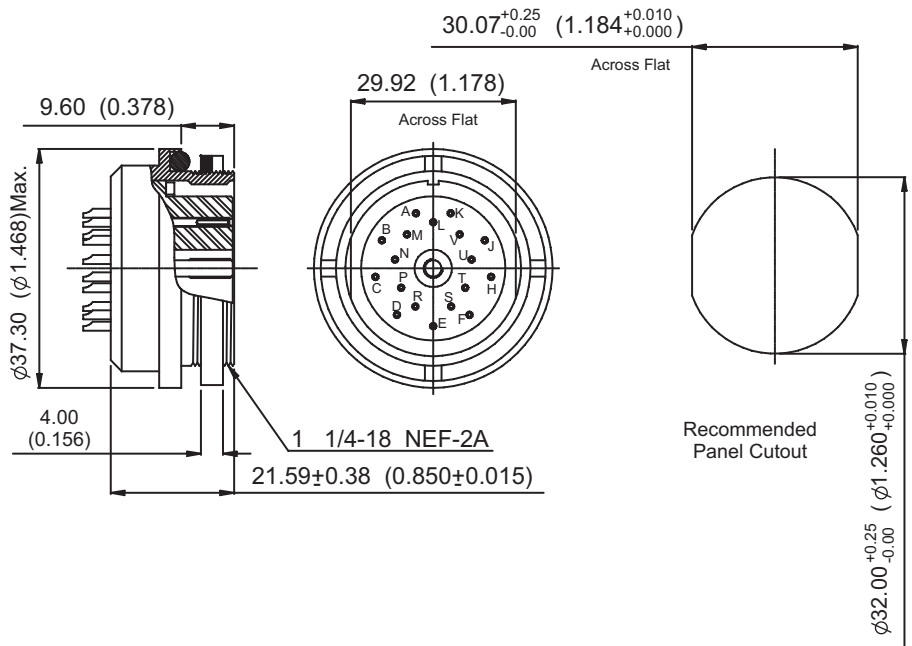
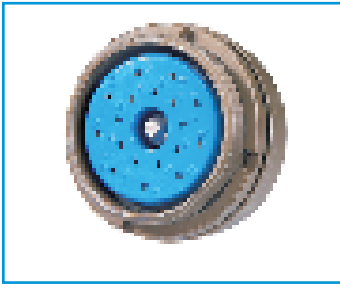
\* For Complete Part No. Replace "XX" With Cable Clamp Code Shown In The Table-2 (page 8)

\* Above connectors are not tooled up, contact factory



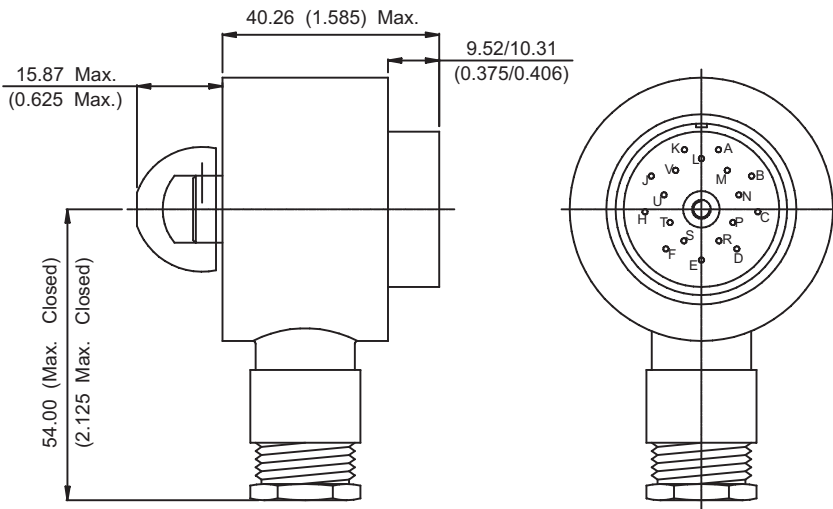
## Receptacle Connector

### MW20F(M)DXX (M55181/8-01)



## Plug Connector

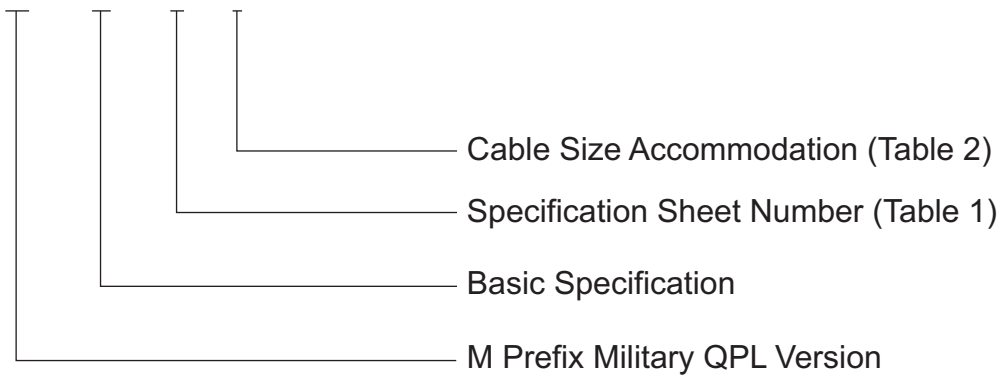
### MW10M(M)DXX\* (M55181/7-XX)



\* For Complete Part No. Replace "XX" With Cable Clamp Code Shown In The Table-1 (page 8)

Notice : All information, including illustrations given herein is believed to be accurate at the time of printing. In lieu of design advances, Amphenol reserves the right to change specifications without notice. This publication MW Series Connectors 01/10 supercedes all existing Amphenol literature on MW Series Connectors.

M 55181 / 1 - 01



**Table 1**

MIL Designation	Amphenol Designation
M55181/1-01	MW10F(M)A11
M55181/1-02	MW10F(M)A13
M55181/1-03	MW10F(M)A17
M55181/1-04	MW10F(M)A19
M55181/1-05	MW10F(M)A15
M55181/2-01	MW20M(M)A00
M55181/3-01	MW10M(M)A11
M55181/3-02	MW10M(M)A13
M55181/3-03	MW10M(M)A17
M55181/3-04	MW10M(M)A19
M55181/3-05	MW10M(M)A15
M55181/4-01	MW20F(M)A00
M55181/7-01	MW10M(M)D11
M55181/7-02	MW10M(M)D13
M55181/7-03	MW10M(M)D17
M55181/7-04	MW10M(M)D19
M55181/7-05	MW10M(M)D15
M55181/8-01	MW20F(M)D00

**Table 2**

Cable Clamp Code for M55181 Part No.	Cable Clamp Code For MW Part No.	Cable Diameter-Inch	Cable Diameter-mm
1	11	0.292 to 0.343	7.42 to 8.71
2	13	0.323 to 0.406	8.20 to 10.31
3	15	0.386 to 0.468	9.80 to 11.88
4	17	0.448 to 0.531	11.38 to 14.49
5	19	0.511 to 0.593	12.98 to 15.06

\* Cable size accommodation specification is not applicable for receptacles

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# Amphenol

*A Global Company*



Pune Operations



Bangalore Operations

# Amphenol

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