# MG CONNECTORS

## CIRCULAR REVERSE BAYONET COUPLING

**INDEX:**



ALLIED CONNECTORS

"Connect Through Allied"

# CIRCULAR REVERSE BAYONET COUPLING CONNECTORS

These are circular connectors with rugged aluminium alloy shells and reverse bayonet coupling. Based on MIL-C-5015, there is a wide range of contact arrangements available. Insert material is Polychloroprene. These connectors give quick positive coupling with audible indication of full coupling.

Other attributes include high shock and vibration capabilities without the need for lockwiring. The connectors offer an operating temperature range of -55°C to +125°C & are intermateable with VG95234 and 121B connectors.

Designed originally as a military connector, current applications include railways, process control equipments, communication equipments, stage lighting, mining equipments ..... to name a few.

**MG 00F** — Box mounting receptacle for front mounting. With cable clamp and telescopic bushing.

**MG 01F** — Cable connecting receptacle with cable clamp and telescopic bushing.

**MG 00T** — Box mounting receptacle for front mounting. With back shell threads.

**MG 02R B05** — Box mounting receptacle for rear mounting.

**MG 02R** — Box mounting receptacle for front mounting.

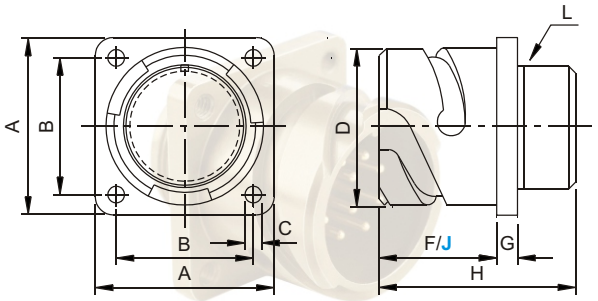
**MG 06F** — Straight cable connector With cable clamp and telescopic bushing.

**MG 08F** — 90° angle connector With cable clamp and telescopic bushing.

**MG TBF** — Bulkhead receptacle.

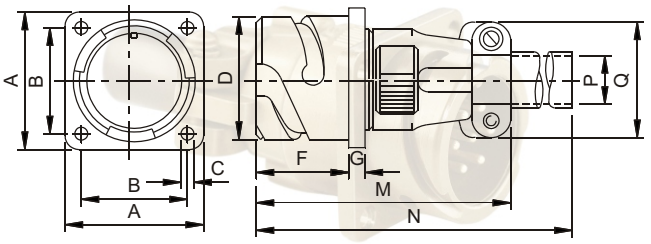
## MG 00T / B05

Box mounting receptacle for front mounting.
With back shell threads.




## MG 00F

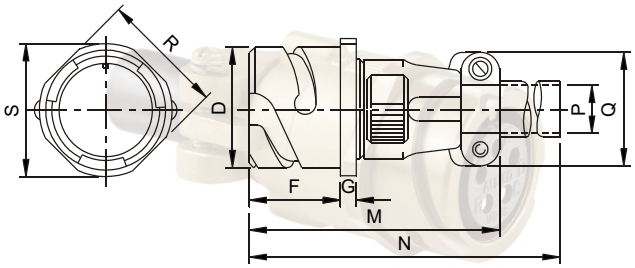
Box mounting receptacle for front mounting.
With cable clamp and telescopic bushing.




TH option available on all square flange connectors.

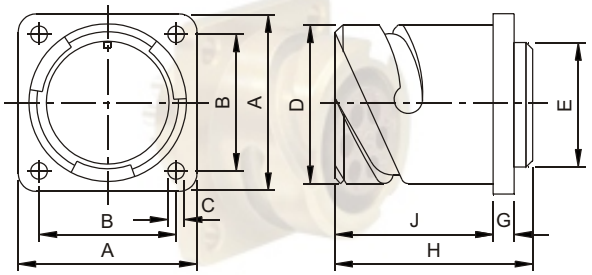

## MG 01F

Cable connecting receptacle with cable clamp and telescopic bushing.



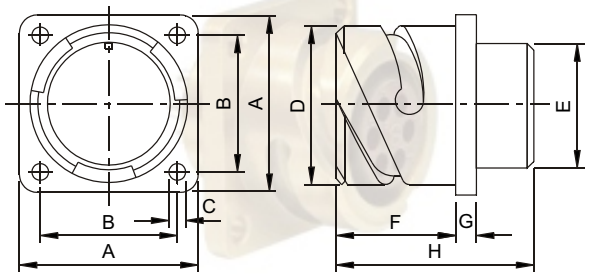

## MG 02R B05

Box mounting receptacle for rear mounting.



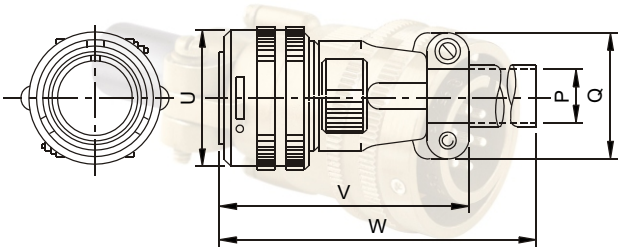

## MG 02R

Box mounting receptacle for front mounting.



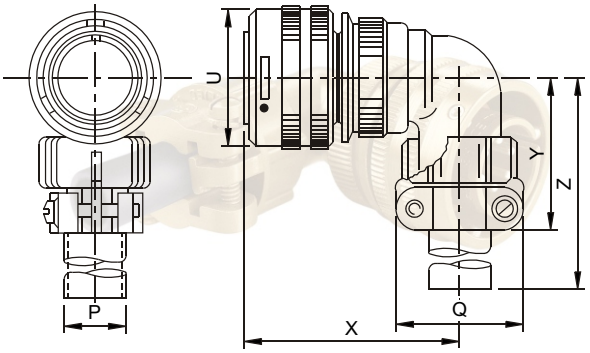

## MG 06F

Straight cable connector with cable clamp and telescopic bushing.



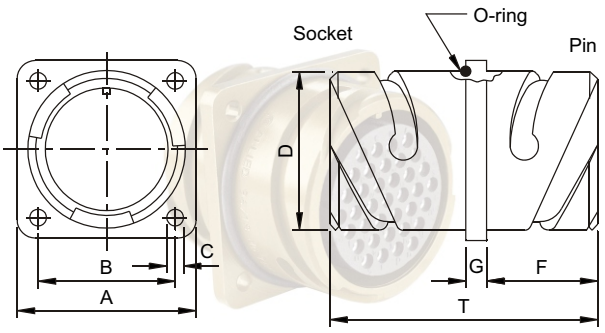

## MG 08F

90 ° angle connector with cable clamp and telescopic bushing.




## MG TBF

Bulkhead receptacle.



## DIMENSION CHART

| SHELL SIZE | 10SL | 14S | 16S | 16 | 18 | 20 | 22 | 24 | 28 | 32 | 36 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A 0.3 | 25.4 | 30.0 | 32.0 | 32.0 | 35.0 | 38.0 | 41.0 | 44.5 | 50.8 | 57.0 | 64.0 |
| B 0.1 | 18.2 | 23.0 | 24.6 | 24.6 | 27.0 | 29.4 | 31.8 | 34.9 | 39.7 | 44.5 | 49.2 |
| C +0.15 -0 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.7 | 3.7 | 4.3 | 4.3 |
| D +0 -0.15 | 18.2 | 24.6 | 27.4 | 27.4 | 30.8 | 34.2 | 37.4 | 40.9 | 46.7 | 53.4 | 59.6 |
| E MAX | 16.2 | 19.2 | 22.4 | 22.4 | 25.6 | 29.0 | 32.2 | 35.3 | 41.4 | 47.8 | 54.1 |
| F +0.4 -0 | 14.2 | 14.2 | 14.2 | 19.0 | 19.0 | 19.0 | 19.0 | 20.6 | 20.6 | 22.2 | 22.2 |
| G 0.2 | 2.8 | 3.2 | 3.2 | 3.2 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| H 0.3 | 24.7 | 24.7 | 24.7 | 33.8 | 33.8 | 33.8 | 33.8 | 35.7 | 35.7 | 37.3 | 37.3 |
| J +0.4 -0 | 18.2 | 18.2 | 18.2 | 21.5 | 23.0 | 23.0 | 23.0 | 23.0 | 24.0 | 24.0 | 24.0 |
| K ISO Thread | M4 | M4 | M4 | M4 | M4 | M4 | M4 | M4 | M5 | M5 | M5 |
| L UNEF-2A Thread | 5/8"x 24 | 3/4"x 20 | 7/8"x 20 | 7/8"x 20 | 1" x 20 | 1 1/8"x 18 | 1 1/4"x 18 | 1 3/8"x 18 | 1 5/8"x 18 | 1 7/8"x 16UN | 2 1/16" x 16UN |
| M MAX | 60.0 | 62.0 | 70.0 | 70.0 | 77.0 | 77.0 | 77.0 | 85.0 | 85.0 | 85.0 | 105.0 |
| N MAX | 120.0 | 120.0 | 120.0 | 125.0 | 125.0 | 125.0 | 125.0 | 125.0 | 125.0 | 125.0 | 135.0 |
| P Cable Entry | 6.5 | 9.0 | 11.0 | 11.0 | 14.2 | 15.8 | 15.8 | 21.4 | 212.4 | 26.7 | 31.7 |
| Q MAX | 23.0 | 28.0 | 30.5 | 30.5 | 33.0 | 38.1 | 38.1 | 44.2 | 44.2 | 52.7 | 58.4 |
| R 0.2 | 20.6 | 25.4 | 28.6 | 28.6 | 31.7 | 34.9 | 38.1 | 41.3 | 47.6 | 54.0 | 60.6 |
| S +0 -0.15 | 25.2 | 29.3 | 32.3 | 32.3 | 34.8 | 37.8 | 41.1 | 44.6 | 50.9 | 57.1 | 63.6 |
| T 0.7 | 37.5 | 37.5 | 37.5 | 51.4 | 51.4 | 51.4 | 51.4 | 51.4 | 51.4 | 51.4 | 51.4 |
| U MAX | 24.5 | 30.5 | 33.5 | 33.5 | 37.5 | 40.5 | 44.0 | 47.5 | 53.5 | 60.0 | 67.5 |
| V MAX | 55.0 | 60.0 | 60.0 | 70.0 | 75.0 | 75.0 | 75.0 | 90.0 | 90.0 | 90.0 | 100.0 |
| W MAX | 115.0 | 115.0 | 115.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 130.0 |
| X MAX | 45.0 | 47.0 | 48.0 | 57.0 | 58.0 | 61.0 | 61.0 | 66.0 | 66.0 | 72.0 | 75.0 |
| Y MAX | 42.0 | 42.0 | 45.0 | 45.0 | 53.0 | 53.0 | 53.0 | 58.0 | 58.0 | 66.0 | 69.0 |
| Z MAX | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 110.0 | 110.0 |

## INSERT SPECIFICATIONS

| SR. NO. | INSERT NO. | TOTAL CONTACTS | CONTACTS SIZE | | | | | SERVICE RATING |
|---|---|---|---|---|---|---|---|---|
| | | | # 0 | # 4 | # 8 | # 12 | # 16 | |
| 1 | 10SL-3 | 3 | - | - | - | - | 3 | A |
| 2 | 10SL-4 | 2 | - | - | - | - | 2 | A |
| 3 | 14S-2 | 4 | - | - | - | - | 4 | INST |
| 4 | 14S-5 | 5 | - | - | - | - | 5 | INST |
| 5 | 14S-6 | 6 | - | - | - | - | 6 | INST |
| 6 | 14S-7 | 3 | - | - | - | - | 3 | A |
| 7 | 14S-9 | 2 | - | - | - | - | 2 | A |
| 8 | 14SA-61 | 7 | - | - | - | - | 7 | INST |
| 9 | 16S-1 | 7 | - | - | - | - | 7 | A |
| 10 | 16S-4 | 2 | - | - | - | - | 2 | D |
| 11 | 16S-5 | 3 | - | - | - | - | 3 | A |
| 12 | 16S-8 | 5 | - | - | - | - | 5 | A |
| 13 | 16-9 | 4 | - | - | - | 2 | 2 | A |
| 14 | 16-10 | 3 | - | - | - | 3 | - | A |
| 15 | 16-11 | 2 | - | - | - | 2 | - | A |
| 16 | 18-1 | 10 | - | - | - | - | 10 | A,INST |
| 17 | 18-3 | 2 | - | - | - | 2 | - | A |
| 18 | 18-4 | 4 | - | - | - | - | 4 | D |
| 19 | 18-5 | 3 | - | - | - | 2 | 1 | D |
| 20 | 18-8 | 8 | - | - | - | 1 | 7 | A |
| 21 | 18-9 | 7 | - | - | - | 2 | 5 | INST |
| 22 | 18-10 | 4 | - | - | - | 4 | - | A |
| 23 | 18-11 | 5 | - | - | - | 5 | - | A |
| 24 | 18-12 | 6 | - | - | - | - | 6 | A |
| 25 | 20-2 | 1 | 1 | - | - | - | - | D |
| 26 | 20-3 | 3 | - | - | - | 3- | - | D |
| 27 | 20-4 | 4 | - | - | - | 4 | - | D |
| 28 | 20-7 | 8 | - | - | - | - | 8 | A,D |
| 29 | 20-8 | 6 | - | - | 2 | - | 4 | INST |
| 30 | 20L-9 | 9 | - | - | - | 9 | - | INST |
| 31 | 20-14 | 5 | - | - | 2 | 3 | - | A |
| 32 | 20-15 | 7 | - | - | - | 7 | - | A |
| 33 | 20-16 | 9 | - | - | - | 2 | 7 | A |
| 34 | 20-17 | 6 | - | - | - | 5 | 1 | A |
| 35 | 20-18 | 9 | - | - | - | 3 | 6 | A |
| 36 | 20-19 | 3 | - | - | 3 | - | - | A |
| 37 | 20-23 | 2 | - | - | 2 | - | - | A |
| 38 | 20-24 | 4 | - | - | 2 | - | 2 | A |
| 39 | 20-27 | 14 | - | - | - | - | 14 | A |
| 40 | 20-29 | 17 | - | - | - | - | 17 | A |
| 41 | 20-33 | 11 | - | - | - | - | 11 | A |
| 42 | 20L-48 | 19 | - | - | - | - | 19 | INST |
| 43 | 22-2 | 3 | - | - | 3 | - | - | A |
| 44 | 22-7 | 1 | 1 | - | - | - | - | E |
| 45 | 22-9 | 3 | - | - | - | 3 | - | E |
| 46 | 22-10 | 4 | - | - | - | - | 4 | E |
| 47 | 22-14 | 19 | - | - | - | - | 19 | A |
| 48 | 22-15 | 6 | - | - | - | 5 | 1 | A,E |
| 49 | 22-16 | 9 | - | - | - | 3 | 6 | A |
| 50 | 22-18 | 8 | - | - | - | - | 8 | A,D |
| 51 | 22-19 | 14 | - | - | - | - | 14 | A |
| 52 | 22-20 | 9 | - | - | - | - | 9 | A |
| 53 | 22-22 | 4 | - | - | 4 | - | - | A |
| 54 | 22-23 | 8 | - | - | - | 8 | - | A,D |
| 55 | 22-29 | 7 | - | 1 | - | - | 6 | A |

| SR. NO. | INSERT NO. | TOTAL CONTACTS | CONTACTS SIZE | | | | | SERVICE RATING |
|---|---|---|---|---|---|---|---|---|
| | | | # 0 | # 4 | # 8 | # 12 | # 16 | |
| 56 | 22-33 | 7 | - | - | - | - | 7 | A,D |
| 57 | 22-34 | 5 | - | - | - | 3 | 2 | D |
| 58 | 24-2 | 7 | - | - | - | 7 | - | D |
| 59 | 24-4 | 4 | 1 | - | - | - | 3 | D |
| 60 | 24-5 | 16 | - | - | - | - | 16 | A |
| 61 | 24-6 | 8 | - | - | - | 8 | - | A,D |
| 62 | 24-7 | 16 | - | - | - | 2 | 14 | A |
| 63 | 24-9 | 2 | - | 2 | - | - | - | A |
| 64 | 24-10 | 7 | - | - | 7 | - | - | A |
| 65 | 24-11 | 9 | - | - | 3 | 6 | - | A |
| 66 | 24-12 | 5 | - | 2 | - | 3 | - | A |
| 67 | 24-20 | 11 | - | - | - | 2 | 9 | D |
| 68 | 24-21 | 10 | - | - | 1 | - | 9 | D |
| 69 | 24-22 | 4 | - | - | 4 | - | - | D |
| 70 | 24-27 | 7 | - | - | - | - | 7 | E |
| 71 | 24-28 | 24 | - | - | - | - | 24 | INST |
| 72 | 24L-58* | 13 | - | - | 3 | 3 | 7 | INST |
| 73 | 28-3 | 3 | - | - | 3 | - | - | E |
| 74 | 28-5 | 5 | - | 2 | - | 1 | 2 | D |
| 75 | 28-6 | 3 | - | 3 | - | - | - | D |
| 76 | 28-8 | 12 | - | - | - | 2 | 10 | A,D,E |
| 77 | 28-9 | 12 | - | - | - | 6 | 6 | D |
| 78 | 28-10 | 7 | - | 2 | 2 | 3 | - | A,D |
| 79 | 28-11 | 22 | - | - | - | 4 | 18 | A |
| 80 | 28-12 | 26 | - | - | - | - | 26 | A |
| 81 | 28-13 | 26 | - | - | - | - | 26 | A |
| 82 | 28-15 | 35 | - | - | - | - | 35 | A |
| 83 | 28-16 | 20 | - | - | - | - | 20 | A |
| 84 | 28L-16 | 9 | - | 4 | - | - | 5 | A |
| 85 | 28-18 | 12 | - | - | - | - | 12 | A,C,D.INST |
| 86 | 28-19 | 10 | - | - | - | 4 | 6 | A,B,D |
| 87 | 28-20 | 14 | - | - | - | 10 | 4 | A |
| 88 | 28-21 | 37 | - | - | - | - | 37 | A |
| 89 | 28-22 | 6 | - | 3 | - | - | 3 | D |
| 90 | 28L-51 | 43 | - | - | - | - | 43 | A |
| 91 | 28L-61 | 16 | - | - | - | 16 | - | A |
| 92 | 32-3 | 9 | 1 | 2 | - | 2 | 4 | D |
| 93 | 32-4 | 14 | - | - | - | 2 | 12 | A,D |
| 94 | 32-5 | 2 | 2 | - | - | - | - | D |
| 95 | 32-6 | 23 | - | 2 | 3 | 2 | 16 | A |
| 96 | 32-7 | 35 | - | - | - | 7 | 28 | A,INST |
| 97 | 32-8 | 30 | - | - | - | 6 | 24 | A |
| 98 | 32-9 | 14 | - | 2 | - | - | 12 | D |
| 99 | 32L-10 | 54 | - | - | - | - | 54 | A |
| 100 | 32-17 | 4 | - | 4 | - | - | - | D |
| 101 | 32L-68 | 16 | - | 4 | - | - | 12 | A |
| 102 | 36-5 | 4 | 4 | - | - | - | - | A |
| 103 | 36-9 | 31 | - | 1 | 2 | 14 | 14 | A |
| 104 | 36-10 | 48 | - | - | - | - | 48 | A |
| 105 | 36-14 | 16 | - | - | 5 | 5 | 6 | D |
| 106 | 36-15 | 35 | - | - | - | - | 35 | A,D |
| 107 | 36L-34 | 52 | - | - | - | - | 52 | A |
| 108 | 36L-46 | 27 | - | - | - | 27 | - | A |
| 109 | 36-52 | 52 | - | - | - | - | 52 | A |

*Shell size 40 available - Contact Factory*

* *CONSULT FACTORY BEFORE ORDERING*

- *SPECIAL INSERT ARRANGEMENTS ALSO AVAILABLE,*
- *Shell sizes 12S & 44 for RANGE MS ONLY.*

## GENERAL SPECIFICATION

| | |
|---|---|
| Shell Housing | Aluminium alloy |
| Plating | Olive drab chromate conversion over Cadmium |
| Insulator | Polychloroprene |
| Contact Material | Copper base alloy - Silver plated |
| Operating Temperature | - 55° C to +125° C |
| Insulation Resistance | Min. 5000 Meg Ohms at 500 VDC |
| Current rating | 10 to 150 Amps. (Depends on contact arrangement ) |
| Working voltage | 200 to 3000 VAC rms ( Depends on contact arrangement ) |
| Wire termination | Solder type |

## SERVICE RATING

| | INST | A | D | E | B | C |
|---|---|---|---|---|---|---|
| Test Voltage at Sea level AC rms | 1000 | 2000 | 2800 | 3500 | 4500 | 7000 |
| Rated working Voltage - DC | 250 | 700 | 1250 | 1750 | 2450 | 4200 |
| At sea level AC rms | 200 | 500 | 900 | 1250 | 1750 | 3000 |
| Effective creepage-(nom. mm) | 1.57 | 3.18 | 4.75 | 6.35 | 7.92 | 25.40 |
| Mechanical spacing-(nom. mm) | - | 1.57 | 3.18 | 4.75 | 6.35 | 7.92 |

## CONTACT RATING

| CONTACT SIZE | 16 | 12 | 8 | 4 | 0 |
|---|---|---|---|---|---|
| Max test current - Amps | 22 | 41 | 73 | 135 | 245 |
| Rated current - Amps | 13 | 23 | 46 | 80 | 150 |

## ORDERING INFORMATION

### CONNECTORS

Example: **MG 02R 28-21 P W GP XX**

**SERIES PREFIX**
For reverse bayonet coupling connectors

**SHELL STYLES**
00T - Box mounting Receptacle with rear accessory thread
00F - As 00T with cable clamp
01F - Cable Extension connector
02R - Box Mounting receptacle
06F - Cable connector straight
08F - Cable connector angular
06V - As 06F but with arctic grip coupling nut
08V - As 08F but with arctic grip coupling nut
TBF - Bulkhead receptacle

**INSERT NUMBER**
Consist of Shell Size 10SL, 14S, 16S,16 18,20,22,24,28,32,36
Contact arrangement code number as per MIL-C-5015
See Insert Specifications

**CONTACT TYPE**
P - Pin (male contact)
S - Socket (female contact)

**ALTERNATE INSERT POSITION**
(omit for standard position)
W, X, Y OR Z for alternate position depending on insert

**FINISH (omit for standard)**
GP - Flash Gold plated contacts solder only
EN - Electroless nickel plated shell
NI - Nickel plated shell

**MODIFICATION (Omit for standard)**
B-05 Box mounting receptacle for rear mounting (Applies to type MG 02R only)
A-30 Crimp contacts-Silver plated
C-30 Crimp contacts-flash Gold plated-available in selected sizes
(contact sales department for details)
TH - Threaded mounting holes (Applies to receptacles only)
211 - Less backshell grommet & follower
PMC - Pre mating contact
For other modification requirements contact Factory.

### PROTECTIVE CAPS

Example: **MG XX XX CC**

**SERIES PREFIX**
for reverse bayonet coupling connector

**SHELL STYLE**
02 - Receptacle
06 - Cable connectors

**ACCESSORY TYPE**
Cap and chain

**SHELL SIZE**
10SL,14S,16S,16,18,20,22,24,28,32,36