

MILITARY SPECIFICATION SHEET

Ⓒ CONNECTORS, FIBER OPTIC, CIRCULAR, RECEPTACLE STYLE,
 MULTIPLE REMOVABLE TERMINI, SCREW THREADS,
 WALL MOUNTING, WITH 90° STRAIN RELIEF, ENVIRONMENT RESISTING

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring fiber optic connectors described herein shall consist of this specification and the latest issue of MIL-C-28876.

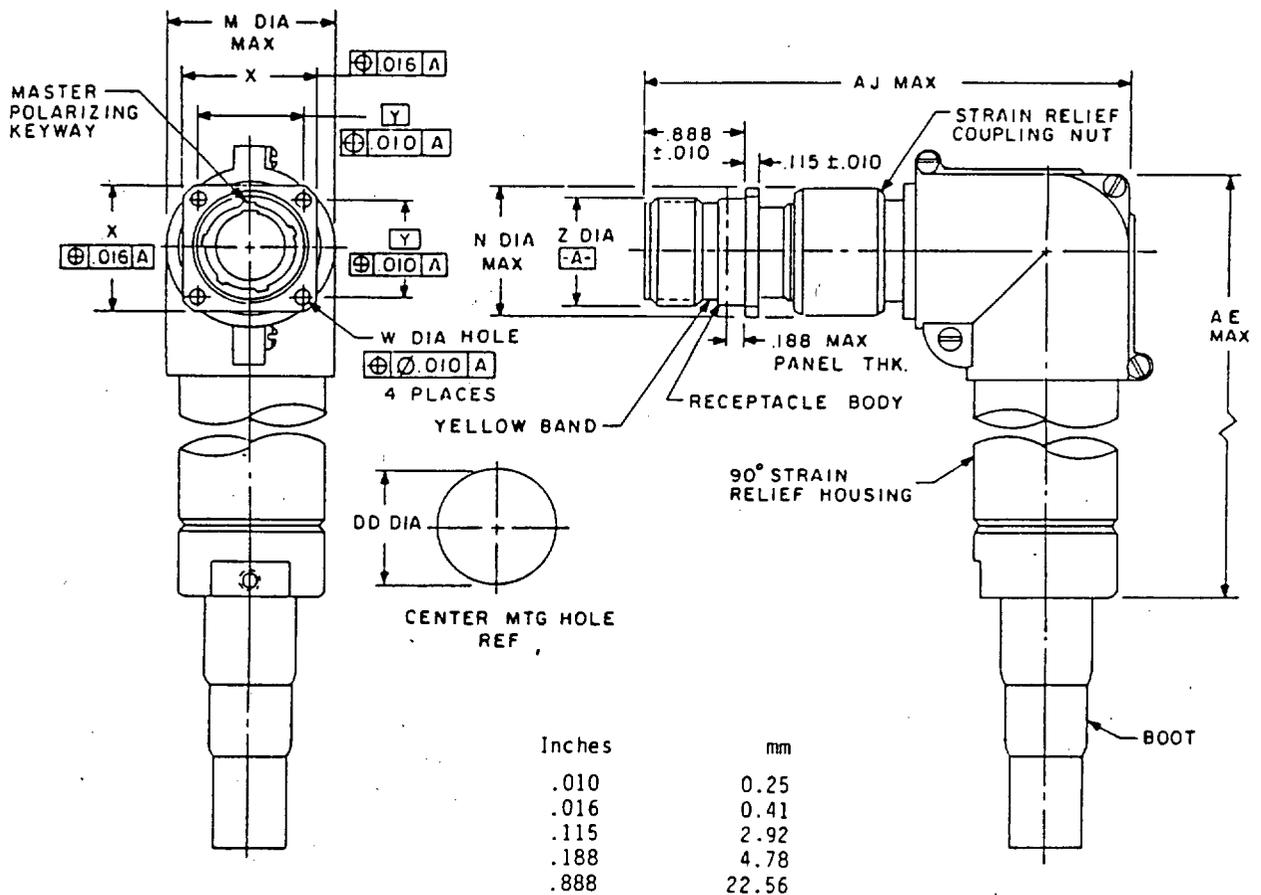


FIGURE 1. Receptacle connector with 90° backshell strain relief.

Ⓒ denotes changes

| Shell size | N dia max | W | X | Y | Z dia max | M dia max | AE max | AJ max | DD dia ref | For insert arrangement MIL-STD-2163 Figure | Color band EIA RS359 |
|------------|------------------|----------------|------------------|-----------------|------------------|------------------|-------------------|-------------------|------------------|--|----------------------|
| 11 | .960 (24.38) | .130 (3.30) | 1.043 (26.49) | .750 (19.05) | .750 (19.05) | 1.050 (26.67) | 4.250 (107.95) | 4.250 (107.95) | .812 (20.62) | 1 | Yellow |
| | | .115 (2.92) | 1.001 (25.43) | | | | | | | | |
| 13 | 1.085 (27.55) | .130 (3.30) | 1.158 (29.41) | .843 (21.41) | .875 (22.22) | 1.050 (26.67) | 4.250 (107.95) | 4.250 (107.95) | .937 (23.80) | 2 | Yellow |
| | | .115 (2.92) | 1.116 (28.35) | | | | | | | | |
| 15 | 1.255 (31.88) | .130 (3.30) | 1.278 (32.46) | .968 (24.59) | 1.062 (26.97) | 1.550 (39.37) | 4.500 (114.30) | 4.500 (114.30) | 1.124 (28.55) | 3 | Yellow |
| | | .115 (2.92) | 1.236 (31.39) | | | | | | | | |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Dimensions apply after plating.
4. Metric equivalents (mm) are in parentheses.

FIGURE 1. Receptacle connector with 90° backshell strain relief - Continued.

REQUIREMENTS:

Dimensions and configurations: See figure 1 and MIL-C-28876, figures 4 and 8.

Ⓒ Weight:

| Shell size | Weight (ounces) |
|------------|-----------------|
| 11 | 9.5 |
| 13 | 11.5 |
| 15 | 14.5 |

Ⓒ Fiber optic cable:

Cable diameter: In accordance with DOD-C-85045/2 and DOD-C-85045/6.

Cable configuration: In accordance with DOD-C-85045/2 and DOD-C-85045/6.

Fiber diameter: In accordance with DOD-F-49291/3 and DOD-F-49291/4.

Fiber numerical aperture:

DOD-F-49291/3: 0.23 ±0.02 at 850 nanometers.

DOD-F-49291/4: 0.29 ±0.02 at 850 nanometers.

Fiber type: Multimode.

Fiber class: Graded index.

Insert arrangement: See MIL-STD-2163 for desired shell size.

Ⓒ Termini: Style P (pin) or S (socket). See MIL-T-29504/1 and MIL-T-29504/2. (For dummy terminus see MIL-T-29504/3.)

Ⓒ Cleaning procedures: Dampen lens tissue (paper wipe or cotton swab) with a small amount of isopropyl alcohol (minimum 90 percent strength). Gently wipe the face of the connector, removing any debris, particularly around the optical fiber, using clean lint-free lens tissue (paper wipe, cotton swab). Carefully dry the contact with a clean, dry, lint-free tissue.

Shell polarization: 1 through 6 keyway positions. See MIL-C-28876, figure 5.

Marking:

Part number: Marked on flange of receptacle (see table I).

| Basic part number | M28876/4 | B | 1 | 2 | P | 1 | Keying position number |
|------------------------------|----------|---|---|---|---|---|------------------------|
| Shell size designator letter | | | | | | | Terminus style letter |
| Insert arrangement number | | | | | | | Backshell dash number |

Ⓒ TABLE I. Part number designators.

| Shell size | Designator | Insert arrangement number | Termini | Key position | Maximum cable outer diameter, backshell number | | |
|------------|------------|---------------------------|---------|---------------------|--|-------------|-------------|
| | | | | | 1 | 2 | 3 |
| 11 | A | 1 | P or S | 1, 2, 3, 4, 5, or 6 | .250 (6.35) | | |
| 13 | B | 1 | P or S | 1, 2, 3, 4, 5, or 6 | .285 (7.24) | | |
| 15 | C | 1 or 2 | P or S | 1, 2, 3, 4, 5, or 6 | .515 (13.08) | .256 (6.50) | .375 (9.53) |

Mating counterpart: Plug connectors specified in MIL-C-28876/6 through MIL-C-28876/9.

Installation and removal tools: As specified in MIL-I-81969/46 through MIL-I-81969/49 and MIL-T-83523/5 through MIL-T-83523/8.

- Ⓒ Qualified products listing, quality conformance, and periodic inspections: The following cables shall be used for qualified products listing, quality conformance, and periodic inspections:

| <u>Shell size</u> | <u>Cables</u> |
|-------------------|--|
| A | D85045/2-B2A or Siecor part number 277-R, 2-channel, 50 micron core, 125 clad, or equal. |
| B | D85045/2-C4A or Siecor part number 477-R, 4-channel, 100 micron core, 140 clad, or equal. |
| C | D85045/6-C8B or Belden part number 229626, 8-channel, 100 micron core, 140 clad, or equal. |

- Ⓒ For qualified products listing, quality conformance, and periodic inspections, dummy termini shall be used in all unused cavities.

Patent notice: The Government does not have a royalty-free license under the following patents for the benefit of manufacturers of the item, either for the Government or for use in equipment to be delivered to the Government:

| <u>Patent no.</u> | <u>Patent expiration date</u> |
|-------------------|-------------------------------|
| US 65,032 | 11/17/2004 |
| US 260,660 | 1/8/2002 |
| US 376,866 | 2/12/2002 |
| US 403,446 | 1/15/2002 |
| US 751,204 | 2/7/2002 |
| US 4,330,965 | 5/25/1999 |

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85

Preparing activity:

Navy - EC

Agent:

DLA - ES

Review activities:

Army - MI
Navy - AS, MC, SH
Air Force - 11, 17, 19, 80, 90, 99
NASA - NA
DLA - ES

(Project 6060-0066-4)

User activities:

Navy - OS, YD
Air Force - 13, 14