

MILITARY SPECIFICATION SHEET

CONNECTORS, FIBER OPTIC, CIRCULAR, PLUG AND RECEPTACLE STYLE,  
MULTIPLE REMOVABLE TERMINI, 45° BACKSHELL, SCREW THREADS,  
WITH STRAIN RELIEF, ENVIRONMENT RESISTING

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

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

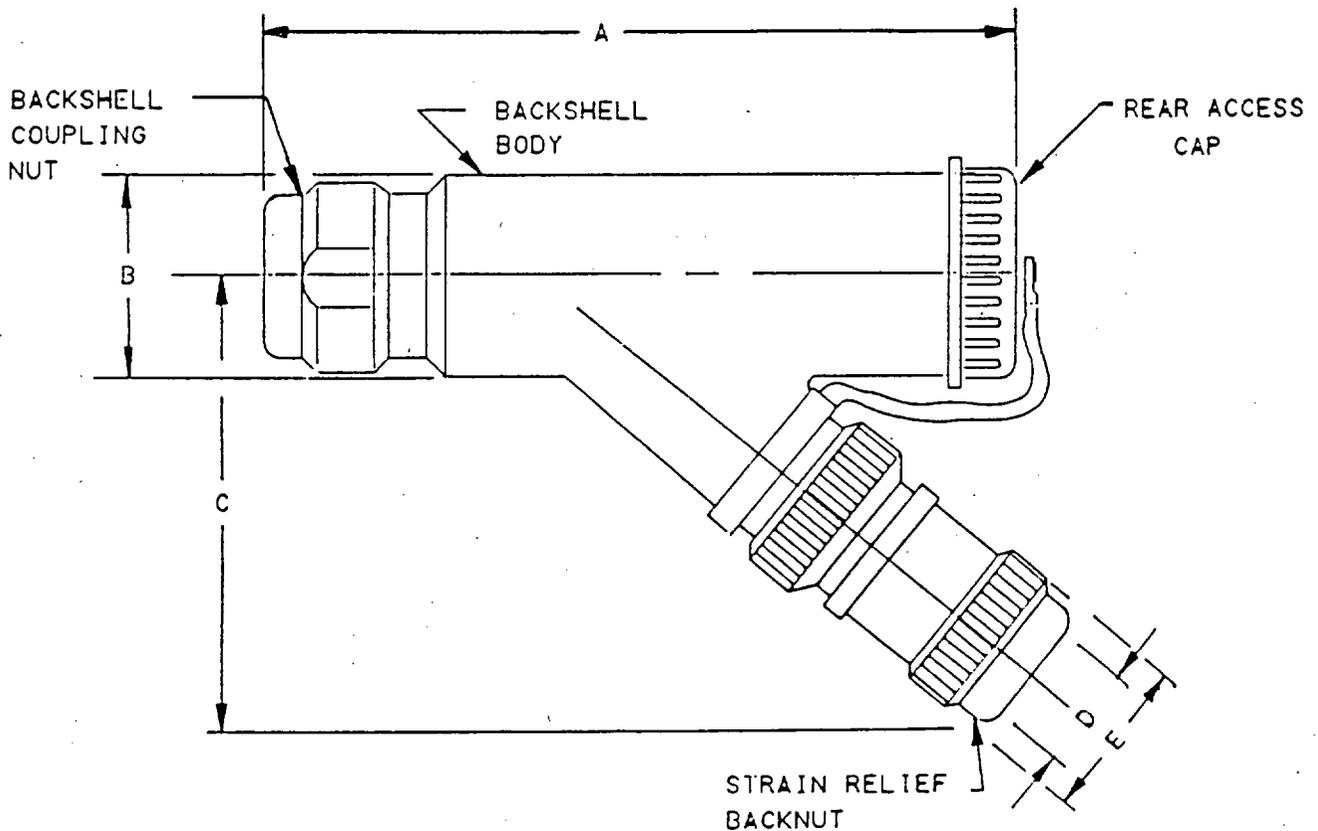


FIGURE 1. Backshell with strain relief.

ⓑ denotes changes

Shell size	Dimension A maximum	Dimension B diameter maximum	Dimension C maximum	Dimension D Cable range O.D.	Dimension E diameter maximum
11	5.7 (145.)	1.031 (26.19)	2.963 (75.26)	See table I	See table I
13	5.7 (145.)	1.150 (29.21)	3.011 (76.48)	See table I	See table I
15	5.7 (145.)	1.262 (32.05)	3.062 (77.77)	See table I	See table I

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are in parentheses.
3. Metric equivalents are given for general information only.
4. Dimensions apply after plating.
5. For mating key dimensions, see figure 9 of MIL-C-28876.
6. Each backshell shall be legibly and permanently marked in accordance with MIL-STD-130.

FIGURE 1. Backshell with strain relief - Continued.

## REQUIREMENTS:

Dimensions and configurations: See figure 1 herein and figure 9 of MIL-C-28876.

ⓑ Weight: 6.4 ounces, maximum.

## Material:

Aluminum alloy: In accordance with QQ-A-225 or QQ-A-591.

Stainless steel: In accordance with type 303, QQ-S-763.

Silicone rubber: In accordance with ZZ-R-765.

Brass: In accordance with QQ-B-626.

ⓑ 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.

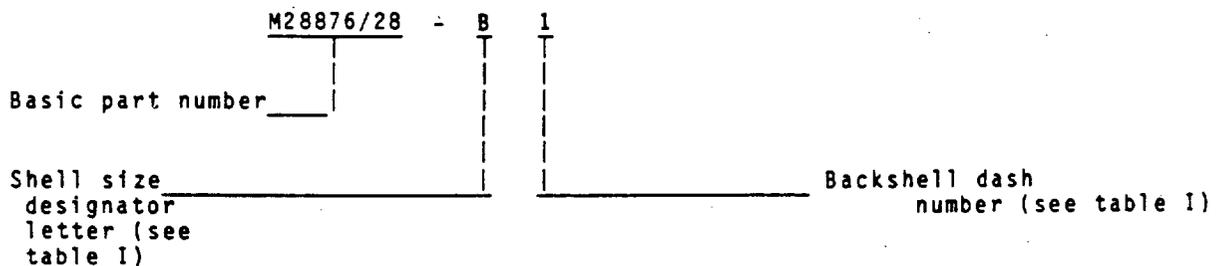
DOD-F-49291/4: 0.29 ±0.02 at 850 nanometers.

Fiber type: Multimode.

Fiber class: Graded index.

ⓑ 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.

Part number: The part number shall be marked on coupling nut of backshell. The part number shall consist of the prefix "M28876/28-" and a dash number from table I.



(B) TABLE I. Part number designators.

Shell size	Designator	Cable diameter backshell dash number <u>1/</u>			
		1		2	
		Dim. D	Dim. E	Dim. D	Dim. E
11	A	.250 (6.35) .240 (6.09)	.800 (20.32)		
13	B	.300 (7.62) .290 (7.36)	.925 (23.49)		
15	C	.515 (13.08) .495 (12.57)	1.06 (26.92)	.415 (10.75) .375 (9.52)	.925 (23.49)

1/ Cable shall be in accordance with the performance requirements of DOD-C-85045.

Mating counterpart: Backshell mates with MIL-C-28876/1 receptacle, MIL-C-28876/6 plug, and MIL-C-28876/11 receptacle.

Installation and removal tools: Adjustable or 1.25 inches open end wrench, strap wrench and scissors.

- (B) Qualification: The following cable shall be in accordance with the performance requirements of DOD-C-85045 and shall be used for qualified products listing, qualification, periodic inspection, and quality conformance inspection. Qualification of shell size 15 also qualifies shell sizes 11 and 13 provided six sample units of each size are tested to size and mass requirement paragraphs to verify dimensional and mass requirements.

Shell size

15

Cable

D85045/2-C1AS or Raychem P/N  
P400F/001-100/140-8-11 (or equivalent)

## CONCLUDING MATERIAL

## Custodians:

Army - CR  
Navy - EC  
Air Force - 85

## Review activities:

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

## User activities:

Navy - OS, YD  
Air Force - 13, 14

## Preparing activity:

Navy - EC

## Agent:

DLA - ES

(Project 6060-0066-16)