QPC FIBER OPTIC

Q38 Connectors & Q38Shell Backshells



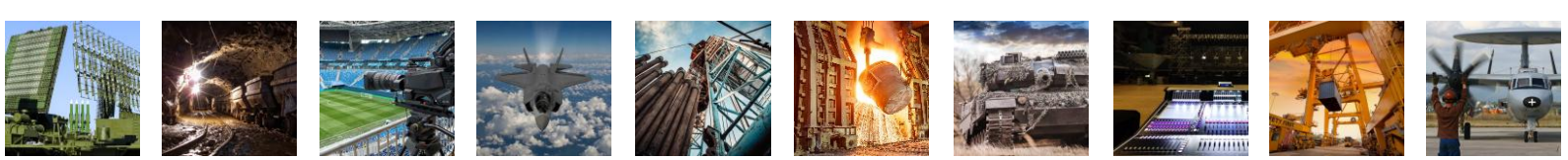
MADE IN THE U.S.A

Proudly Designed, Manufactured & Assembled in the USA

AS9100D CERTIFIED ISO 9001:2015

QPC is ISO 9001:2015 and AS9100D Certified

Military Aerospace Defense Industrial Oil & Gas Mining Energy Marine Entertainment Audio Broadcast



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Q38 Connectors & Q38Shell Backshells

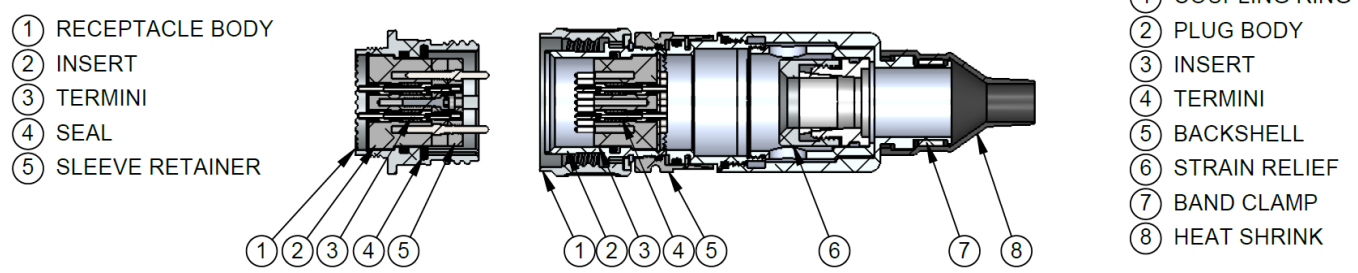


QPC's Q38 Connector System utilizes the proven shell technology from the widely used Military Specified (Mil-Spec) D38999 Connectors combined with three variations of custom inserts to improve channel density and to offer expanded beam connectivity. The Q38HD uses a High Density physical contact genderless termini that is smaller than the traditional M29504/4 & M29504/5 to support more discrete channels in a given shell size. Q38HD also features a removable Alignment Sleeve Retainer (ASR) that can be installed in either the Plug or Receptacle. The Q38MT offers even higher density by using MT Termini that can hold 12 or 24 fibers each. The Q38EB incorporates QPC's popular QMicro and QMini inserts for Expanded Beam functionality. Q38 Connectors have industry standard rear accessory threads, so they are compatible with standard backshells, cable clamps, and other existing hardware. QPC can customize inserts to accommodate hybrid (Fiber / Copper) designs and to produce special layouts.

QPC's Q38Shell Backshells compliment the Q38 Connector System with Strain Relief and Cable Exit Options designed specifically for use with fiber optic cable. Optional Q38DC Dustcovers complete the product line. A variety of materials and finishes are available across the entire Q38 Product Line for use in many types of harsh environments. Q38Shell Backshells and Q38DC Dustcovers are designed to be compatible with Mil-Spec D38999 Connectors available from other manufacturers.

Q38 Connectors, Q38Shell Backshells, and Q38DC Dustcovers are used in Military, Aerospace, and Defense for Communications, Audio / Video, and Sensing Applications.

- Q38HD: 4Ch (Shell Size 11) / 20Ch (Shell Size 17) / 28Ch (Shell Size 19) / 48Ch (Shell Size 23)
- Q38EB: 4Ch (1x QMicro in Shell Size 11) / 4Ch (1x QMini in Shell Size 13) / 12Ch (3x QMicro in Shell Size 23)
- Q38MT (QPC Standard): 12/24Ch (1x MT in Shell Size 15) / 24/48Ch (2x MT in Shell Size 17) / 48/96Ch (4x MT in Shell Size 21)
- Q38MT (VITA 87 Style): 12/24Ch (1x MT in Shell Size 11) / 24/48Ch (2x MT in Shell Size 13) / 48/96Ch (4x MT in Shell Size 15)
- Plugs: With Triple Start Threads, Ratcheting Coupling Rings, D38999 Standard Rear Accessory Threads
- Receptacles: Flange Mount and Jam Nut, D38999 Standard Rear Accessory Threads
- Q38Shell Backshells: Straight, 45°, and 90° Backshells with or without Wedge Strain Reliefs, equipped with Heat Shrink, Heat Shrink with Band Clamp, Gland, or Gland with Bend Limiter Cable Exit Options, supporting Cable ODs from 3.6mm to 17.5mm
- Q38DC Dustcovers: Sealed Dustcovers for Q38 Connectors with Crimp, Ring, and Eyelet Attachments
- Sealed to IP68



Specifications:

	Q38HD 1.25mm Termini	Q38EB Expanded Beam	Q38MT MT Termini
Insertion Loss: SM (9/125µm)	0.10-1.0dB Max.	0.75-2.0dB Max.	0.35-1.0dB Max.
MM (50/125µm)	0.50-1.0dB Max.	0.75-1.5dB Max.	0.35-1.0dB Max.
MM (62.5/125µm)	0.50-1.0dB Max.	0.75-1.5dB Max.	0.35-1.0dB Max.
Return Loss: SM (9/125µm)	-55dB	-34dB	-60dB
Operating Temperature:	-46°C to +85°C	-46°C to +85°C	-40°C to +75°C
Vibration:	10 to 2000Hz / 10g, EIA/TIA-455-11, Condition III and 10 to 2000Hz / 20g / 9g RMS Avg, EIA/TIA-455-11, Condition IV		10 to 55Hz EIA/TIA-455-11, Cond. I
Mating Durability:	500 Cycles		
Impact:	8 Impacts @ 8FT (2.5MT), EIA/TIA-455-2		
Shock:	50g for 11ms, EIA/TIA-455-14, Condition A		
IP Rating:	IP68 - Dust Tight, No ingress of dust, complete protection against contact, Water Immersion, 1m Testing Conditions & Duration – Plug with Dust Cover and Mated Plug / Receptacle, 3 Meters for 24 Hours		
Material & Plating Specifications:	Electroless Nickel: 6061-T6 Aluminum, Electroless Nickel per ASTM B733, .0006"/.0003" Thick Black Hard Anodize: 6061-T6 Aluminum, Anodize per MIL-A-8625 Type III Class 2, .0022"/.0018" Thick, 50% Penetration, Black Stainless Steel: 303 Stainless Steel, Passivate Per QQ-P-35 Black Zinc-Nickel: 6061-T6 Aluminum, Zinc-Nickel Followed by Black Chromate per AMS-2417 Electroless Nickel Plate .0003" to .00035" Thickness as per AMS-C-26074 Alkaline Zinc-Nickel Plate .0003" to .0004" Thickness as per AMS 2417 "H" TY 2 Zinc Strike - .00005" - .00015" Thickness per ASTM B 633 "11" Black Chromate Marine Bronze: Aluminum Nickel Bronze per C63000; No Finish; Bronze Tin Zinc over Electroless Nickel: 6061-T6 Aluminum, Tin Zinc Alloy per MIL-DTL-38999 spec, Class V, 500hr Salt Spray in accordance with SAE-AMS2434, Type 2, Grade A or B, 65-90 Percent Tin and 10-35 Percent Zinc .0005" Minimum Thickness, Over Electroless Nickel per SAE AMS 2404, .0005" Minimum Thickness. Olive Drab Zinc-Nickel: 6061-T6 Aluminum, Zinc-Nickel Followed by Olive Drab Chromate per AMS-2417 Electroless Nickel Plate .0003" to .00035" Thickness as per AMS-C-26074 Alkaline Zinc-Nickel Plate .0003" to .0004" Thickness as per AMS 2417 "H" TY 2 Zinc Strike - .00005" - .00015" Thickness per ASTM B 633 "11" Dark Green Olive Drab Chromate		
Cable Retention:	400 lbs (1780 N)[1]		

Specifications Notes:

[1] Cable retention depends on Cable Type and Strain Relief Option Selected

* All Dimensions in this document are shown in Inches (Millimeters)

Part Number Builder, Q38HD Plugs and Receptacles:

Sample Part Number: Q38HD-PGE-17A4-N	Q38HD	-	PG	E	-	17	A4	-	N

1 Series
Q38HD - Q38 HIGH DENSITY

2 Product Type
PG - PLUG, D38999/26 STYLE
RF - RECEPTACLE, FLANGE MOUNT, D38999/20 STYLE
RJ - RECEPTACLE, JAM NUT, D38999/24 STYLE

3 Material & Finish Code
E - ALUMINUM, ELECTROLESS NICKEL
N - ALUMINUM, HARD ANODIZE, BLACK
S - STAINLESS STEEL, PASSIVATED
K - ALUMINUM, ZINC OVER NICKEL, BLACK
Q - ALUMINUM, TIN ZINC OVER ELECTROLESS NICKEL, GRAY
W - ALUMINUM NICKEL BRONZE PER C63000, NO FINISH, BRONZE
Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB
(CONSULT QPC FOR OTHER OPTIONS)

4 Shell Size
11 - SHELL SIZE 11
17 - SHELL SIZE 17
19 - SHELL SIZE 19
23 - SHELL SIZE 23

5 Insert Layout
A1 - Q38HD, SHELL SIZE 11, 4x HD TERMINI
A4 - Q38HD, SHELL SIZE 17, 20x HD TERMINI
A5 - Q38HD, SHELL SIZE 19, 28x HD TERMINI
A7 - Q38HD, SHELL SIZE 23, 48x HD TERMINI
XX - CUSTOM INSERT LAYOUT
B1 - Q38HD, SHELL SIZE 11, 4x HD TERMINI, WITH ASR
B4 - Q38HD, SHELL SIZE 17, 20x HD TERMINI, WITH ASR
B5 - Q38HD, SHELL SIZE 19, 28x HD TERMINI, WITH ASR
B7 - Q38HD, SHELL SIZE 23, 48x HD TERMINI, WITH ASR

6 Key
A - ALTERNATE KEY POSITION A
B - ALTERNATE KEY POSITION B
C - ALTERNATE KEY POSITION C
D - ALTERNATE KEY POSITION D
E - ALTERNATE KEY POSITION E
N - NORMAL KEYING
U - UNIVERSAL KEYING

Part Number Builder Notes:

* For all Q38 Connectors order Termini, Backshells, and Dust Covers Separately
* For Q38HD, Alignment Sleeve Retainers (ASR's) can be installed in either the Plug or Receptacle and channel numbers will be marked accordingly
* For All Aluminum Q38 Connectors the Inserts and ASRs (if applicable) will be Aluminum, Hard Anodize, Black. For all other Material / Finishes, the Inserts and ASRs (if applicable) will be the same Material / Finish as the Connector Shell
* See for Page 11 for Q38HD Insert Layout Details
* See Page 20 for Key Layout Details

Part Number Builder, Q38EB Plugs and Receptacles:

Sample Part Number: Q38EB-PGE-13E2-N	Q38EB	-	PG	E	-	13	E2	-	N

1 Series
Q38EB - Q38 EXPANDED BEAM

2 Product Type
PG - PLUG, D38999/26 STYLE
RF - RECEPTACLE, FLANGE MOUNT, D38999/20 STYLE
RJ - RECEPTACLE, JAM NUT, D38999/24 STYLE

3 Material & Finish Code
E - ALUMINUM, ELECTROLESS NICKEL
N - ALUMINUM, HARD ANODIZE, BLACK
S - STAINLESS STEEL, PASSIVATED
K - ALUMINUM, ZINC OVER NICKEL, BLACK
Q - ALUMINUM, TIN ZINC OVER ELECTROLESS NICKEL, GRAY
W - ALUMINUM NICKEL BRONZE PER C63000, NO FINISH, BRONZE
Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB
(CONSULT QPC FOR OTHER OPTIONS)

4 Shell Size
11 - SHELL SIZE 11
13 - SHELL SIZE 13
23 - SHELL SIZE 23

5 Insert Layout
E1 - Q38EB, SHELL SIZE 11, 1x QMICRO INSERT
E2 - Q38EB, SHELL SIZE 13, 1x QMINI INSERT
E7 - Q38EB, SHELL SIZE 23, 3x QMICRO INSERTS
XX - CUSTOM INSERT LAYOUT

6 Key
A - ALTERNATE KEY POSITION A
B - ALTERNATE KEY POSITION B
C - ALTERNATE KEY POSITION C
D - ALTERNATE KEY POSITION D
E - ALTERNATE KEY POSITION E
N - NORMAL KEYING
U - UNIVERSAL KEYING

Part Number Builder Notes:

* For all Q38 Connectors order Termini, Backshells, and Dust Covers Separately
* For All Aluminum Q38 Connectors the Insert Retainer (Shell Size 23 Only) will be Aluminum, Hard Anodize, Black. For all other Material / Finishes, the Insert Retainer (Shell Size 23 Only) will be the same Material / Finish as the Connector Shell
* See for Page 15 for Q38EB Insert Layout Details
* See Page 20 for Key Layout Details

Part Number Builder, Q38MT Plugs and Receptacles:

Sample Part Number: Q38MT-PGE-15V3-N	Q38MT	-	PG	E	-	15	V3	-	N

1 Series
Q38MT - Q38 MT TERMINI

2 Product Type
PG - PLUG, D38999/26 STYLE
RF - RECEPTACLE, FLANGE MOUNT, D38999/20 STYLE
RJ - RECEPTACLE, JAM NUT, D38999/24 STYLE

3 Material & Finish Code
E - ALUMINUM, ELECTROLESS NICKEL
N - ALUMINUM, HARD ANODIZE, BLACK
S - STAINLESS STEEL, PASSIVATED
K - ALUMINUM, ZINC OVER NICKEL, BLACK
Q - ALUMINUM, TIN ZINC OVER ELECTROLESS NICKEL, GRAY
W - ALUMINUM NICKEL BRONZE PER C63000, NO FINISH, BRONZE
Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB
(CONSULT QPC FOR OTHER OPTIONS)

4 Shell Size
11 - SHELL SIZE 11
13 - SHELL SIZE 13
15 - SHELL SIZE 15
17 - SHELL SIZE 17
21 - SHELL SIZE 21

5 Insert Layout
G3 - Q38MT, SHELL SIZE 15, 1x MT PIN TERMINUS
G4 - Q38MT, SHELL SIZE 17, 2x MT PIN TERMINI
G6 - Q38MT, SHELL SIZE 21, 4x MT PIN TERMINI
V1 - Q38MT, SHELL SIZE 11, 1x MT PIN TERMINUS
V2 - Q38MT, SHELL SIZE 13, 2x MT PIN TERMINI
V3 - Q38MT, SHELL SIZE 15, 4x MT PIN TERMINI
V4 - Q38MT, SHELL SIZE 11, 1x MT PIN TERMINUS
V5 - Q38MT, SHELL SIZE 13, 2x MT PIN TERMINI
V6 - Q38MT, SHELL SIZE 15, 4x MT PIN TERMINI
XX - CUSTOM INSERT LAYOUT
H3 - Q38MT, SHELL SIZE 15, 1x MT SOCKET TERMINUS
H4 - Q38MT, SHELL SIZE 17, 2x MT SOCKET TERMINI
H6 - Q38MT, SHELL SIZE 21, 4x MT SOCKET TERMINI
W1 - Q38MT, SHELL SIZE 11, 1x MT SOCKET TERMINUS
W2 - Q38MT, SHELL SIZE 13, 2x MT SOCKET TERMINI
W3 - Q38MT, SHELL SIZE 15, 4x MT SOCKET TERMINI
W4 - Q38MT, SHELL SIZE 11, 1x MT SOCKET TERMINUS
W5 - Q38MT, SHELL SIZE 13, 2x MT SOCKET TERMINI
W6 - Q38MT, SHELL SIZE 15, 4x MT SOCKET TERMINI

6 Key
A - ALTERNATE KEY POSITION A
B - ALTERNATE KEY POSITION B
C - ALTERNATE KEY POSITION C
D - ALTERNATE KEY POSITION D
E - ALTERNATE KEY POSITION E
N - NORMAL KEYING
U - UNIVERSAL KEYING

Part Number Builder Notes:

* For all Q38 Connectors order Termini, Backshells, and Dust Covers Separately
* For All Aluminum Q38 Connectors the Inserts will be Aluminum, Hard Anodize, Black. For all other Material / Finishes, the Inserts will be the same Material / Finish as the Connector Shell
* Insert Layouts V1/W1 to V3/W3 are Aligned with the Main Keyway (Normal), Insert Layouts V4/W4 to V6/W6 are Clocked at 45° from the Main Keyway
* See for Page 19 for Q38MT Insert Layout Details
* See Page 20 for Key Layout Details

Part Number Builder, Backshells Q38 Plugs and Receptacles:

Sample Part Number: Q38SHELL-STE-17-S065-HS	Q38SHELL	-	ST	E	-	17	-	S	065	-	HS

1 Series
Q38SHELL - D38999 COMPATIBLE BACKSHELL
Q38EBSHELL - Q38EB BACKSHELL

2 Type
ST - STRAIGHT
45 - 45 DEGREE
90 - 90 DEGREE

3 Material & Finish Code
E - ALUMINUM, ELECTROLESS NICKEL
N - ALUMINUM, HARD ANODIZE, BLACK
S - STAINLESS STEEL, PASSIVATED
K - ALUMINUM, ZINC OVER NICKEL, BLACK
Q - ALUMINUM, TIN ZINC OVER ELECTROLESS NICKEL, GRAY
W - ALUMINUM NICKEL BRONZE PER C63000, NO FINISH, BRONZE
Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB
(CONSULT QPC FOR OTHER OPTIONS)

4 Shell Size
11 - SHELL SIZE 11
13 - SHELL SIZE 13
15 - SHELL SIZE 15
17 - SHELL SIZE 17
19 - SHELL SIZE 19
21 - SHELL SIZE 21
23 - SHELL SIZE 23
25 - SHELL SIZE 25

5 Strain Relief Type
S - WEDGE STYLE STRAIN RELIEF
N - NO STRAIN RELIEF

6 Cable / Conduit Outside Diameter (OD) Identifier
See Table I

7 Cable Exit
HS - HEAT SHRINK SEAL / CABLE EXIT
HC - HEAT SHRINK WITH BAND CLAMP SEAL / CABLE EXIT
GL - GLAND SEAL / CABLE EXIT
GB - GLAND WITH BEND LIMITER SEAL / CABLE EXIT

Part Number Builder Notes:

* Q38Shell Backshells have standard length Backshell Coupling Rings and are designed to work with the standard accessory threads on Q38HD / Q38MT Connectors as well as on industry standard D38999 Style Connectors
* Q38EBShell Backshells have longer Backshell Coupling Rings and are designed to work with the longer accessory threads on the Q38EB Connectors
* If Q38Shell / Q38EBShell Backshells are used on Flange Mount (RF) Receptacles that will be Panel Mounted, they must be Internally Mounted
* Q38Shell / Q38EBShell Backshells using Heat Shrink Cable Exits (Cable Exit Options "HS" and "HC") include a Heat Shrink Boot and also include an additional piece of Adhesive Lined Heat Shrink to Build up the Cable Diameter for OD Identifiers 045, 055, and 065, see Page 51 for more information
* Q38Shell / Q38EBShell Backshells using Heat Shrink with Band Clamp Cable Exits (Cable Exit Option "HC") include a Band Clamp in addition to the Heat Shrink outlined above, see Page 52 for more information

Part Number Builder, Dust Covers Q38 Plugs and Receptacles:

Sample Part Number: Q38DC-PGE-17	Q38DC	-	PG	E	-	17

1 Series
Q38DC - D38999 COMPATIBLE DUST COVERS

2 Product Type
PG - PLUG, D38999/32 STYLE, CRIMP ATTACHMENT
PR - PLUG, D38999/32 STYLE, RING ATTACHMENT
RF - RECEPTACLE, FLANGE MOUNT, D38999/33 STYLE, EYELET ATTACHMENT
RJ - RECEPTACLE, JAM NUT, D38999/33 STYLE, RING ATTACHMENT

3 Material & Finish Code
E - ALUMINUM, ELECTROLESS NICKEL
N - ALUMINUM, HARD ANODIZE, BLACK
S - STAINLESS STEEL, PASSIVATED
K - ALUMINUM, ZINC OVER NICKEL, BLACK
Q - ALUMINUM, TIN ZINC OVER ELECTROLESS NICKEL, GRAY
W - ALUMINUM NICKEL BRONZE PER C63000, NO FINISH, BRONZE
Z - ALUMINUM, ZINC OVER NICKEL, OLIVE DRAB
(CONSULT QPC FOR OTHER OPTIONS)

4 Shell Size

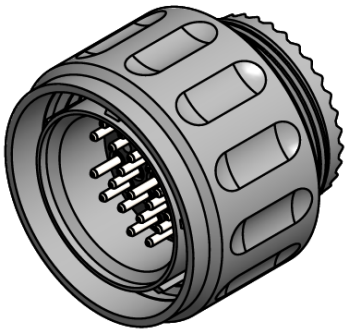
11 - SHELL SIZE 11	19 - SHELL SIZE 19
13 - SHELL SIZE 13	21 - SHELL SIZE 21
15 - SHELL SIZE 15	23 - SHELL SIZE 23
17 - SHELL SIZE 17	25 - SHELL SIZE 25

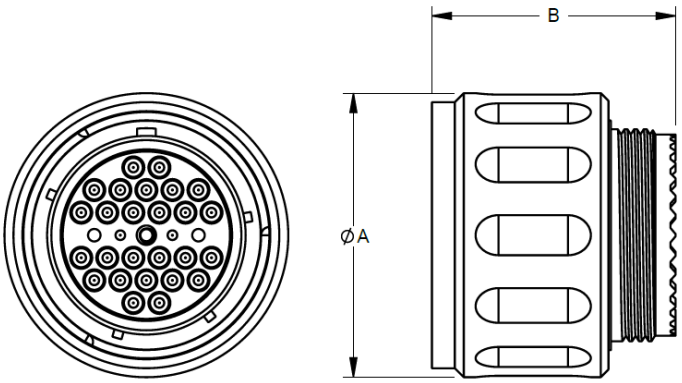
Part Number Builder Notes:

* All Dust Covers use a Black Nylon Coated Stainless Steel Wire Lanyard
* Plug Dust Covers (Type "PG") ordered with Q38Shell Backshells will come factory installed (Crimp with Heat Shrink) unless specified otherwise

Q38HD Plug, D38999/26 Style:

Q38HD-PGX-XXXX-X

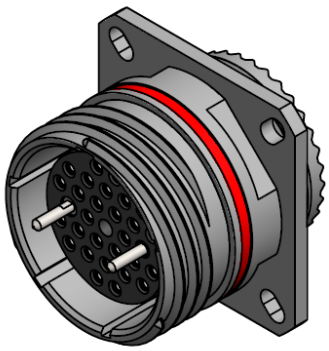


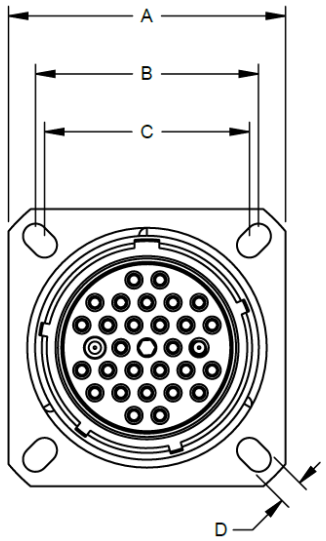


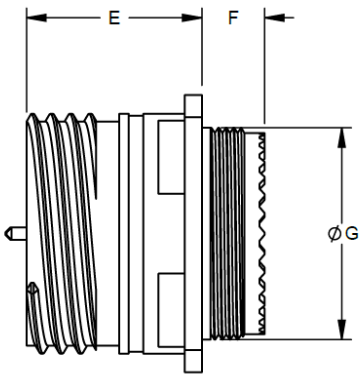
NOMINAL DIMENSIONS: in (mm)		
SHELL SIZE	A	B
11	0.945 (24.0)	1.263 (32.1)
17	1.361 (34.6)	1.263 (32.1)
19	1.471 (37.4)	1.263 (32.1)
23	1.723 (43.8)	1.263 (32.1)

Q38HD Receptacle, Flange Mount, D38999/20 Style:

Q38HD-RFX-XXXX-X



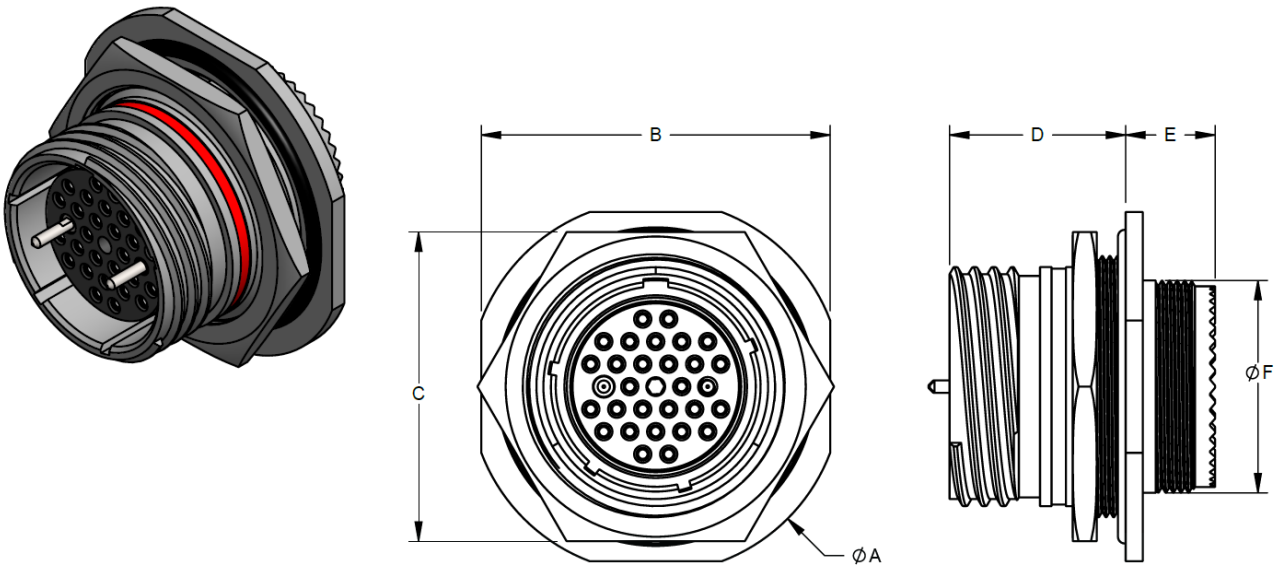




NOMINAL DIMENSIONS: in (mm)							
SHELL SIZE	A	B	C	D	E	F	G
11	1.031 (26.2)	0.812 (20.6)	0.719 (18.3)	0.128 (3.3)	0.909 (23.1)	0.325 (8.3)	0.591 (15.0)
17	1.311 (33.3)	1.062 (27.0)	0.969 (24.6)	0.128 (3.3)	0.909 (23.1)	0.325 (8.3)	0.984 (25.0)
19	1.437 (36.5)	1.156 (29.4)	1.062 (27.0)	0.128 (3.3)	0.909 (23.1)	0.325 (8.3)	1.102 (28.0)
23	1.689 (42.9)	1.375 (34.9)	1.250 (31.8)	0.155 (3.9)	0.909 (23.1)	0.325 (8.3)	1.339 (34.0)

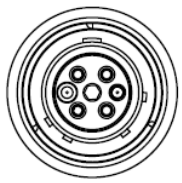
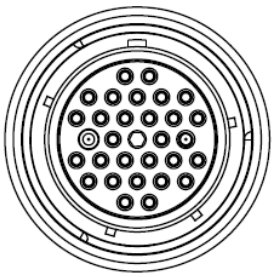
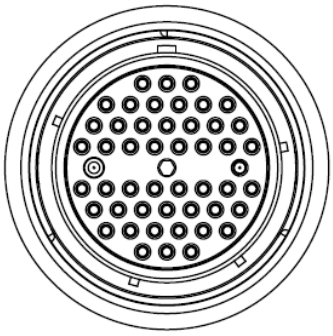
Q38HD Receptacle, Jam Nut, D38999/24 Style:

Q38HD-RJX-XXXX-X



NOMINAL DIMENSIONS: in (mm)						
SHELL SIZE	A	B	C	D	E	F
11	1.375 (34.9)	1.252 (31.8)	1.040 (26.4)	0.915 (23.2)	0.465 (11.8)	0.591 (15.0)
17	1.752 (44.5)	1.626 (41.3)	1.418 (36.0)	0.915 (23.2)	0.465 (11.8)	0.984 (25.0)
19	1.937 (49.2)	1.811 (46.0)	1.605 (40.8)	0.915 (23.2)	0.465 (11.8)	1.102 (28.0)
23	2.189 (55.6)	2.063 (52.4)	1.918 (48.7)	0.915 (23.2)	0.465 (11.8)	1.339 (34.0)

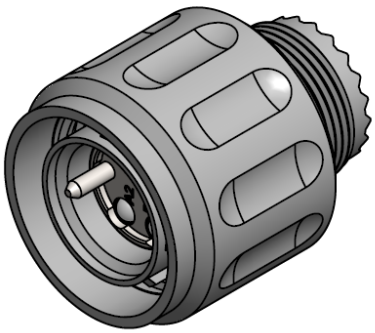
Q38HD Insert Layouts:

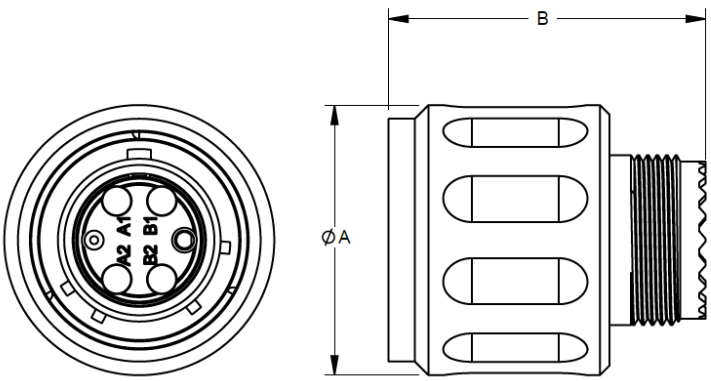
Shell Size / Insert Layout:	
	
11A1 4x PIN TERMINI 11B1 4x PIN TERMINI WITH ASR	17A4 20x PIN TERMINI 17B4 20x PIN TERMINI WITH ASR
	
19A5 28x PIN TERMINI 19B5 28x PIN TERMINI WITH ASR	23A7 48x PIN TERMINI 23B7 48x PIN TERMINI WITH ASR

* Alignment Sleeve Retainers (ASR's) can be installed in either the Plug or Receptacle and channel numbers will be marked accordingly

Q38EB Plug, D38999/26 Style:

Q38EB-PGX-XXXX-X

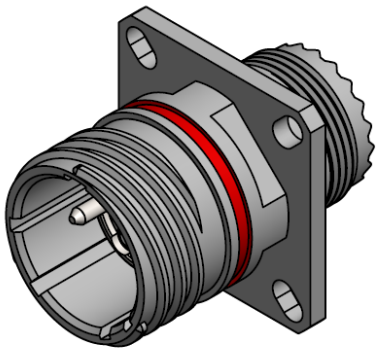


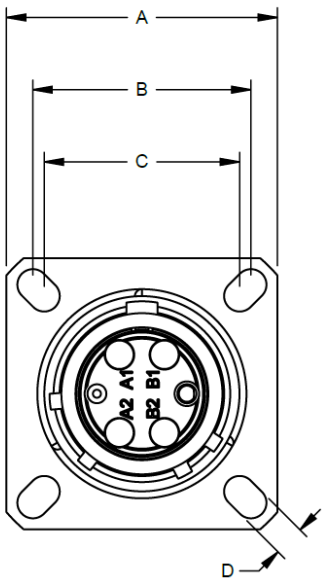


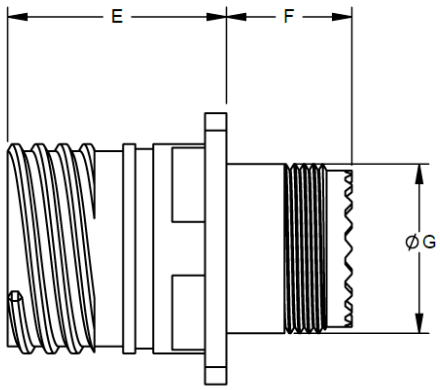
NOMINAL DIMENSIONS: in (mm)		
SHELL SIZE	A	B
11	0.945 (24.0)	1.313 (33.4)
13	1.118 (28.4)	1.313 (33.4)
23	1.723 (43.8)	1.313 (33.4)

Q38EB Receptacle, Flange Mount, D38999/20 Style:

Q38EB-RFX-XXXX-X



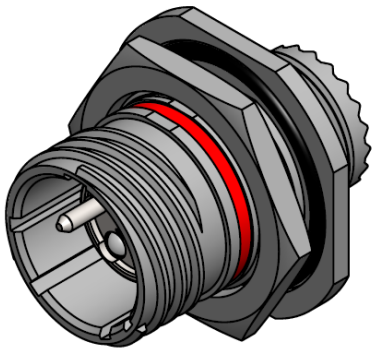


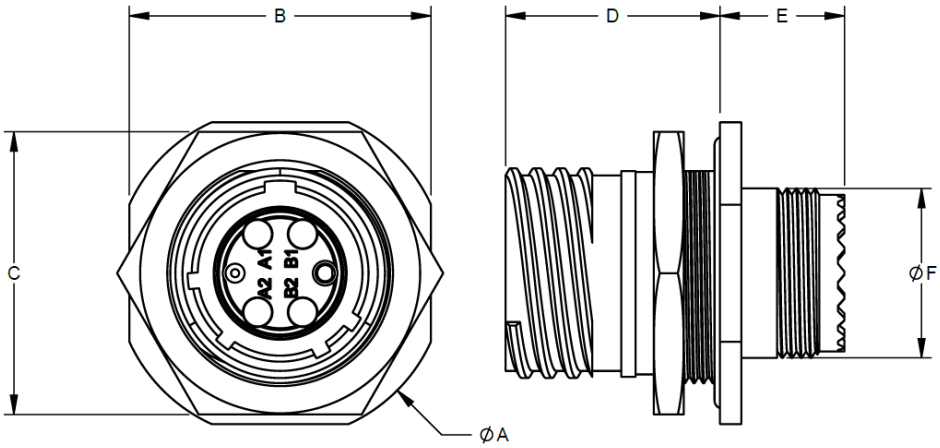


NOMINAL DIMENSIONS: in (mm)							
SHELL SIZE	A	B	C	D	E	F	G
11	1.031 (26.2)	0.812 (20.6)	0.719 (18.3)	0.128 (3.3)	0.909 (23.1)	0.521 (13.2)	0.591 (15.0)
13	1.126 (28.6)	0.906 (23.0)	0.812 (20.6)	0.128 (3.3)	0.909 (23.1)	0.521 (13.2)	0.709 (18.0)
23	1.689 (42.9)	1.375 (34.9)	1.250 (31.8)	0.155 (3.9)	0.909 (23.1)	0.521 (13.2)	1.339 (34.0)

Q38EB Receptacle, Jam Nut, D38999/24 Style:

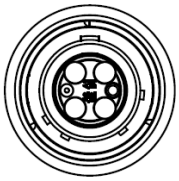
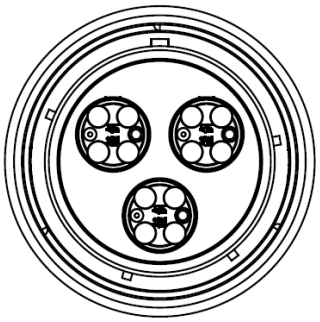
Q38EB-RJX-XXXX-X





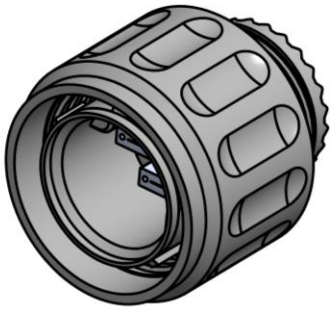
NOMINAL DIMENSIONS: in (mm)						
SHELL SIZE	A	B	C	D	E	F
11	1.375 (34.9)	1.252 (31.8)	1.040 (26.4)	0.915 (23.2)	0.515 (13.1)	0.591 (15.0)
13	1.500 (38.1)	1.374 (34.9)	1.230 (31.2)	0.915 (23.2)	0.515 (13.1)	0.709 (18.0)
23	2.189 (55.6)	2.063 (52.4)	1.918 (48.7)	0.915 (23.2)	0.515 (13.1)	1.339 (34.0)

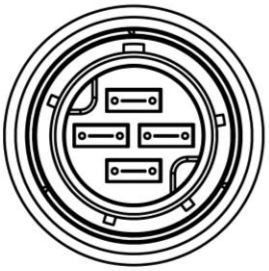
Q38EB Insert Layouts:

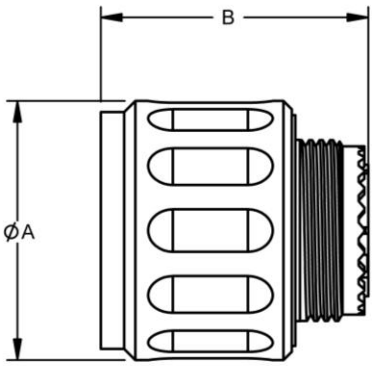
Shell Size / Insert Layout:		
		
11E1 1x QMICRO EXPANDED BEAM INSERT	13E2 1x QMINI EXPANDED BEAM INSERT	23E7 3x QMICRO EXPANDED BEAM INSERTS

Q38MT Plug, D38999/26 Style:

Q38MT-PGX-XXXX-X



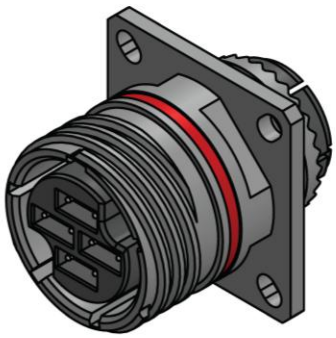


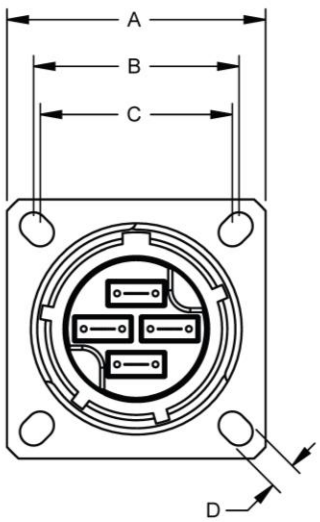


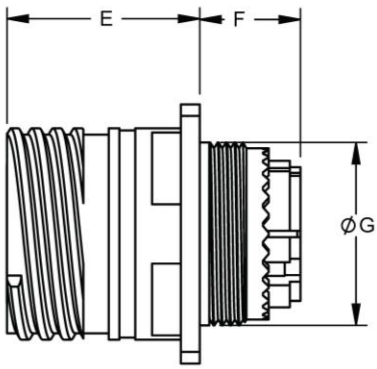
NOMINAL DIMENSIONS: in (mm)		
SHELL SIZE	A	B
11	0.945 (24.0)	1.288 (32.7)
13	1.118 (28.4)	1.288 (32.7)
15	1.241 (31.5)	1.288 (32.7)
17	1.361 (34.6)	1.263 (32.1)
21	1.597 (40.6)	1.263 (32.1)

Q38MT Receptacle, Flange Mount, D38999/20 Style:

Q38MT-RFX-XXXX-X



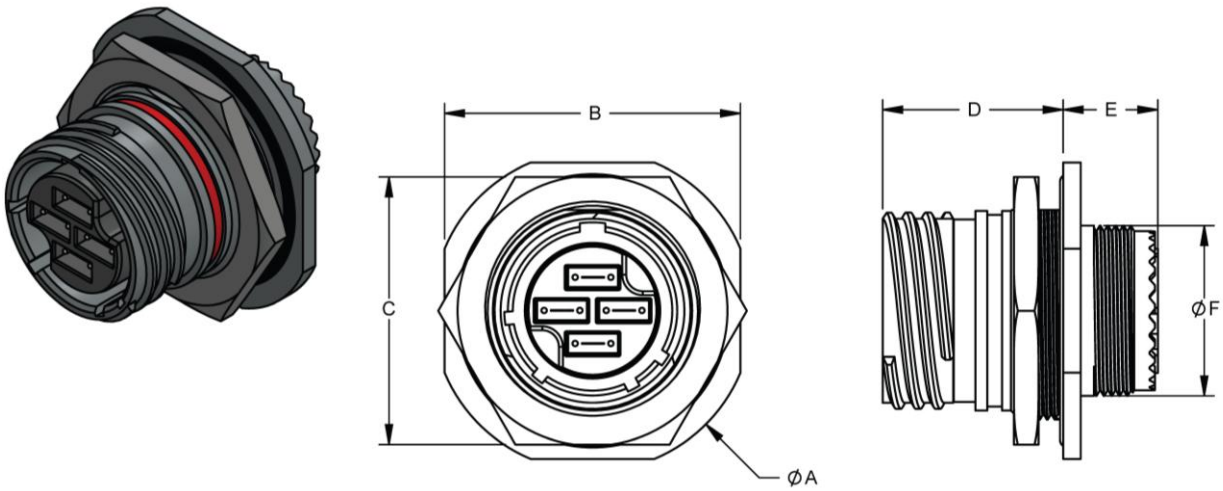




NOMINAL DIMENSIONS: in (mm)							
SHELL SIZE	A	B	C	D	E	F	G
11	1.031 (26.2)	0.812 (20.6)	0.719 (18.3)	0.128 (3.3)	0.909 (23.1)	0.480 (12.2)	0.591 (15.0)
13	1.126 (28.6)	0.906 (23.0)	0.812 (20.6)	0.128 (3.3)	0.909 (23.1)	0.480 (12.2)	0.709 (18.0)
15	1.220 (31.0)	0.969 (24.6)	0.906 (23.0)	0.128 (3.3)	0.909 (23.1)	0.480 (12.2)	0.866 (22.0)
17	1.311 (33.3)	1.062 (27.0)	0.969 (24.6)	0.128 (3.3)	0.909 (23.1)	0.325 (8.3)	0.984 (25.0)
21	1.563 (39.7)	1.250 (31.8)	1.156 (29.4)	0.128 (3.3)	0.909 (23.1)	0.325 (8.3)	1.220 (31.0)

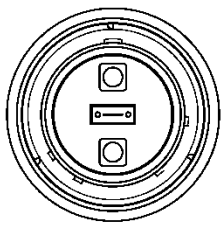
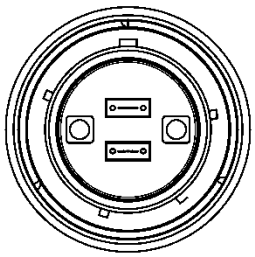
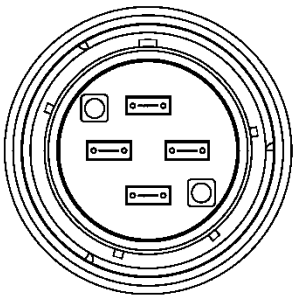
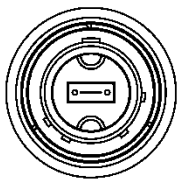
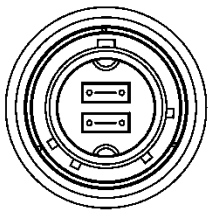
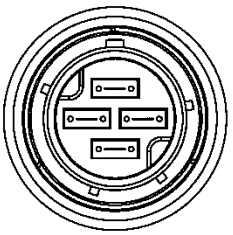
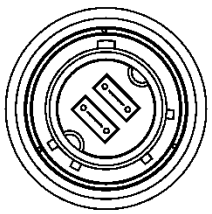
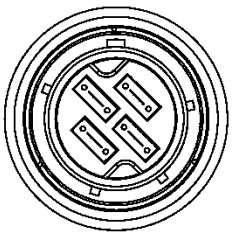
Q38MT Receptacle, Jam Nut, D38999/24 Style:

Q38MT-RJX-XXXX-X

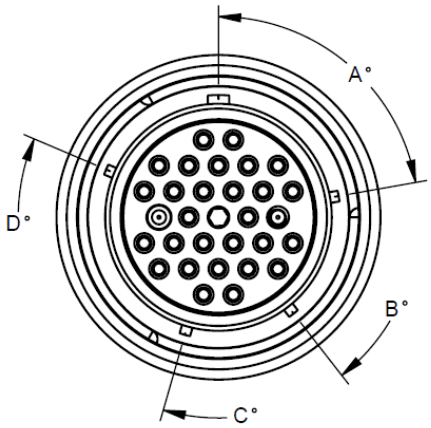


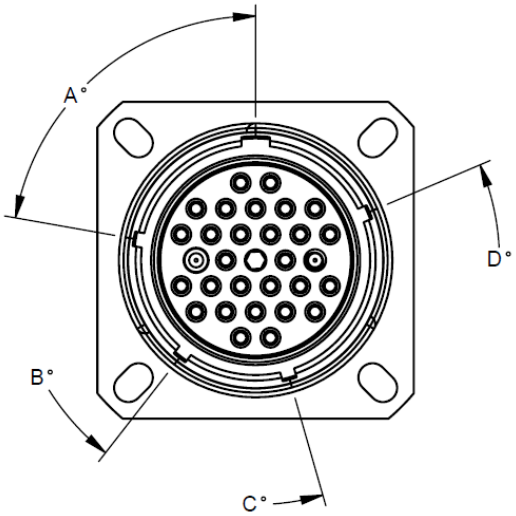
NOMINAL DIMENSIONS: in (mm)						
SHELL SIZE	A	B	C	D	E	F
11	1.375 (34.9)	1.252 (31.8)	1.040 (26.4)	0.915 (23.2)	0.480 (12.19)	0.591 (15.0)
13	1.500 (38.1)	1.374 (34.9)	1.230 (31.2)	0.915 (23.2)	0.480 (12.19)	0.709 (18.0)
15	1.626 (41.3)	1.500 (38.1)	1.355 (34.4)	0.915 (23.2)	0.480 (12.19)	0.866 (22.0)
17	1.752 (44.5)	1.626 (41.3)	1.418 (36.0)	0.915 (23.2)	0.465 (11.8)	0.984 (25.0)
21	2.063 (52.4)	1.937 (49.2)	1.792 (45.5)	0.915 (23.2)	0.465 (11.8)	1.220 (31.0)

Q38MT Insert Layouts:

Shell Size / Insert Layout:		
QPC STANDARD		
		
15G3 1x MT PIN TERMINUS 15H3 1x MT SOCKET TERMINUS	17G4 2x MT PIN TERMINI 17H4 2x MT SOCKET TERMINI	21G6 4x MT PIN TERMINI 21H6 4x MT SOCKET TERMINI
VITA 87 STYLE - NORMAL INSERT		
		
11V1 1x MT PIN TERMINUS 11W1 1x MT SOCKET TERMINUS	13V2 2x MT PIN TERMINI 13W2 2x MT SOCKET TERMINI	15V3 4x MT PIN TERMINI 15W3 4x MT SOCKET TERMINI
VITA 87 STYLE - 45° INSERT		
		
11V4 1x MT PIN TERMINUS 11W4 1x MT SOCKET TERMINUS	13V5 2x MT PIN TERMINI 13W5 2x MT SOCKET TERMINI	15V6 4x MT PIN TERMINI 15W6 4x MT SOCKET TERMINI

Key Layout Details, Q38 Plugs and Receptacles:



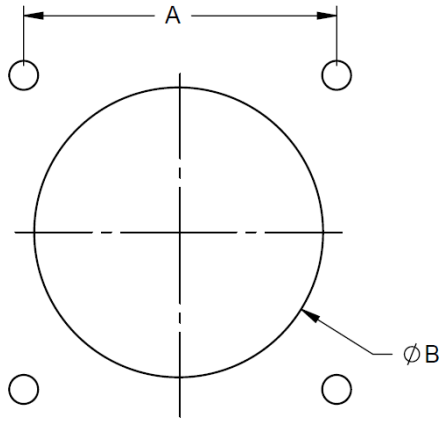


KEY ANGLES: SHELL SIZES 11-15				
KEY	A°	B°	C°	D°
N	95	141	208	236
A	113	156	182	292
B	90	145	195	252
C	53	156	220	255
D	119	146	176	298
E	51	141	184	242

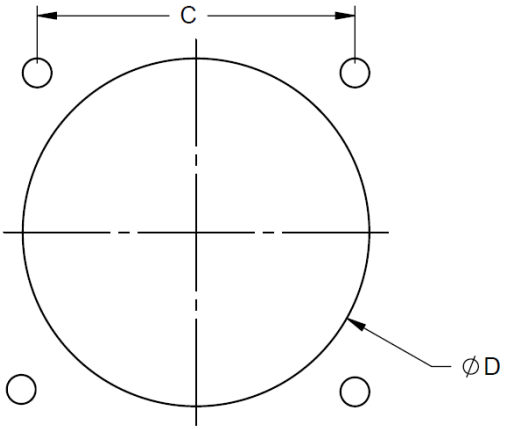
KEY ANGLES: SHELL SIZES 17-25				
KEY	A°	B°	C°	D°
N	80	142	196	293
A	135	170	200	310
B	49	169	200	244
C	66	140	200	257
D	62	145	180	280
E	79	153	197	272

* Q38 Connectors with Key Designator "U" (Universal) will mate will all other Keys

Q38 Receptacle Panel Cutouts:

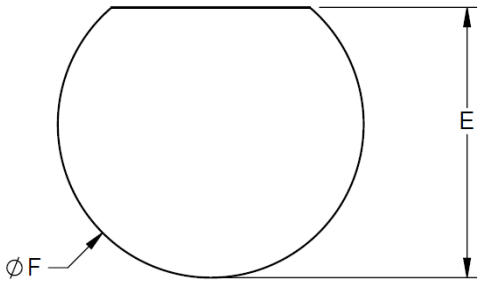


Q38 External Flange Mount (RF)



Q38 Internal Flange Mount (RF)

Maximum Panel Thickness: 0.125" (3.18mm)



Q38 Jam Nut (RJ)

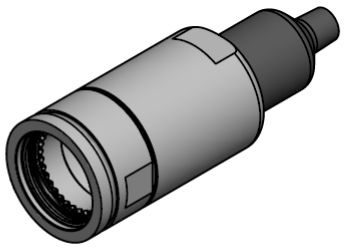
Maximum Panel Thickness: 0.125" (3.18mm)

NOMINAL DIMENSIONS: in (mm)						
SHELL SIZE	A	B	C	D	E	F
11	0.719 (18.3)	0.625 (15.9)	0.812 (20.6)	0.796 (20.2)	0.761 (19.3)	0.835 (21.2)
13	0.812 (20.6)	0.750 (19.1)	0.906 (23.0)	0.922 (23.4)	0.945 (24.0)	1.020 (25.9)
15	0.906 (23.0)	0.906 (23.0)	0.969 (24.6)	1.047 (26.6)	1.075 (27.3)	1.145 (29.1)
17	0.969 (24.6)	1.016 (25.8)	1.062 (27.0)	1.219 (31.0)	1.200 (30.5)	1.270 (32.3)
19	1.062 (27.0)	1.141 (29.0)	1.156 (29.4)	1.297 (32.9)	1.325 (33.7)	1.395 (35.4)
21	1.156 (29.4)	1.266 (32.2)	1.250 (31.8)	1.422 (36.1)	1.450 (36.8)	1.520 (38.6)
23	1.250 (31.8)	1.375 (34.9)	1.375 (34.9)	1.547 (39.3)	1.575 (40.0)	1.645 (41.8)
25	1.375 (34.9)	1.484 (37.7)	1.500 (38.1)	1.672 (42.5)	1.700 (43.2)	1.770 (45.0)

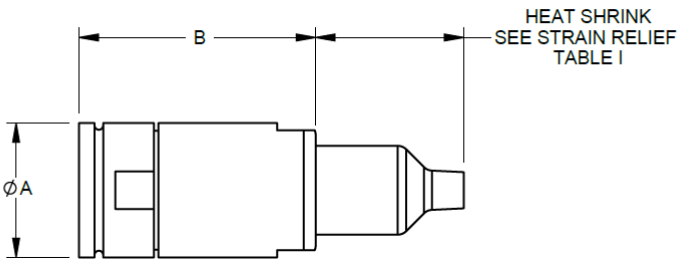
* Q38 Flange Mount Receptacles (RF) can be mounted externally or internally depending on the application. If a Q38Shell / Q38EBShell Backshell is used, they must be Internally Mounted.

Q38Shell Straight Backshells with Heat Shrink & Heat Shrink with Band Clamp:

Q38SHELL-STX-XX-XXXX-HX



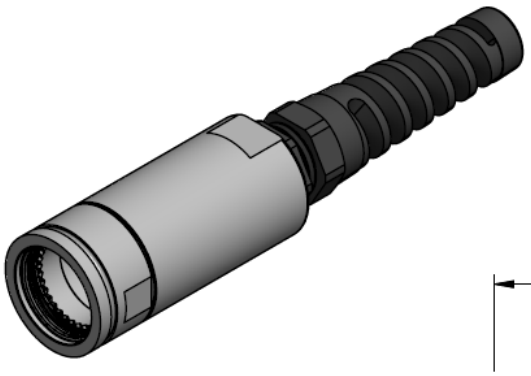


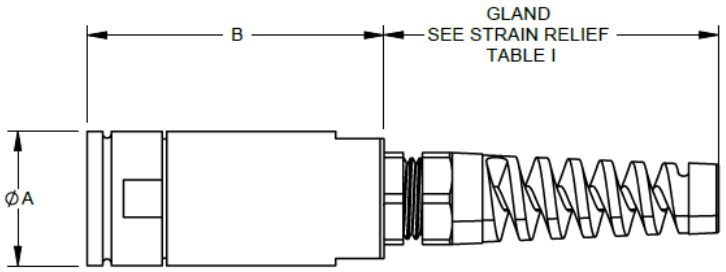


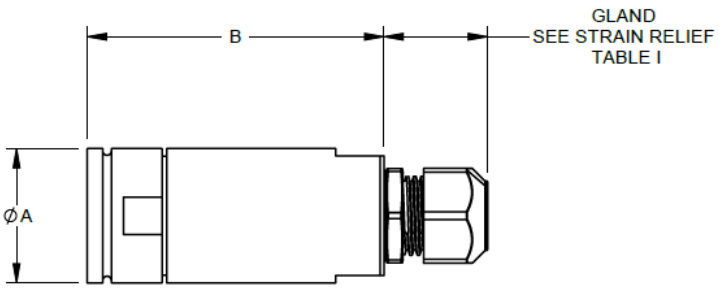
NOMINAL DIMENSIONS: in (mm)				
SHELL SIZE	A	B	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.455 (62.4)	0.142 (3.6)	0.453 (11.5)
13	1.040 (26.4)	2.455 (62.4)	0.142 (3.6)	0.453 (11.5)
15	1.163 (29.5)	2.455 (62.4)	0.142 (3.6)	0.492 (12.5)
17	1.283 (32.6)	2.455 (62.4)	0.142 (3.6)	0.492 (12.5)
19	1.393 (35.4)	2.455 (62.4)	0.142 (3.6)	0.689 (17.5)
21	1.519 (38.6)	2.705 (68.7)	0.142 (3.6)	0.689 (17.5)
23	1.645 (41.8)	2.705 (68.7)	0.142 (3.6)	0.689 (17.5)
25	1.767 (44.9)	2.705 (68.7)	0.142 (3.6)	0.689 (17.5)

Q38Shell Straight Backshells with Cable Glands (Standard Cable OD Range):

Q38SHELL-STX-XX-XXXX-GX



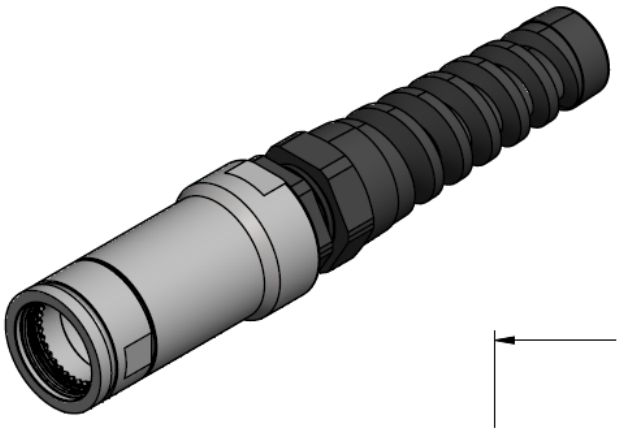


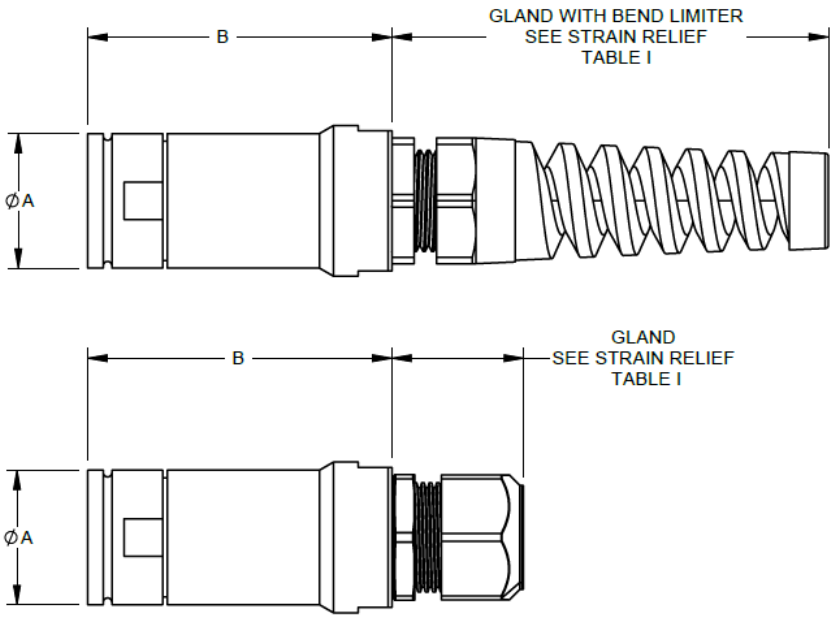


	NOMINAL DIMENSIONS: in (mm)			
SHELL SIZE	A	B	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	3.075 (78.1)	0.142 (3.6)	0.256 (6.5)
13	1.040 (26.4)	3.075 (78.1)	0.142 (3.6)	0.256 (6.5)
15	1.163 (29.5)	3.075 (78.1)	0.142 (3.6)	0.492 (12.5)
17	1.283 (32.6)	3.075 (78.1)	0.142 (3.6)	0.492 (12.5)
19	1.393 (35.4)	3.075 (78.1)	0.142 (3.6)	0.492 (12.5)
21	1.519 (38.6)	3.325 (84.5)	0.142 (3.6)	0.492 (12.5)
23	1.645 (41.8)	3.325 (84.5)	0.142 (3.6)	0.492 (12.5)
25	1.767 (44.9)	3.325 (84.5)	0.142 (3.6)	0.492 (12.5)

Q38Shell Straight Backshells with Cable Glands (Expanded Cable OD Range):

Q38SHELL-STX-XX-XXXX-GX



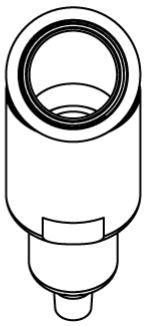


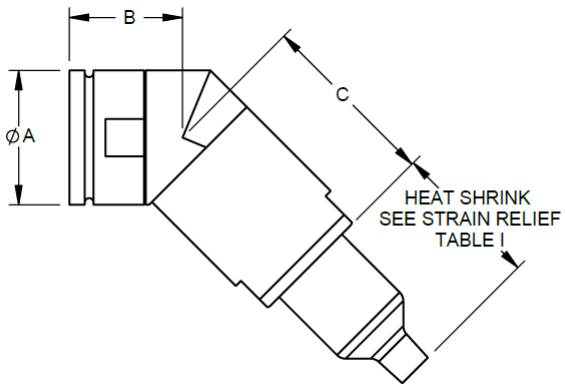
	NOMINAL DIMENSIONS: in (mm)			
SHELL SIZE	A	B	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	3.075 (78.1)	0.260 (6.6)	0.453 (11.5)
13	1.040 (26.4)	3.075 (78.1)	0.260 (6.6)	0.453 (11.5)
19	1.393 (35.4)	3.075 (78.1)	0.496 (12.6)	0.689 (17.5)
21	1.519 (38.6)	3.325 (84.5)	0.496 (12.6)	0.689 (17.5)
23	1.645 (41.8)	3.325 (84.5)	0.496 (12.6)	0.689 (17.5)
25	1.767 (44.9)	3.325 (84.5)	0.496 (12.6)	0.689 (17.5)

Q38Shell 45° Backshells with Heat Shrink & Heat Shrink with Band Clamp:

Q38SHELL-45X-XX-XXXX-HX



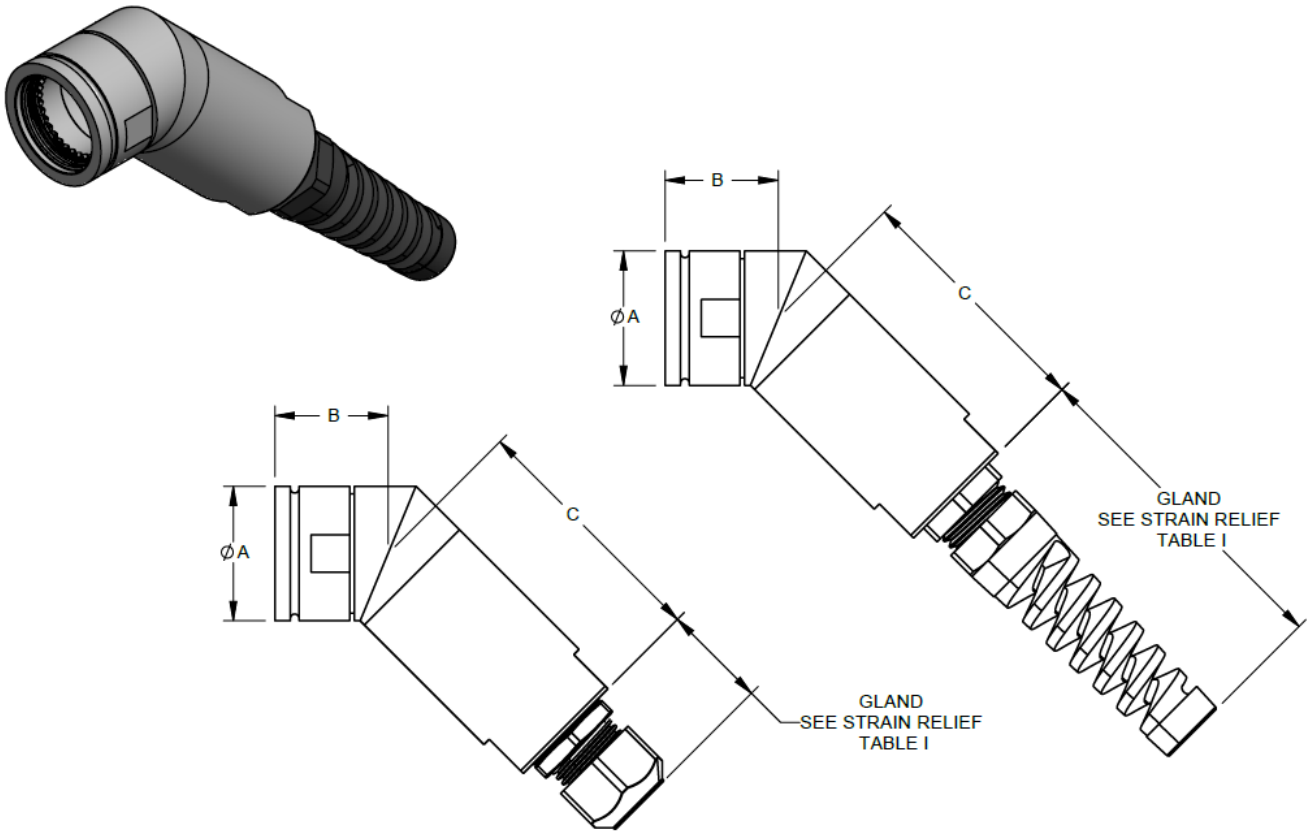




NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.200 (30.5)	1.880 (47.8)	0.142 (3.6)	0.335 (8.5)
13	1.040 (26.4)	1.200 (30.5)	1.880 (47.8)	0.142 (3.6)	0.335 (8.5)
15	1.163 (29.5)	1.200 (30.5)	1.880 (47.8)	0.142 (3.6)	0.374 (9.5)
17	1.283 (32.6)	1.200 (30.5)	1.880 (47.8)	0.142 (3.6)	0.374 (9.5)
19	1.393 (35.4)	1.200 (30.5)	1.880 (47.8)	0.142 (3.6)	0.453(11.5)
21	1.519 (38.6)	1.450 (36.8)	2.130 (54.1)	0.142 (3.6)	0.453 (11.5)
23	1.645 (41.8)	1.450 (36.8)	2.130 (54.1)	0.142 (3.6)	0.453 (11.5)
25	1.767 (44.9)	1.450 (36.8)	2.130 (54.1)	0.142 (3.6)	0.453 (11.5)

Q38Shell 45° Backshells with Cable Glands (Standard Cable OD Range):

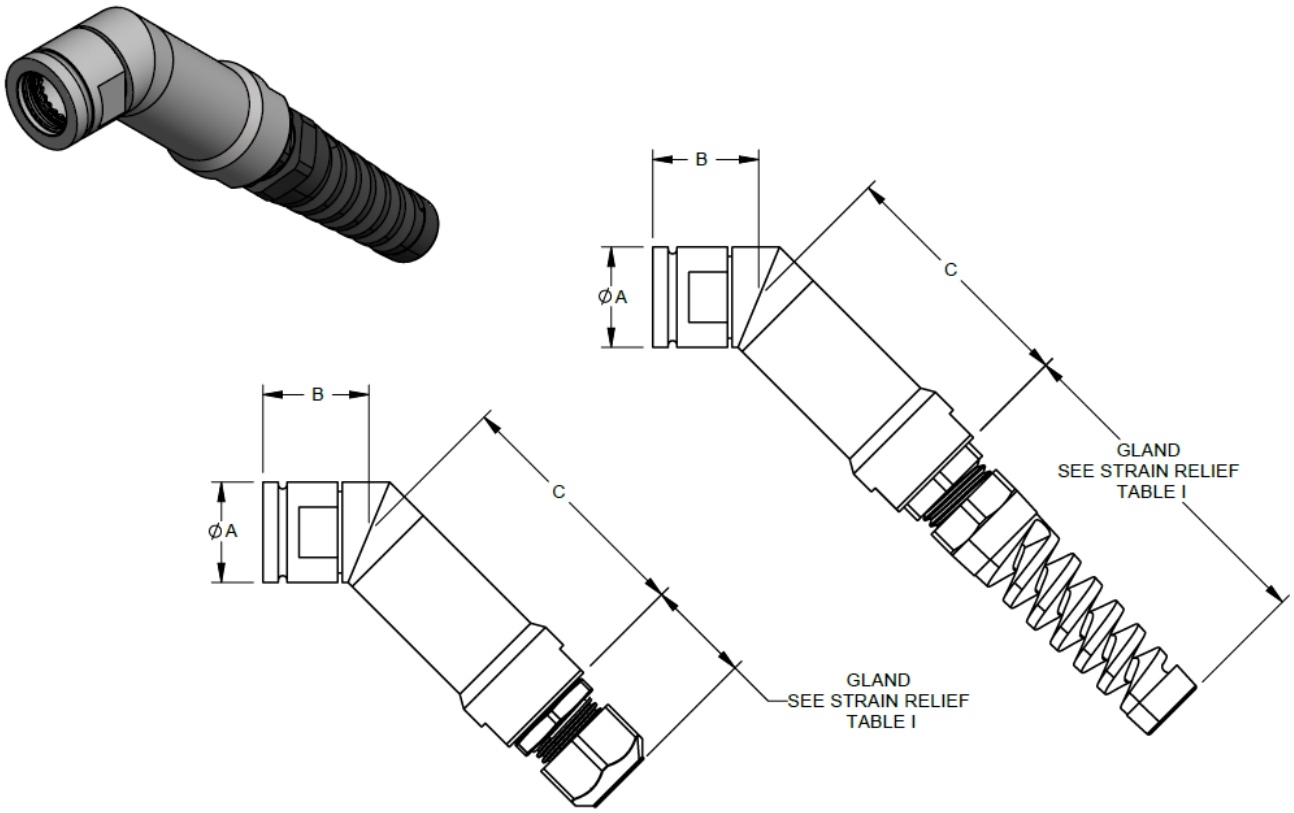
Q38SHELL-45X-XX-XXXX-GX



NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.200 (30.5)	2.500 (63.5)	0.142 (3.6)	0.256 (6.5)
13	1.040 (26.4)	1.200 (30.5)	2.500 (63.5)	0.142 (3.6)	0.256 (6.5)
15	1.163 (29.5)	1.200 (30.5)	2.500 (63.5)	0.142 (3.6)	0.374 (9.5)
17	1.283 (32.6)	1.200 (30.5)	2.500 (63.5)	0.142 (3.6)	0.374 (9.5)
19	1.393 (35.4)	1.200 (30.5)	2.500 (63.5)	0.142 (3.6)	0.453(11.5)
21	1.519 (38.6)	1.450 (36.8)	2.750 (69.9)	0.142 (3.6)	0.453 (11.5)
23	1.645 (41.8)	1.450 (36.8)	2.750 (69.9)	0.142 (3.6)	0.453 (11.5)
25	1.767 (44.9)	1.450 (36.8)	2.750 (69.9)	0.142 (3.6)	0.453 (11.5)

Q38Shell 45° Backshells with Cable Glands (Expanded Cable OD Range):

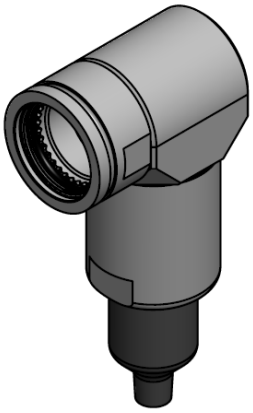
Q38SHELL-45X-XX-XXXX-GX

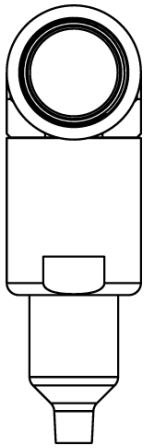


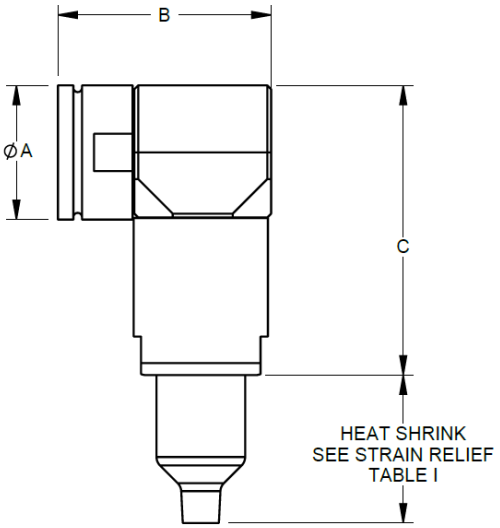
NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.200 (30.5)	2.500 (63.5)	0.260 (6.6)	0.335 (8.5)
13	1.040 (26.4)	1.200 (30.5)	2.500 (63.5)	0.260 (6.6)	0.335 (8.5)

Q38Shell 90° Backshells with Heat Shrink & Heat Shrink with Band Clamp:

Q38SHELL-90X-XX-XXXX-HX



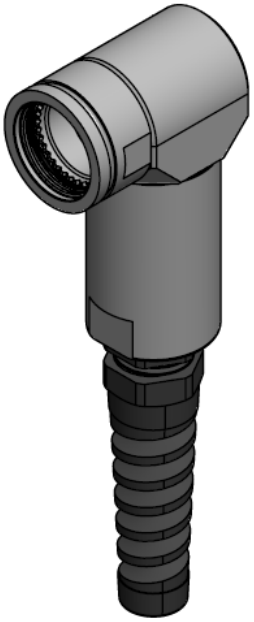


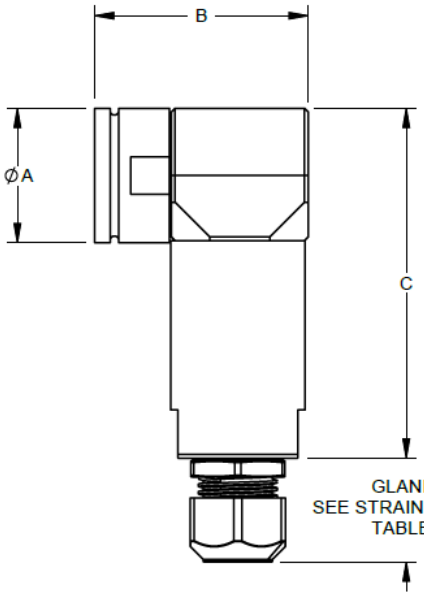


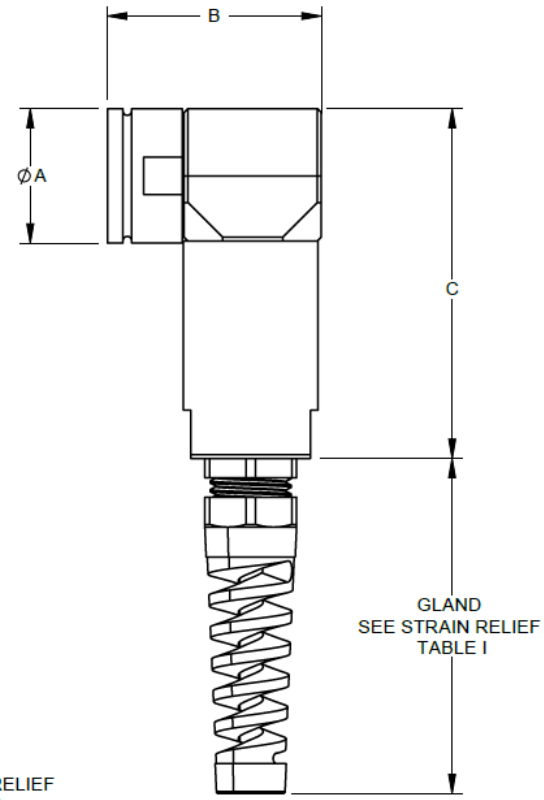
NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.250 (57.2)	2.700 (68.6)	0.142 (3.6)	0.335 (8.5)
13	1.040 (26.4)	2.250 (57.2)	2.875 (73.0)	0.142 (3.6)	0.335 (8.5)
15	1.163 (29.5)	2.250 (57.2)	2.875 (73.0)	0.142 (3.6)	0.374 (9.5)
17	1.283 (32.6)	2.250 (57.2)	2.875 (73.0)	0.142 (3.6)	0.374 (9.5)
19	1.393 (35.4)	2.250 (57.2)	3.000 (76.2)	0.142 (3.6)	0.453(11.5)
21	1.519 (38.6)	2.500 (63.5)	3.125 (79.4)	0.142 (3.6)	0.453 (11.5)
23	1.645 (41.8)	2.500 (63.5)	3.188 (81.0)	0.142 (3.6)	0.453 (11.5)
25	1.767 (44.9)	2.500 (63.5)	3.250 (82.6)	0.142 (3.6)	0.453 (11.5)

Q38Shell 90° Backshells with Cable Glands (Standard Cable OD Range):

Q38SHELL-90X-XX-XXXX-GX



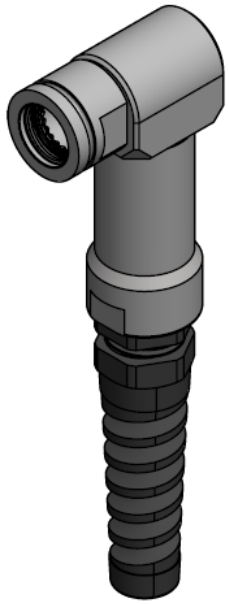


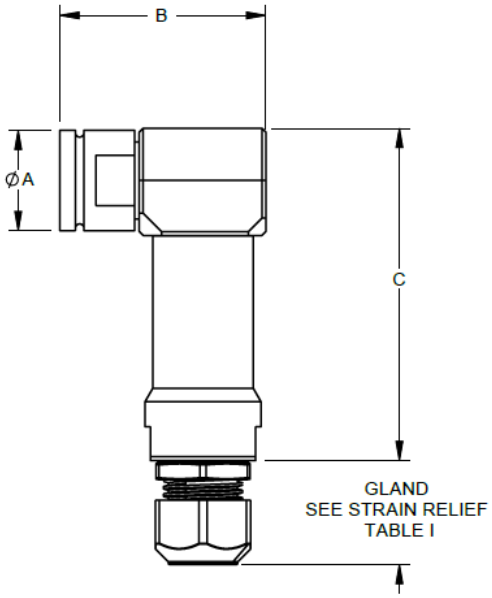


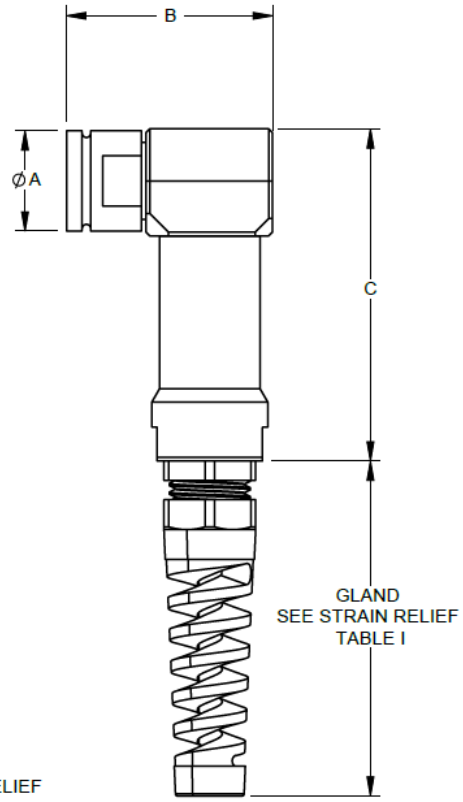
NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.250 (57.2)	2.762 (70.2)	0.142 (3.6)	0.256 (6.5)
13	1.040 (26.4)	2.250 (57.2)	2.937 (74.6)	0.142 (3.6)	0.256 (6.5)
15	1.163 (29.5)	2.250 (57.2)	2.937 (74.6)	0.142 (3.6)	0.374 (9.5)
17	1.283 (32.6)	2.250 (57.2)	2.937 (74.6)	0.142 (3.6)	0.374 (9.5)
19	1.393 (35.4)	2.250 (57.2)	3.062 (77.8)	0.142 (3.6)	0.453(11.5)
21	1.519 (38.6)	2.500 (63.5)	3.187 (80.9)	0.142 (3.6)	0.453 (11.5)
23	1.645 (41.8)	2.500 (63.5)	3.250 (82.6)	0.142 (3.6)	0.453 (11.5)
25	1.767 (44.9)	2.500 (63.5)	3.312 (84.1)	0.142 (3.6)	0.453 (11.5)

Q38Shell 90° Backshells with Cable Glands (Expanded Cable OD Range):

Q38SHELL-90X-XX-XXXX-GX



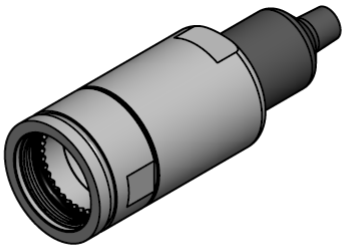




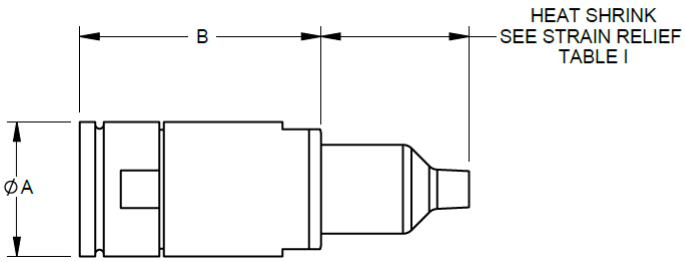
NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.200 (30.5)	2.500 (63.5)	0.260 (6.6)	0.335 (8.5)
13	1.040 (26.4)	1.200 (30.5)	2.500 (63.5)	0.260 (6.6)	0.335 (8.5)

Q38EBShell Straight Backshells with Heat Shrink & Heat Shrink with Band Clamp:

Q38EBSHELL-STX-XX-XXXX-HX



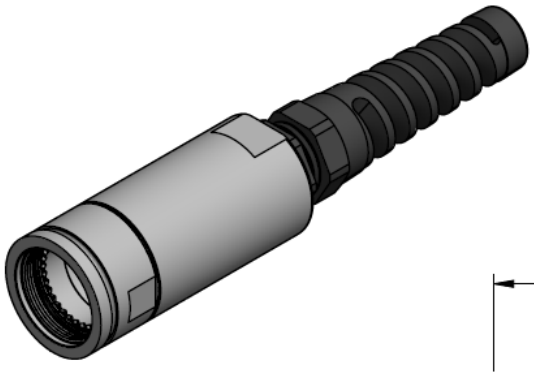


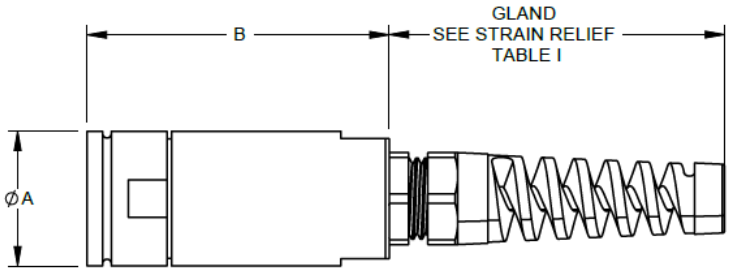


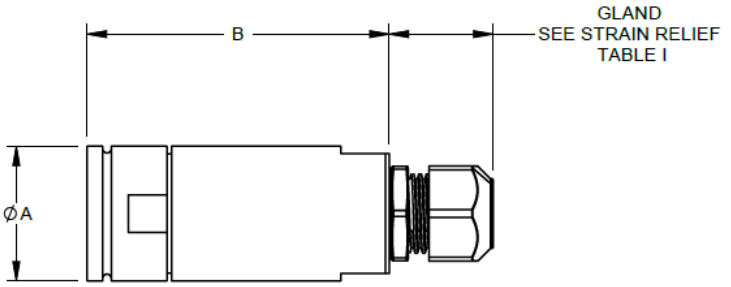
NOMINAL DIMENSIONS: in (mm)				
SHELL SIZE	A	B	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.505 (63.6)	0.142 (3.6)	0.453 (11.5)
13	1.040 (26.4)	2.505 (63.6)	0.142 (3.6)	0.453 (11.5)
23	1.645 (41.8)	2.755 (70.0)	0.142 (3.6)	0.689 (17.5)

Q38EBShell Straight Backshells with Cable Glands (Standard Cable OD Range):

Q38EBSHELL-STX-XX-XXXX-GX



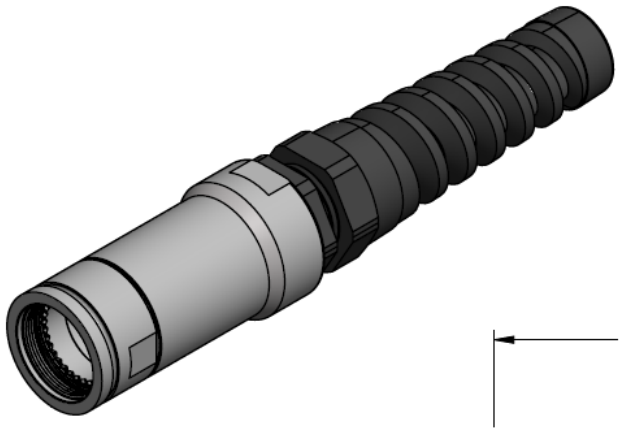


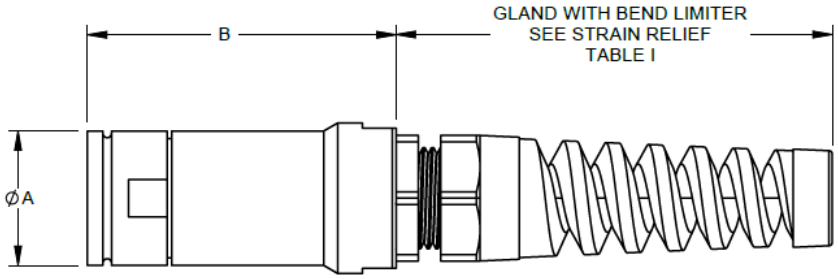


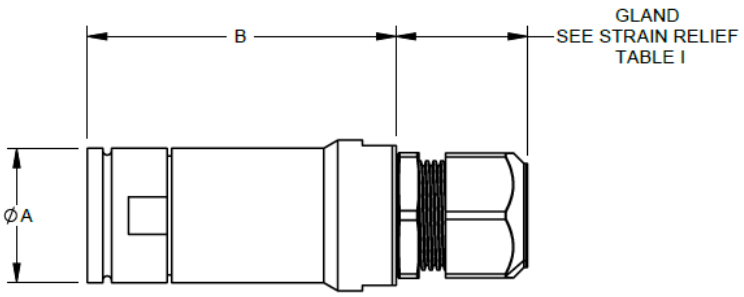
NOMINAL DIMENSIONS: in (mm)				
SHELL SIZE	A	B	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	3.125 (79.4)	0.142 (3.6)	0.256 (6.5)
13	1.040 (26.4)	3.125 (79.4)	0.142 (3.6)	0.256 (6.5)
23	1.645 (41.8)	3.375 (85.7)	0.142 (3.6)	0.492 (12.5)

Q38EBShell Straight Backshells with Cable Glands (Expanded Cable OD Range):

Q38EBSHELL-STX-XX-XXXX-GX



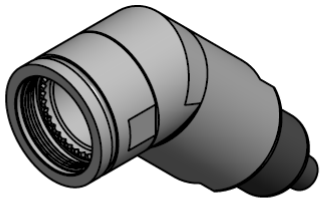


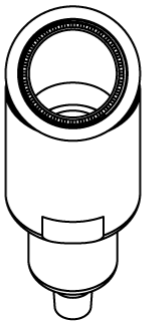


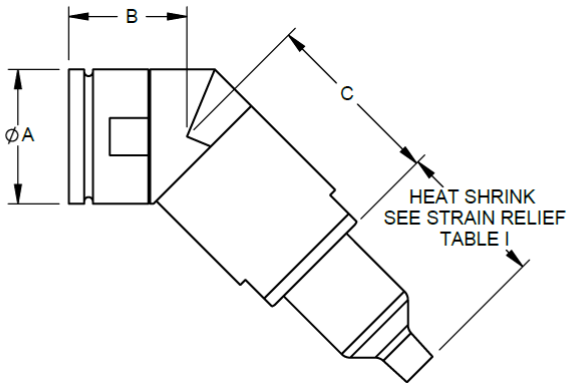
NOMINAL DIMENSIONS: in (mm)				
SHELL SIZE	A	B	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	3.125 (79.4)	0.260 (6.6)	0.453 (11.5)
13	1.040 (26.4)	3.125 (79.4)	0.260 (6.6)	0.453 (11.5)
23	1.645 (41.8)	3.375 (85.7)	0.496 (12.6)	0.689 (17.5)

Q38EBShell 45° Backshells with Heat Shrink & Heat Shrink with Band Clamp:

Q38EBSHELL-45X-XX-XXXX-HX



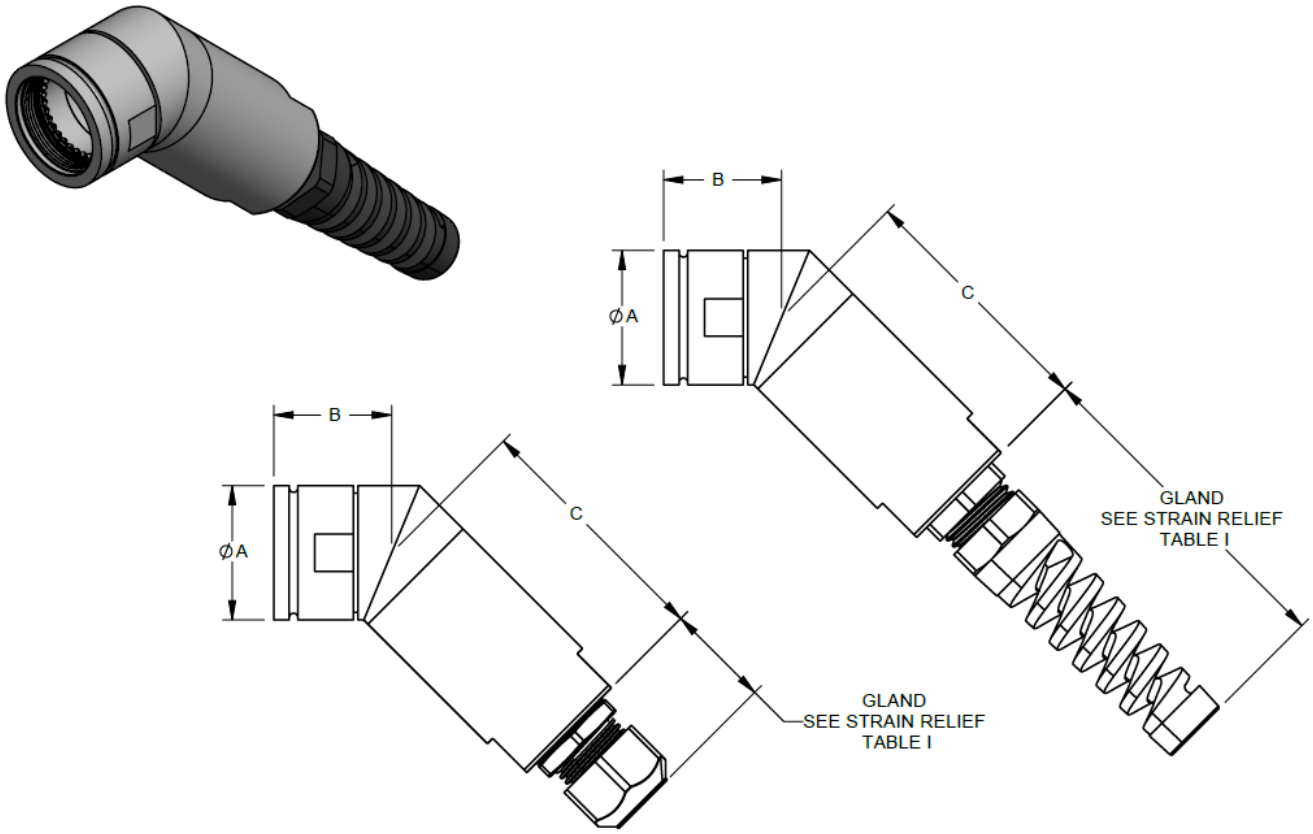




NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.250 (31.8)	1.880 (47.8)	0.142 (3.6)	0.335 (8.5)
13	1.040 (26.4)	1.250 (31.8)	1.880 (47.8)	0.142 (3.6)	0.335 (8.5)
23	1.645 (41.8)	1.500 (38.1)	2.130 (54.1)	0.142 (3.6)	0.453 (11.5)

Q38EBShell 45° Backshells with Cable Glands (Standard Cable OD Range):

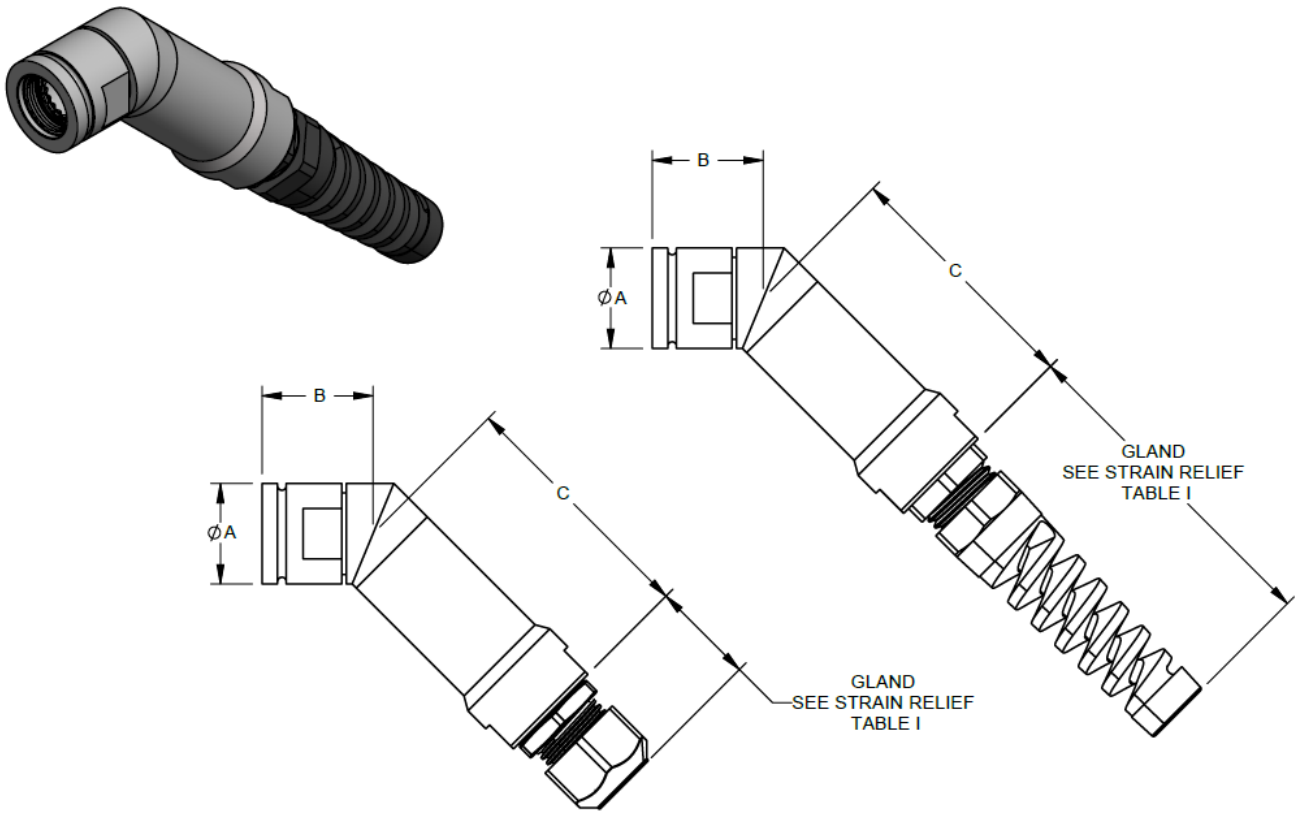
Q38EBSHELL-45X-XX-XXXX-GX



NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.250 (31.8)	2.500 (63.5)	0.142 (3.6)	0.256 (6.5)
13	1.040 (26.4)	1.250 (31.8)	2.500 (63.5)	0.142 (3.6)	0.256 (6.5)
23	1.645 (41.8)	1.500 (38.1)	2.750 (69.9)	0.142 (3.6)	0.453 (11.5)

Q38EBShell 45° Backshells with Cable Glands (Expanded Cable OD Range):

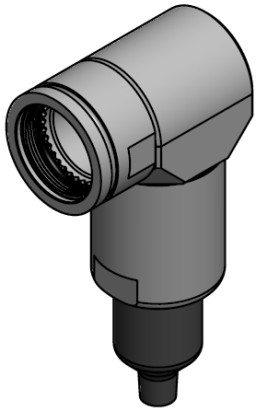
Q38EBSHELL-45X-XX-XXXX-GX

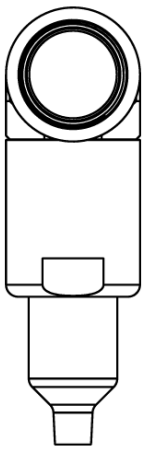


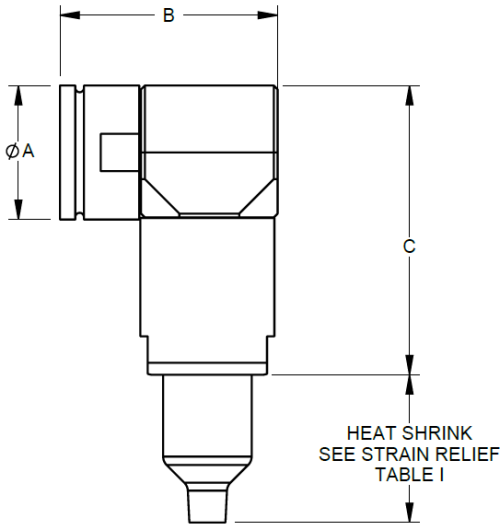
NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	1.250 (31.8)	2.500 (63.5)	0.260 (6.6)	0.335 (8.5)
13	1.040 (26.4)	1.250 (31.8)	2.500 (63.5)	0.260 (6.6)	0.335 (8.5)

Q38EBShell 90° Backshells with Heat Shrink & Heat Shrink with Band Clamp:

Q38EBSHELL-90X-XX-XXXX-HX



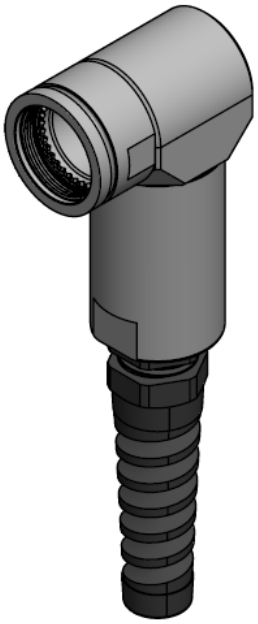


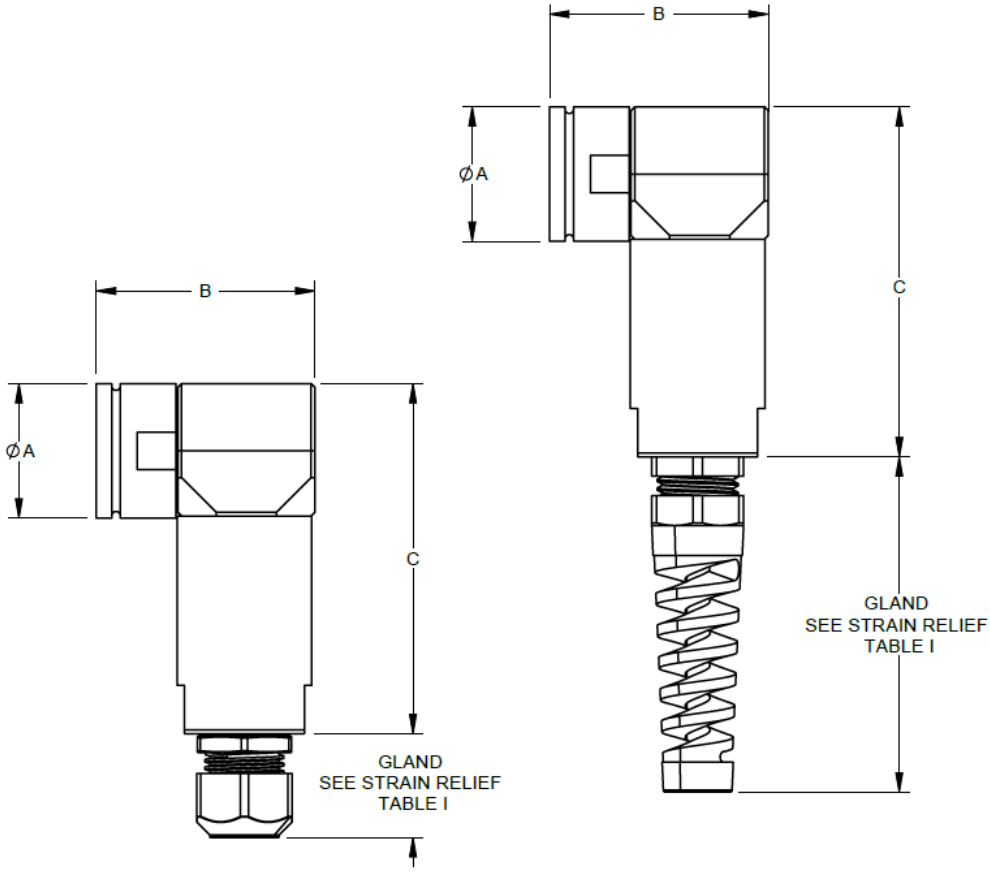


NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.300 (58.4)	2.700 (68.6)	0.142 (3.6)	0.335 (8.5)
13	1.040 (26.4)	2.300 (58.4)	2.875 (73.0)	0.142 (3.6)	0.335 (8.5)
23	1.645 (41.8)	2.550 (64.8)	3.188 (81.0)	0.142 (3.6)	0.453 (11.5)

Q38EBShell 90° Backshells with Cable Glands (Standard Cable OD Range):

Q38EBSHELL-90X-XX-XXXX-GX

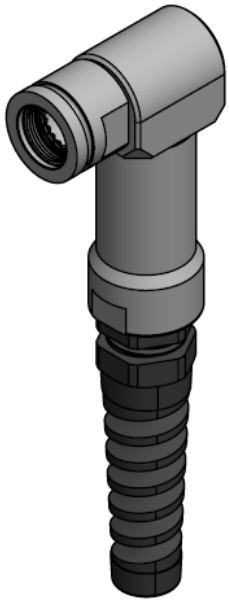


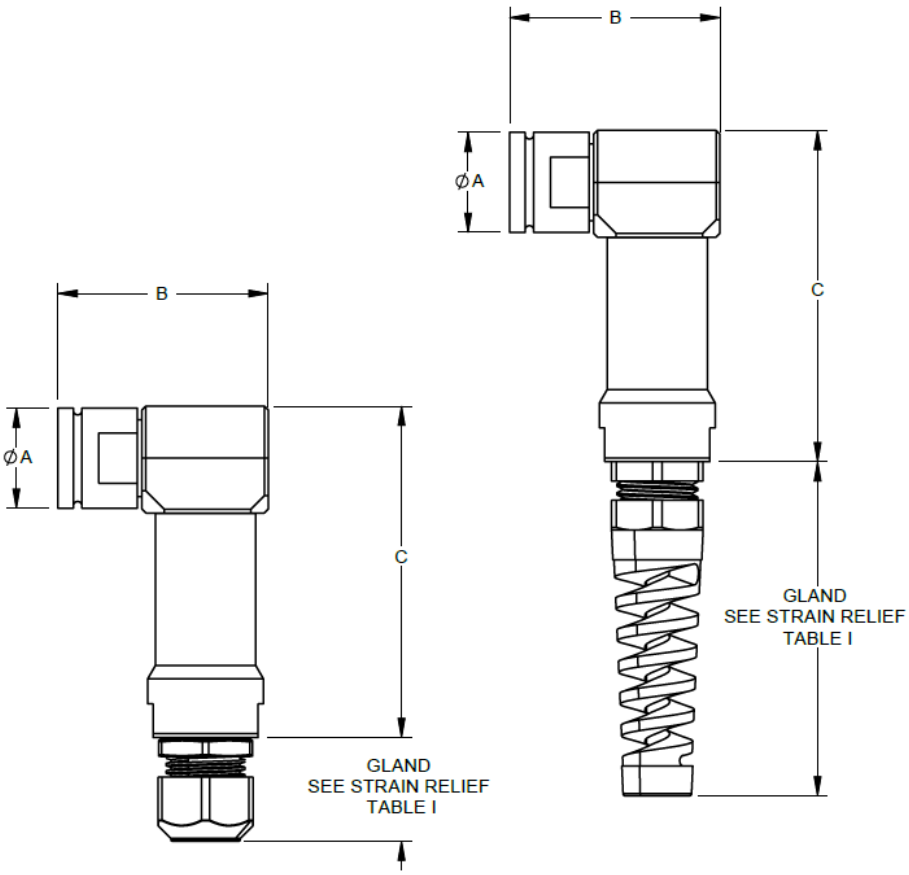


NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.300 (58.4)	2.762 (70.2)	0.142 (3.6)	0.256 (6.5)
13	1.040 (26.4)	2.300 (58.4)	2.937 (74.6)	0.142 (3.6)	0.256 (6.5)
23	1.645 (41.8)	2.550 (64.8)	3.250 (82.6)	0.142 (3.6)	0.453 (11.5)

Q38EBShell 90° Backshells with Cable Glands (Expanded Cable OD Range):

Q38EBSHELL-90X-XX-XXXX-GX



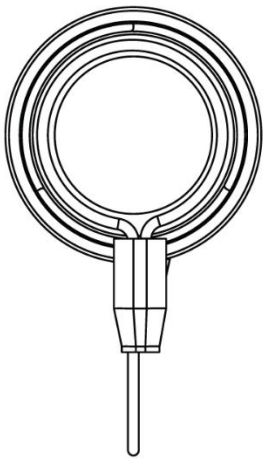


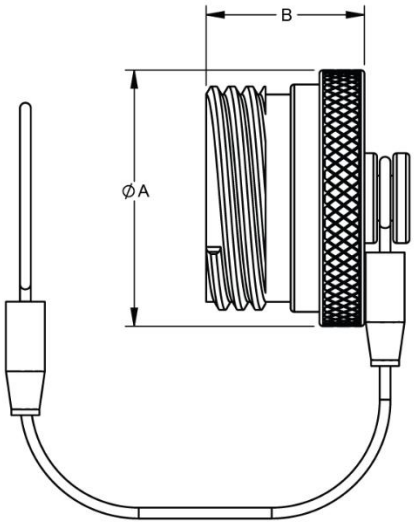
NOMINAL DIMENSIONS: in (mm)					
SHELL SIZE	A	B	C	MIN CABLE OD	MAX CABLE OD
11	0.915 (23.2)	2.300 (58.4)	2.762 (70.2)	0.260 (6.6)	0.335 (8.5)
13	1.040 (26.4)	2.300 (58.4)	2.937 (74.6)	0.260 (6.6)	0.335 (8.5)

Q38DC Dustcovers, Plugs, D38999/32 Style, Crimp Attachment:

Q38DC-PGX-XX





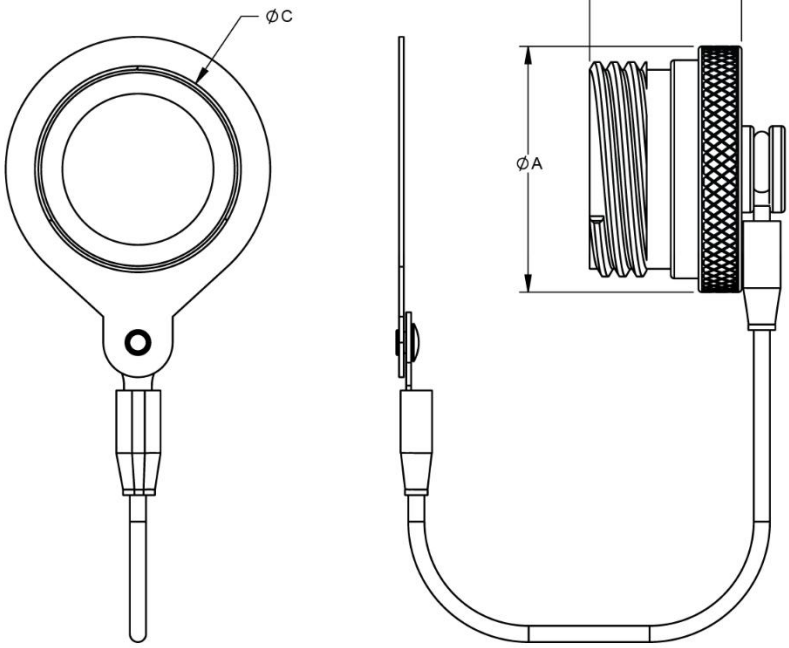


NOMINAL DIMENSIONS: in (mm)		
SHELL SIZE	A	B
11	0.879 (22.3)	1.130 (28.7)
13	1.050 (26.7)	1.130 (28.7)
15	1.179 (29.9)	1.130 (28.7)
17	1.317 (33.5)	1.130 (28.7)
19	1.423 (36.1)	1.130 (28.7)
21	1.549 (39.3)	1.130 (28.7)
23	1.667 (42.3)	1.130 (28.7)
25	1.793 (45.5)	1.130 (28.7)

Q38DC Dustcovers, Plugs, D38999/32 Style, Ring Attachment:

Q38DC-PRX-XX



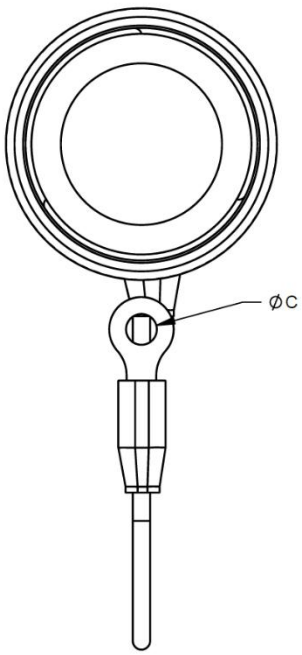


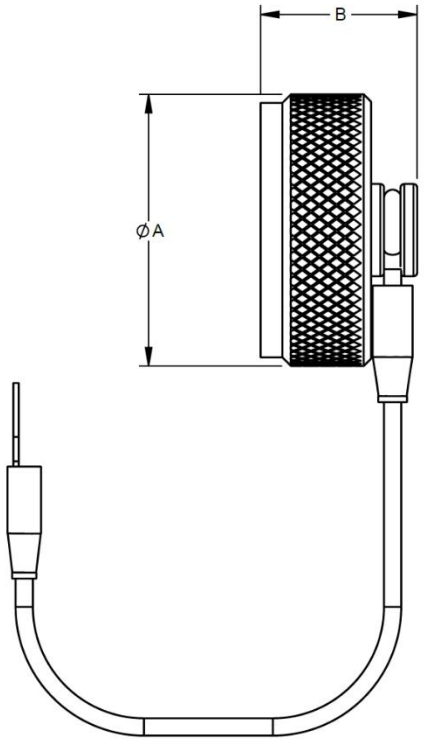
NOMINAL DIMENSIONS: in (mm)			
SHELL SIZE	A	B	C
11	0.879 (22.3)	1.130 (28.7)	0.724 (18.4)
13	1.050 (26.7)	1.130 (28.7)	0.913 (23.2)
15	1.179 (29.9)	1.130 (28.7)	0.913 (23.2)
17	1.317 (33.5)	1.130 (28.7)	1.043 (26.5)
19	1.423 (36.1)	1.130 (28.7)	1.193 (30.3)
21	1.549 (39.3)	1.130 (28.7)	1.283 (32.6)
23	1.667 (42.3)	1.130 (28.7)	1.437 (36.5)
25	1.793 (45.5)	1.130 (28.7)	1.547 (39.3)

Q38DC Dustcovers, Receptacles, Flange Mount, D38999/33 Style, Eyelet Attachment:

Q38DC-RFX-XX





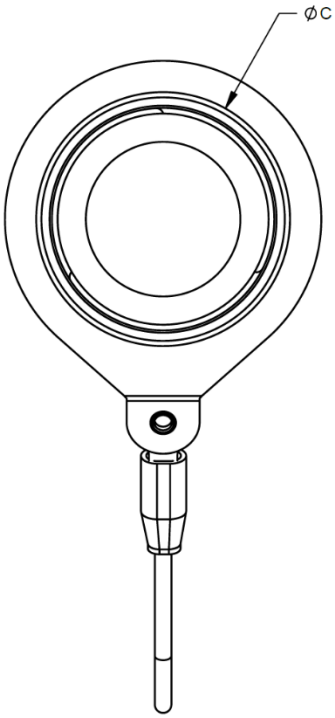


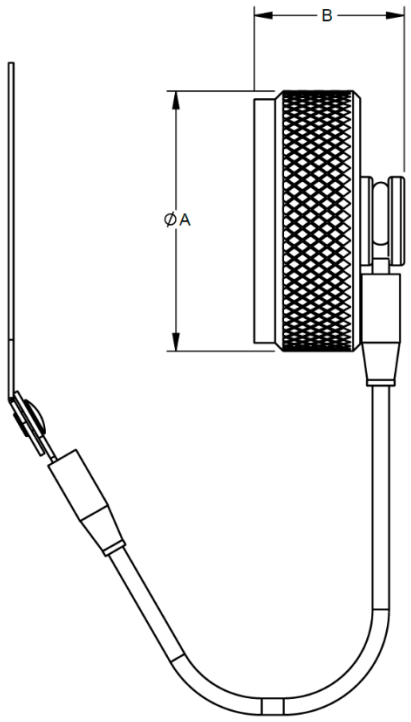
NOMINAL DIMENSIONS: in (mm)			
SHELL SIZE	A	B	C
11	0.945 (24.0)	0.850 (21.6)	0.167 (4.2)
13	1.118 (28.4)	0.850 (21.6)	0.167 (4.2)
15	1.241 (31.5)	0.850 (21.6)	0.167 (4.2)
17	1.361 (34.6)	0.850 (21.6)	0.167 (4.2)
19	1.471 (37.4)	0.850 (21.6)	0.167 (4.2)
21	1.597 (40.6)	0.850 (21.6)	0.167 (4.2)
23	1.723 (43.8)	0.850 (21.6)	0.167 (4.2)
25	1.845 (46.9)	0.850 (21.6)	0.167 (4.2)

Q38DC Dustcovers, Receptacles, Jam Nut, D38999/33 Style, Ring Attachment:

Q38DC-RJX-XX







NOMINAL DIMENSIONS: in (mm)			
SHELL SIZE	A	B	C
11	0.945 (24.0)	0.850 (21.6)	0.913 (23.2)
13	1.118 (28.4)	0.850 (21.6)	1.043 (26.5)
15	1.241 (31.5)	0.850 (21.6)	1.193 (30.3)
17	1.361 (34.6)	0.850 (21.6)	1.283 (32.6)
19	1.471 (37.4)	0.850 (21.6)	1.437 (36.5)
21	1.597 (40.6)	0.850 (21.6)	1.547 (39.3)
23	1.723 (43.8)	0.850 (21.6)	1.689 (42.9)
25	1.845 (46.9)	0.850 (21.6)	1.772 (45.0)

Table I – Q38Shell Strain Relief Options:

Shell Size 11 & 13						
Cable / Conduit Outside Diameter (OD) in (mm)	Heat Shrink Cable Exit		Gland Cable Exit		Gland with Bend Limiter Cable Exit	
	OD Identifier	Length in (mm)	OD Identifier	Length in (mm)	OD Identifier	Length in (mm)
0.142 - 0.177 (3.6 - 4.5)	045	1.50 (38.1)	045	0.843 (21.4)	045	2.122 (53.9)
0.181 - 0.217 (4.6 - 5.5)	055	1.50 (38.1)	055	0.843 (21.4)	055	2.122 (53.9)
0.220 - 0.256 (5.6 - 6.5)	065	1.50 (38.1)	065	0.843 (21.4)	065	2.122 (53.9)
0.260 - 0.295 (6.6 - 7.5)	075	1.50 (38.1)	075	1.091 (27.7)	075	3.480 (88.4)
0.299 - 0.335 (7.6 - 8.5)	085	1.50 (38.1)	085	1.091 (27.7)	085	3.480 (88.4)
0.339 - 0.374 (8.6 - 9.5)	095	1.50 (38.1)	095	1.091 (27.7)	095	3.480 (88.4)
0.378 - 0.413 (9.6 - 10.5)	105	1.50 (38.1)	105	1.091 (27.7)	105	3.480 (88.4)
0.417 - 0.453 (10.6 - 11.5)	115	1.50 (38.1)	115	1.091 (27.7)	115	3.480 (88.4)

* Consult QPC if Cable OD Exceeds 8.5mm for 45 or 90 Degree Backshells. Feasibility will depend on cable construction / flexibility.

Shell Sizes 15 & 17						
Cable / Conduit Outside Diameter (OD) in (mm)	Heat Shrink Cable Exit		Gland Cable Exit		Gland with Bend Limiter Cable Exit	
	OD Identifier	Length in (mm)	OD Identifier	Length in (mm)	OD Identifier	Length in (mm)
0.142 - 0.177 (3.6 - 4.5)	045	1.50 (38.1)	045	1.091 (27.7)	045	3.480 (88.4)
0.181 - 0.217 (4.6 - 5.5)	055	1.50 (38.1)	055	1.091 (27.7)	055	3.480 (88.4)
0.220 - 0.256 (5.6 - 6.5)	065	1.50 (38.1)	065	1.091 (27.7)	065	3.480 (88.4)
0.260 - 0.295 (6.6 - 7.5)	075	1.50 (38.1)	075	1.240 (31.5)	075	3.480 (88.4)
0.299 - 0.335 (7.6 - 8.5)	085	1.50 (38.1)	085	1.240 (31.5)	085	3.480 (88.4)
0.339 - 0.374 (8.6 - 9.5)	095	1.50 (38.1)	095	1.240 (31.5)	095	3.480 (88.4)
0.378 - 0.413 (9.6 - 10.5)	105	1.50 (38.1)	105	1.240 (31.5)	105	3.480 (88.4)
0.417 - 0.453 (10.6 - 11.5)	115	1.50 (38.1)	115	1.240 (31.5)	115	3.480 (88.4)
0.457 - 0.492 (11.6 - 12.5)	125	1.50 (38.1)	125	1.240 (31.5)	125	3.480 (88.4)

* Consult QPC if Cable OD Exceeds 9.5mm for 45 or 90 Degree Backshells. Feasibility will depend on cable construction / flexibility.

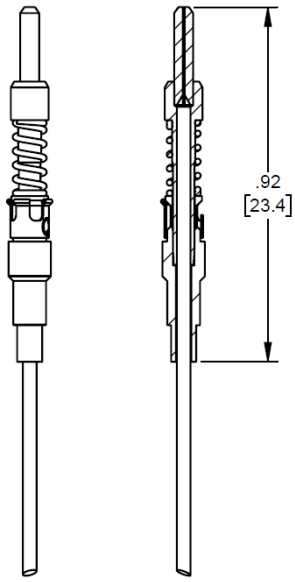
Table I – Q38Shell Strain Relief Options:

Shell Size 19, 21, 23, & 25						
Cable / Conduit Outside Diameter (OD) in (mm)	Heat Shrink Cable Exit		Gland Cable Exit		Gland with Bend Limiter Cable Exit	
	OD Identifier	Length in (mm)	OD Identifier	Length in (mm)	OD Identifier	Length in (mm)
0.142 - 0.177 (3.6 - 4.5)	045	1.50 (38.1)	045	1.091 (27.7)	045	3.480 (88.4)
0.181 - 0.217 (4.6 - 5.5)	055	1.50 (38.1)	055	1.091 (27.7)	055	3.480 (88.4)
0.220 - 0.256 (5.6 - 6.5)	065	1.50 (38.1)	065	1.091 (27.7)	065	3.480 (88.4)
0.260 - 0.295 (6.6 - 7.5)	075	1.50 (38.1)	075	1.240 (31.5)	075	3.480 (88.4)
0.299 - 0.335 (7.6 - 8.5)	085	1.50 (38.1)	085	1.240 (31.5)	085	3.480 (88.4)
0.339 - 0.374 (8.6 - 9.5)	095	1.50 (38.1)	095	1.240 (31.5)	095	3.480 (88.4)
0.378 - 0.413 (9.6 - 10.5)	105	1.50 (38.1)	105	1.240 (31.5)	105	3.480 (88.4)
0.417 - 0.453 (10.6 - 11.5)	115	1.50 (38.1)	115	1.240 (31.5)	115	3.480 (88.4)
0.457 - 0.492 (11.6 - 12.5)	125	1.50 (38.1)	125	1.240 (31.5)	125	3.480 (88.4)
0.496 - 0.531 (12.6 - 13.5)	135	1.50 (38.1)	135	1.380 (35.1)	135	4.510 (114.6)
0.535 - 0.571 (13.6 - 14.5)	-	-	145	1.380 (35.1)	145	4.510 (114.6)
0.575 - 0.610 (14.6 - 15.5)	-	-	155	1.380 (35.1)	155	4.510 (114.6)
0.614 - 0.689 (15.6 - 17.5)	-	-	175	1.380 (35.1)	175	4.510 (114.6)

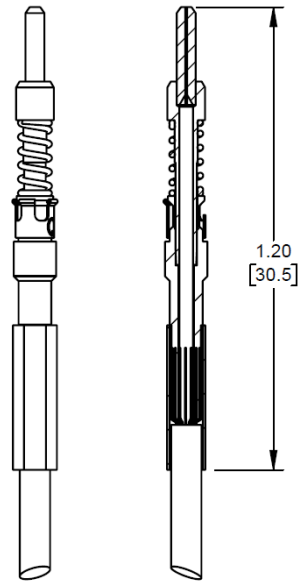
* Consult QPC if Cable OD Exceeds 11.5mm for 45 or 90 Degree Backshells. Feasibility will depend on cable construction / flexibility.

Q38HD High Density Termini:

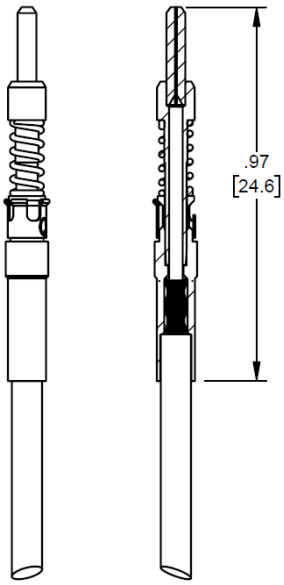




Q38HD-TRM
(No Crimp, 900µm Fiber)



Q38HD-TRM-CM & Q38HD-CMP-2MM
(With Crimp, 2mm Cable)



Q38HD-TRM-E2
(Epoxy Cup, 2mm Cable)

PART NUMBER	DESCRIPTION
Q38HD-TRM	Q38HD Termini, Pin, 1.25mm Ferrule OD, 125.5µm, Singlemode / Multimode, 900µm Fiber
Q38HD-TRM-CM	Q38HD Termini, Pin, 1.25mm Ferrule OD, 125.5µm, Singlemode / Multimode, with 2mm Crimp
Q38HD-TRM-E2	Q38HD Termini, Pin, 1.25mm Ferrule OD, 125.5µm, Singlemode / Multimode, 2mm Epoxy Cup
Q38HD-CMP-2MM	Q38HD Termini Crimp Sleeve, 2.0mm, Stainless Steel
Q38HD-TRM-BLK	Q38HD Termini, Dummy

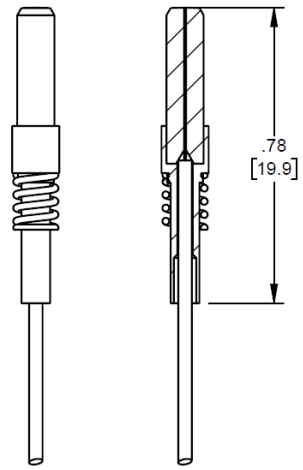
* Q38HD-TRM-CM Termini include the Q38HD-CMP-2MM Crimp Sleeve. Use Part Number Q38HD-CMP-2MM to order spare crimps if needed
* Ferrules for other fiber sizes are available

Q38HD Alignment Sleeve Retainers (ASRs):

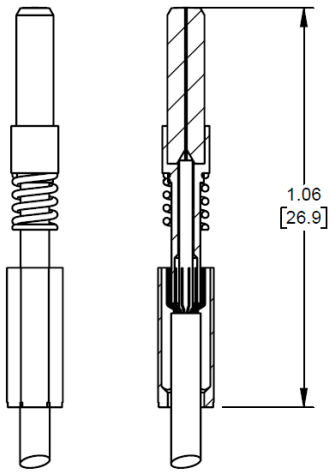
PART NUMBER	DESCRIPTION
Q38HD-SRN-11S1-P	ASR, Q38HD Connector, Shell Size 11, For 4 x HD Termini, Aluminum, Hard Anodize, Black, Plug Channel Marking
Q38HD-SRS-11S1-P	ASR, Q38HD Connector, Shell Size 11, For 4 x HD Termini, Stainless Steel, Passivated, Plug Channel Marking
Q38HD-SRW-11S1-P	ASR, Q38HD Connector, Shell Size 11, For 4 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Plug Channel Marking
Q38HD-SRN-11S1-R	ASR, Q38HD Connector, Shell Size 11, For 4 x HD Termini, Aluminum, Hard Anodize, Black, Receptacle Channel Marking
Q38HD-SRS-11S1-R	ASR, Q38HD Connector, Shell Size 11, For 4 x HD Termini, Stainless Steel, Passivated, Receptacle Channel Marking
Q38HD-SRW-11S1-R	ASR, Q38HD Connector, Shell Size 11, For 4 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Receptacle Channel Marking
Q38HD-SRN-17S4-P	ASR, Q38HD Connector, Shell Size 17, For 20 x HD Termini, Aluminum, Hard Anodize, Black, Plug Channel Marking
Q38HD-SRS-17S4-P	ASR, Q38HD Connector, Shell Size 17, For 20 x HD Termini, Stainless Steel, Passivated, Plug Channel Marking
Q38HD-SRW-17S4-P	ASR, Q38HD Connector, Shell Size 17, For 20 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Plug Channel Marking
Q38HD-SRN-17S4-R	ASR, Q38HD Connector, Shell Size 17, For 20 x HD Termini, Aluminum, Hard Anodize, Black, Receptacle Channel Marking
Q38HD-SRS-17S4-R	ASR, Q38HD Connector, Shell Size 17, For 20 x HD Termini, Stainless Steel, Passivated, Receptacle Channel Marking
Q38HD-SRW-17S4-R	ASR, Q38HD Connector, Shell Size 17, For 20 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Receptacle Channel Marking
Q38HD-SRN-19S5-P	ASR, Q38HD Connector, Shell Size 19, For 28 x HD Termini, Aluminum, Hard Anodize, Black, Plug Channel Marking
Q38HD-SRS-19S5-P	ASR, Q38HD Connector, Shell Size 19, For 28 x HD Termini, Stainless Steel, Passivated, Plug Channel Marking
Q38HD-SRW-19S5-P	ASR, Q38HD Connector, Shell Size 19, For 28 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Plug Channel Marking
Q38HD-SRN-19S5-R	ASR, Q38HD Connector, Shell Size 19, For 28 x HD Termini, Aluminum, Hard Anodize, Black, Receptacle Channel Marking
Q38HD-SRS-19S5-R	ASR, Q38HD Connector, Shell Size 19, For 28 x HD Termini, Stainless Steel, Passivated, Receptacle Channel Marking
Q38HD-SRW-19S5-R	ASR, Q38HD Connector, Shell Size 19, For 28 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Receptacle Channel Marking
Q38HD-SRN-23S7-P	ASR, Q38HD Connector, Shell Size 23, For 48 x HD Termini, Aluminum, Hard Anodize, Black, Plug Channel Marking
Q38HD-SRS-23S7-P	ASR, Q38HD Connector, Shell Size 23, For 48 x HD Termini, Stainless Steel, Passivated, Plug Channel Marking
Q38HD-SRW-23S7-P	ASR, Q38HD Connector, Shell Size 23, For 48 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Plug Channel Marking
Q38HD-SRN-23S7-R	ASR, Q38HD Connector, Shell Size 23, For 48 x HD Termini, Aluminum, Hard Anodize, Black, Receptacle Channel Marking
Q38HD-SRS-23S7-R	ASR, Q38HD Connector, Shell Size 23, For 48 x HD Termini, Stainless Steel, Passivated, Receptacle Channel Marking
Q38HD-SRW-23S7-R	ASR, Q38HD Connector, Shell Size 23, For 48 x HD Termini, Aluminum Nickel Bronze per C63000, No Finish, Bronze, Receptacle Channel Marking

Q38EB Termini:

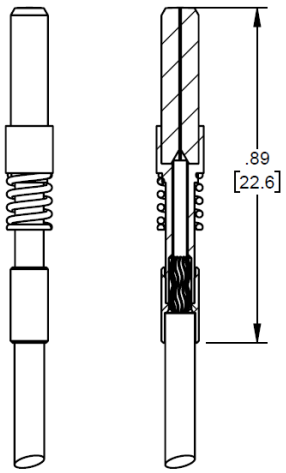




QM-TRM
(No Crimp, 900µm Fiber)



QM-TRM & QMINI-CMP-2MM
(With Crimp, 2mm Cable)



QM-TRM-E2
(Epoxy Cup, 2mm Cable)

PART NUMBER	DESCRIPTION
QM-TRM	Terminus Assembly, QMini, 2.5mm Ferrule OD, 125.5µm, Singlemode / Multimode, 900µm Fiber or 2mm Crimp
QM-TRM-E2	Terminus Assembly, QMini, 2.5mm Ferrule OD, 125.5µm, Singlemode / Multimode, 2mm Epoxy Cup
QMINI-CMP-2MM	Crimp Sleeve, 2.0mm, Stainless Steel

* QMini and QMicro Inserts use the same Termini. Due to the channel spacing on the QMicro Inserts, traditional cable crimps are not an option for Q38EB Connectors that use these Inserts. To retain a 2mm jacketed cable or subunit, please use the E2 Style Epoxy Cup Terminus.

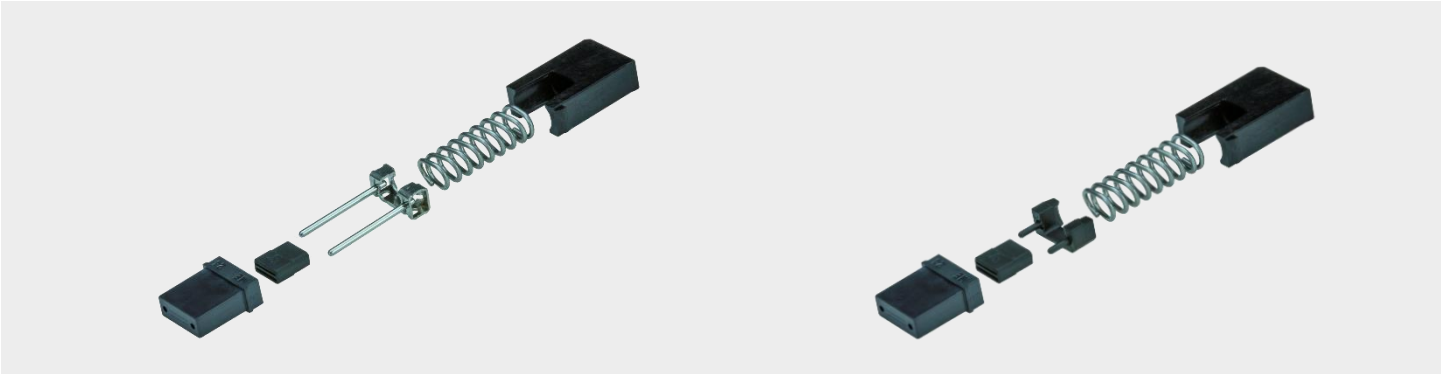
Q38EB QMicro Inserts (Shell Sizes 11 & 23)

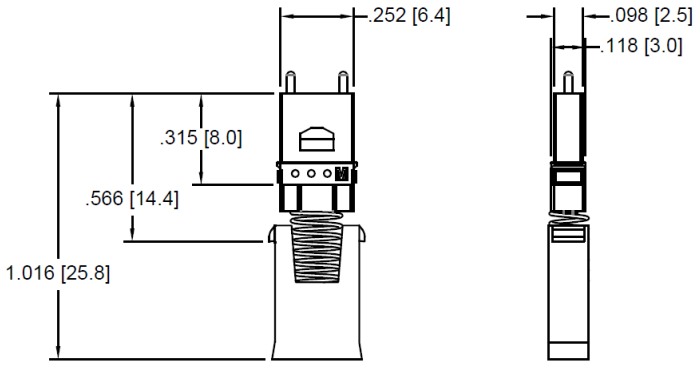
PART NUMBER	DESCRIPTION
QMICRO-INS-02SM	QMicro Insert, 2 Channel, Singlemode (1310/1550nm), Includes Termini Retainer Plate and Screw
QMICRO-INS-02MM	QMicro Insert, 2 Channel, Multimode (850/1300nm), Includes Termini Retainer Plate and Screw
QMICRO-INS-04SM	QMicro Insert, 4 Channel, Singlemode (1310/1550nm), Includes Termini Retainer Plate and Screw
QMICRO-INS-04MM	QMicro Insert, 4 Channel, Multimode (850/1300nm), Includes Termini Retainer Plate and Screw

Q38EB QMini Inserts (Shell Size 13)

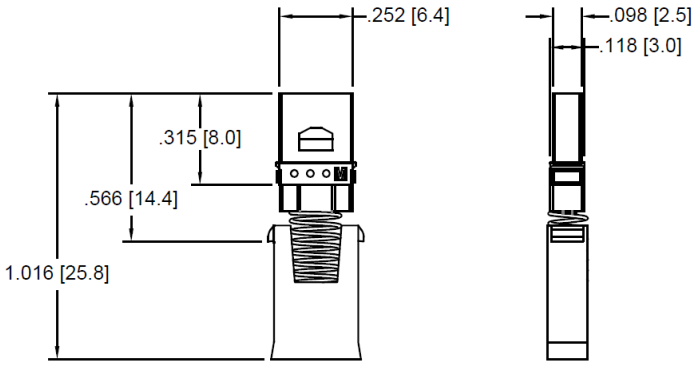
PART NUMBER	DESCRIPTION
QMINI-INS-02SM	QMini Insert, 2 Channel, Singlemode (1310/1550nm), Includes Termini Retainer Plate and Screw
QMINI-INS-02MM	QMini Insert, 2 Channel, Multimode (850/1300nm), Includes Termini Retainer Plate and Screw
QMINI-INS-04SM	QMini Insert, 4 Channel, Singlemode (1310/1550nm), Includes Termini Retainer Plate and Screw
QMINI-INS-04MM	QMini Insert, 4 Channel, Multimode (850/1300nm), Includes Termini Retainer Plate and Screw

Q38MT MT Termini Kits – QPC Standard Insert Layouts:





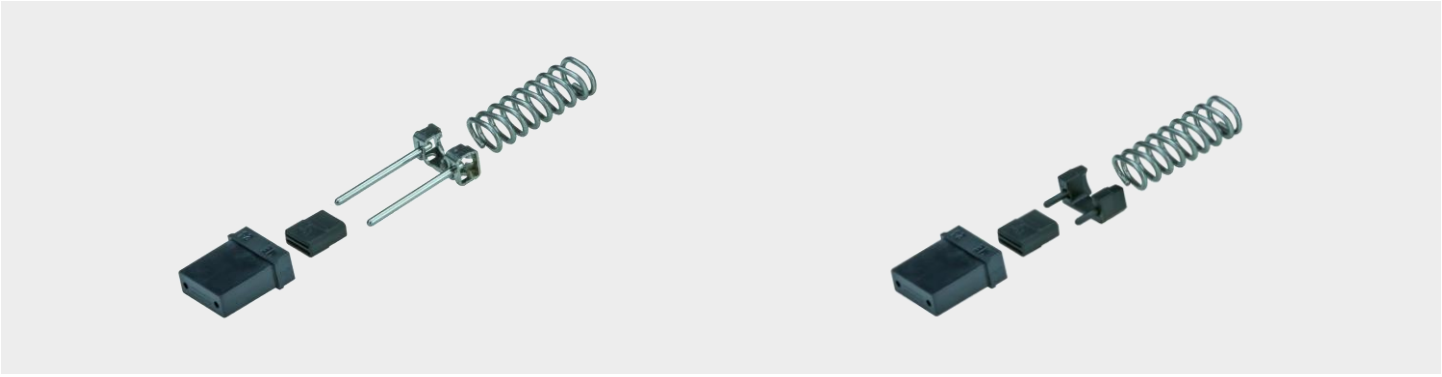
Q38MT-MTM-XXCH-XX

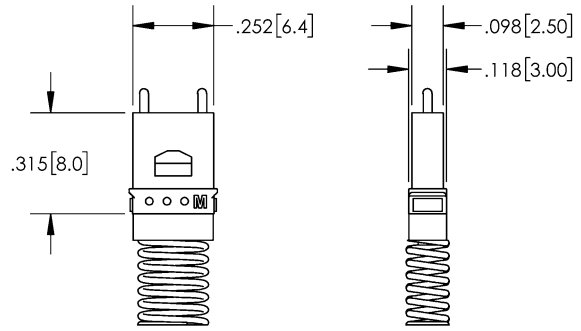


Q38MT-MTF-XXCH-XX

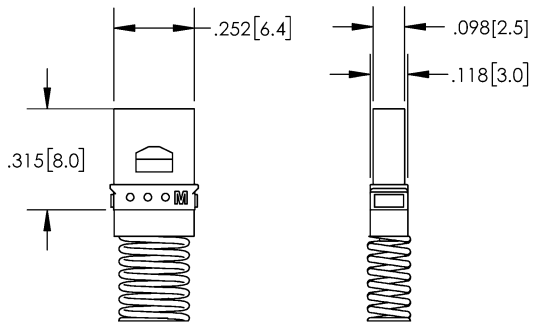
PART NUMBER	DESCRIPTION
Q38MT-MTM-12CH-SM	Q38MT Termini Kit, MT, Male (with pins), 12 Fiber, SM
Q38MT-MTF-12CH-SM	Q38MT Termini Kit, MT, Female (without pins), 12 Fiber, SM
Q38MT-MTM-12CH-MM	Q38MT Termini Kit, MT, Male (with pins), 12 Fiber, MM
Q38MT-MTF-12CH-MM	Q38MT Termini Kit, MT, Female (without pins), 12 Fiber, MM
Q38MT-MTM-24CH-SM	Q38MT Termini Kit, MT, Male (with pins), 24 Fiber, SM
Q38MT-MTF-24CH-SM	Q38MT Termini Kit, MT, Female (without pins), 24 Fiber, SM
Q38MT-MTM-24CH-MM	Q38MT Termini Kit, MT, Male (with pins), 24 Fiber, MM
Q38MT-MTF-24CH-MM	Q38MT Termini Kit, MT, Female (without pins), 24 Fiber, MM

Q38MT MT Termini Kits – VITA 87 Style Insert Layouts:





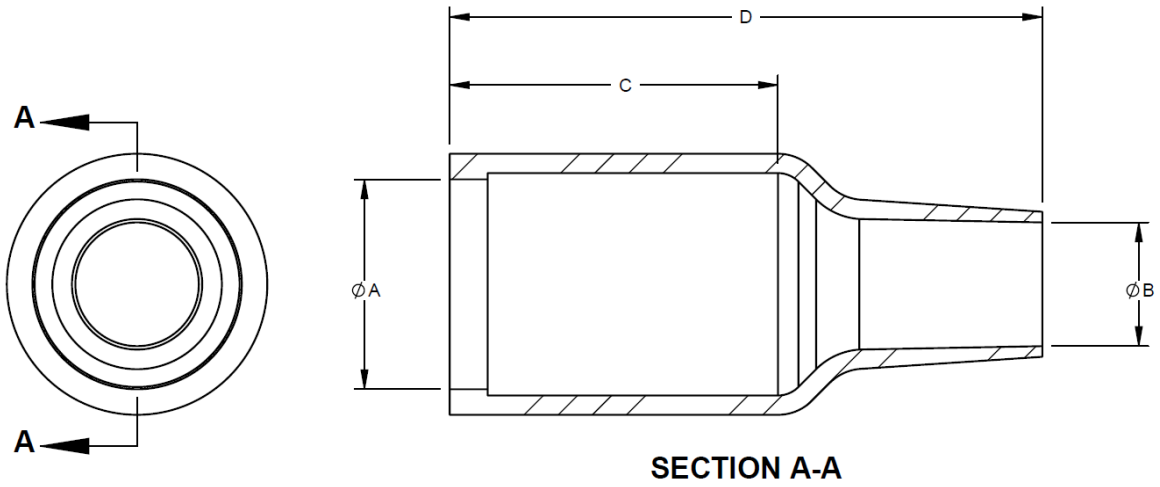
Q38MT-V87-MTM-XXCH-XX



Q38MT-V87-MTF-XXCH-XX

PART NUMBER	DESCRIPTION
Q38MT-V87-MTM-12CH-SM	Q38MT Termini Kit, VITA 87 Style, MT, Male (with pins), 12 Fiber, SM
Q38MT-V87-MTF-12CH-SM	Q38MT Termini Kit, VITA 87 Style, MT, Female (without pins), 12 Fiber, SM
Q38MT-V87-MTM-12CH-MM	Q38MT Termini Kit, VITA 87 Style, MT, Male (with pins), 12 Fiber, MM
Q38MT-V87-MTF-12CH-MM	Q38MT Termini Kit, VITA 87 Style, MT, Female (without pins), 12 Fiber, MM
Q38MT-V87-MTM-24CH-SM	Q38MT Termini Kit, VITA 87 Style, MT, Male (with pins), 24 Fiber, SM
Q38MT-V87-MTF-24CH-SM	Q38MT Termini Kit, VITA 87 Style, MT, Female (without pins), 24 Fiber, SM
Q38MT-V87-MTM-24CH-MM	Q38MT Termini Kit, VITA 87 Style, MT, Male (with pins), 24 Fiber, MM
Q38MT-V87-MTF-24CH-MM	Q38MT Termini Kit, VITA 87 Style, MT, Female (without pins), 24 Fiber, MM

Q38Shell Heat Shrink Details:



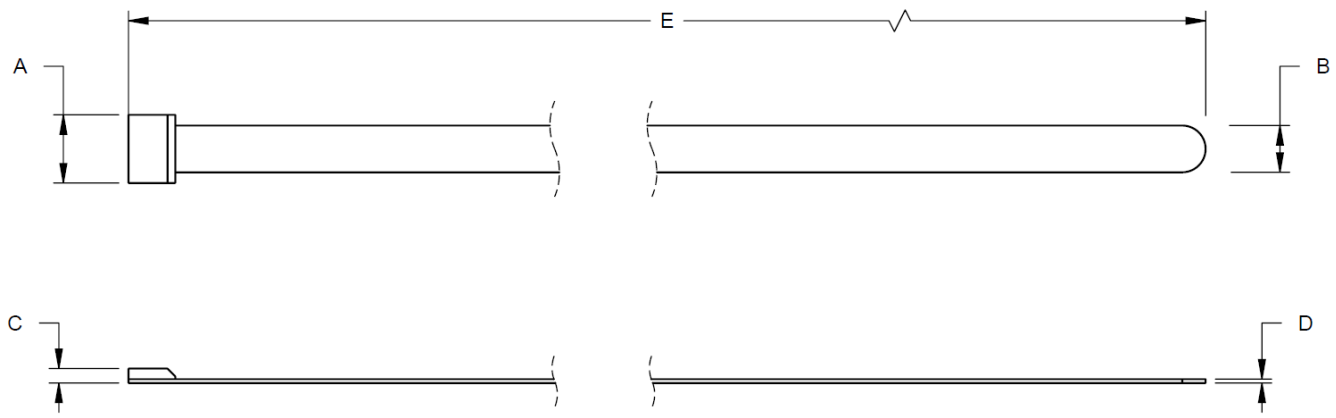
NOMINAL DIMENSIONS: in (mm)				
CONDITION	A	B	C	D
AS SUPPLIED	0.94 (24.0)	0.55 (14.0)	0.83 (21.0)	1.50 (38.0)
ACTIVATED	0.41 (10.4)	0.22 (5.6)	0.83 (21.0)	1.50 (38.0)

* Activated Dimensions "A" and "B" are minimums. The Cable Exits on Q38Shell Heat Shrink Backshells have an OD ranging from 0.58" (14.7mm) on Shell Size 11 to 0.82" (20.8mm) on Shell Size 25, so the same boot is used for the full product line. Cable ODs must exceed 0.250" (6.35mm) to ensure a proper seal, for smaller OD cables, the diameter must be built up using an additional layer of Adhesive Lined Heat Shrink as detailed below.

PART NUMBER	DESCRIPTION
Q38SHELL-HSBT-135-A	Heat Shrink Boot, Black, For Cable OD 6.6mm to 13.5mm, Adhesive Lined, 1.5 Inch Length
Q38SHELL-HS-250-A	Heat Shrink Tubing, Black, 0.250 Inch Inside Diameter, Adhesive Lined, 3 Inch Length

* Q38Shell Backshells using Heat Shrink Cable Exits (Cable Exit Options "HS" and "HC") include the Heat Shrink Boot (Q38SHELL-HSBT-135-A) and also include an additional piece of Adhesive Lined Heat Shrink (Q38SHELL-HS-250-A) to Build up the Cable Diameter for OD Identifiers 045, 055, and 065 to a minimum of 0.250" (6.35mm) to ensure a proper seal with the Heat Shrink Boot.

Q38Shell Band Clamp Details:



NOMINAL DIMENSIONS: in (mm)					
WIDTH	A	B	C	D	E
1/8"	0.195 (5.0)	0.120 (3.0)	0.053 (1.3)	0.015 (0.4)	8.125 (206.4)
1/4"	0.350 (8.9)	0.240 (6.1)	0.074 (1.9)	0.020 (0.5)	14.250 (362.0)

PART NUMBER	DESCRIPTION
Q38SHELL-BC-125	Band Clamp, Stainless Steel, For Cable OD 3.6mm to 17.5mm, 1/8" Wide x 8.125" Long
Q38SHELL-BC-250	Band Clamp, Stainless Steel, For Cable OD 3.6mm to 17.5mm, 1/4" Wide x 14.25" Long

* Q38Shell Backshells using Heat Shrink with Band Clamp Cable Exits (Cable Exit Option "HC") include the Band Clamp (Q38SHELL-BC-125). Wider, 1/4" Band Clamps can be used interchangeably depending on application requirements. These are purchased separately and require a different Banding Tool than the 1/8".

Q38 Tools:

PART NUMBER	DESCRIPTION
TK-058	Q38 Tool Kit (Includes all items below)
PT-001-0900	Fiber Optic Termini Insertion Tool, 900µm Buffered Fiber, Q38HD Termini
PT-001-2000	Fiber Optic Termini Insertion Tool, 2.0mm Jacketed Fiber, Q38HD Termini
PT-002-H	Fiber Optic Termini Removal Tool, Q38HD Termini
PT-480-INS	Fiber Optic Termini Insertion Tool, Q38MT Termini
PT-480-REM	Fiber Optic Termini Removal Tool, Q38MT Termini
PT-005	Fiber Optic Termini Crimp Tool, 2mm & 3mm (Hex Sizes .091 / .128 / .147), Q38HD / Q38EB Termini
PT-590	Torque-Measuring Screwdriver, Hex Drive, 2.5 to 11.5 in.-lbs. Adjustable Torque, For Q38HD ASR
PT-612	Modified Hex Bit, 5/64", with 1/4" Shank, Overall Length 2", For Q38HD ASR
PT-630	Torque Fixture, Q38, Plate, Size 11, 13, 15, 17
PT-631	Torque Fixture, Q38, Plate, Size 19, 21, 23, 25
PT-632-11	Torque Fixture, Q38, Shell Size 11
PT-632-13	Torque Fixture, Q38, Shell Size 13
PT-632-15	Torque Fixture, Q38, Shell Size 15
PT-632-17	Torque Fixture, Q38, Shell Size 17
PT-632-19	Torque Fixture, Q38, Shell Size 19
PT-632-21	Torque Fixture, Q38, Shell Size 21
PT-632-23	Torque Fixture, Q38, Shell Size 23
PT-632-25	Torque Fixture, Q38, Shell Size 25
PT-635	Lanyard Crimp Tool, Open Frame Crimp Tool (M22520/5-01), Daniels HX4, With Die Set (M22520/10-19), .197" Hex x .400" Long, For Q38DC “PG” Style Dustcovers
PT-790	Banding Tool for 1/8” Wide Band Clamps
PT-791	Banding Tool for 1/4” Wide Band Clamps

Notes & Sketches:

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QPC FIBER OPTIC

Military Aerospace Defense Industrial Oil & Gas Mining Energy Marine Entertainment Audio Broadcast





