

# TrustLink Metal Shell Connectors

## Rugged reliability – excellent performance



The TrustLink Metal Shell (MS) series includes a range of cutting-edge power and signal connectivity solutions for critical subsea and offshore applications, in metal shell housing.

Based on advanced technology, rugged materials and MacArtney connectivity know-how, the TrustLink MS series is manufactured from stainless steel and comes in three shell sizes compatible with industry standards. Due to their rugged reliability, these high-density connectors are suitable for the harshest of marine environments and the compact modular design is advantageous where limited space is a factor.

The TrustLink MS connectors, provided in several configurations, ranges from 4 to 37 electrical contacts. The series thereby offers excellent flexibility to operators of subsea equipment and systems.

Manufactured as standard in stainless steel the TrustLink connector has a life expectancy of 25 years with cathodic protection and regular maintenance. Connectors manufactured in titanium have a life expectancy of 25 years in a subsea environment with no additional protection.

All TrustLink MS connectors comply with the EN 60664-1 requirements for clearance and creepage distances, meeting safety standards for pollution degree 2 within a microenvironment. All metal parts are provided with an anti-seizing surface.

The connectors are type tested according to the test requirements of the EN 50393 standard, table 5

All connectors and bulkheads are supplied unterminated. However, custom moulding and termination by MacArtney is available from MacArtney's global stock that includes an extensive range of standard MacArtney cables.

### Reversed male/female inserts

The TrustLink series allows mounting of either a male or a female insert in the same housing, making it a very versatile connector.

### Trustworthy testing

Thoroughly tested at every stage during production, all TrustLink connectors ensure full integrity, functionality, and first-rate performance from the surface to seabed.

### Highlighted specifications

- Depth rating 600 bar (mated)
- Available in three shell sizes
- Up to 25 A rating
- Designed and tested to the EN 60664-1 and EN 50393-Table 5 standard

### Features and benefits

- Available from global stock
- CCP connectors are available in overmould and boot versions
- Interchangeable and reversible male/female inserts
- Anti-seizing surface
- High pin counts
- Available in multiple configurations
- Robust and smooth keyway
- Fast turnaround time for moulding and termination
- Compact modular design
- Large range of standard cables in stock
- Traceability on inserts

### Applications

- ROV/AUV/trenchers
- Naval systems and equipment
- Oceanographic systems, equipment and instrumentation solutions
- Seismic/ocean bottom systems
- Subsea nodes
- Underwater camera, video and lighting
- Survey systems and instrumentation
- Offshore oil and gas systems
- Subsea renewable systems
- Power supply for underwater pumps
- Hazardous environment systems
- Underwater telemetry systems
- Dredging
- Harsh environment monitoring systems

### Options

- Other materials are available on request
- Can be supplied with moulding and termination
- Water blocked in case of cable damage
- PBOF version
- Available for pressure balanced systems. Back pressure rated to 600 Bar

## Specifications - size A

### Electrical

	4 contacts	8 contacts	12 contacts
Contact size:	14 AWG	18 AWG	20 AWG
Contact size:	2.1 mm <sup>2</sup>	0.8 mm <sup>2</sup>	0.5 mm <sup>2</sup>
Voltage rating:	600 V	600 V	250 V
Dielectric withstand:	4,000 VAC	4,000 VAC	2,500 VAC
Current rating			
1-4 contacts loaded:	25 A	12 A	12 A
Current rating			
5-10 contacts loaded:		8 A	7 A
Current rating			
All contacts loaded:	25 A	8 A	7 A

### Materials

Metal shell housing:	Diamond polished AISI 316*
Locking sleeves:	Diamond polished Nickel Aluminium Bronze C63000*
Pressure cap:	Diamond polished AISI 316*
Dust cap:	POM
Electrical insert:	Glass reinforced high performance thermoplastic
O-ring:	FPM-75

### Temperature rating:

Water:	-4 to 70°C/25 to 158°F
Air:	-25 to 70°C/13 to 158°F
Storage:	-25 to 70°C/13 to 158°F

### Standards

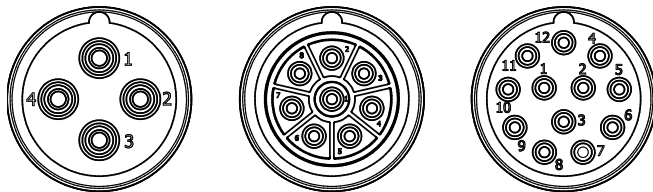
Creepage distances and clearance:	EN 60664-1, tables F2 and F4
Electrical low voltage tests:	EN 50393, table 5

### Environmental

Qualified pressure tested:	Mated 720 bar/10,400 psi
Depth rating:	Mated 600 bar/8,700 psi

\*Other materials on request

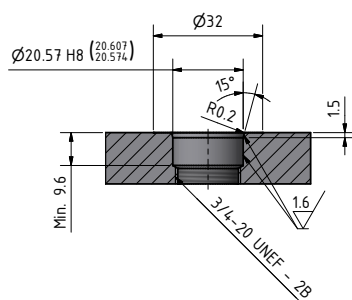
Face view (male)



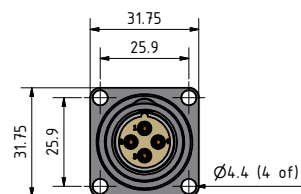
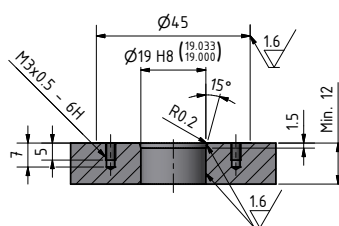
### Recommended cables

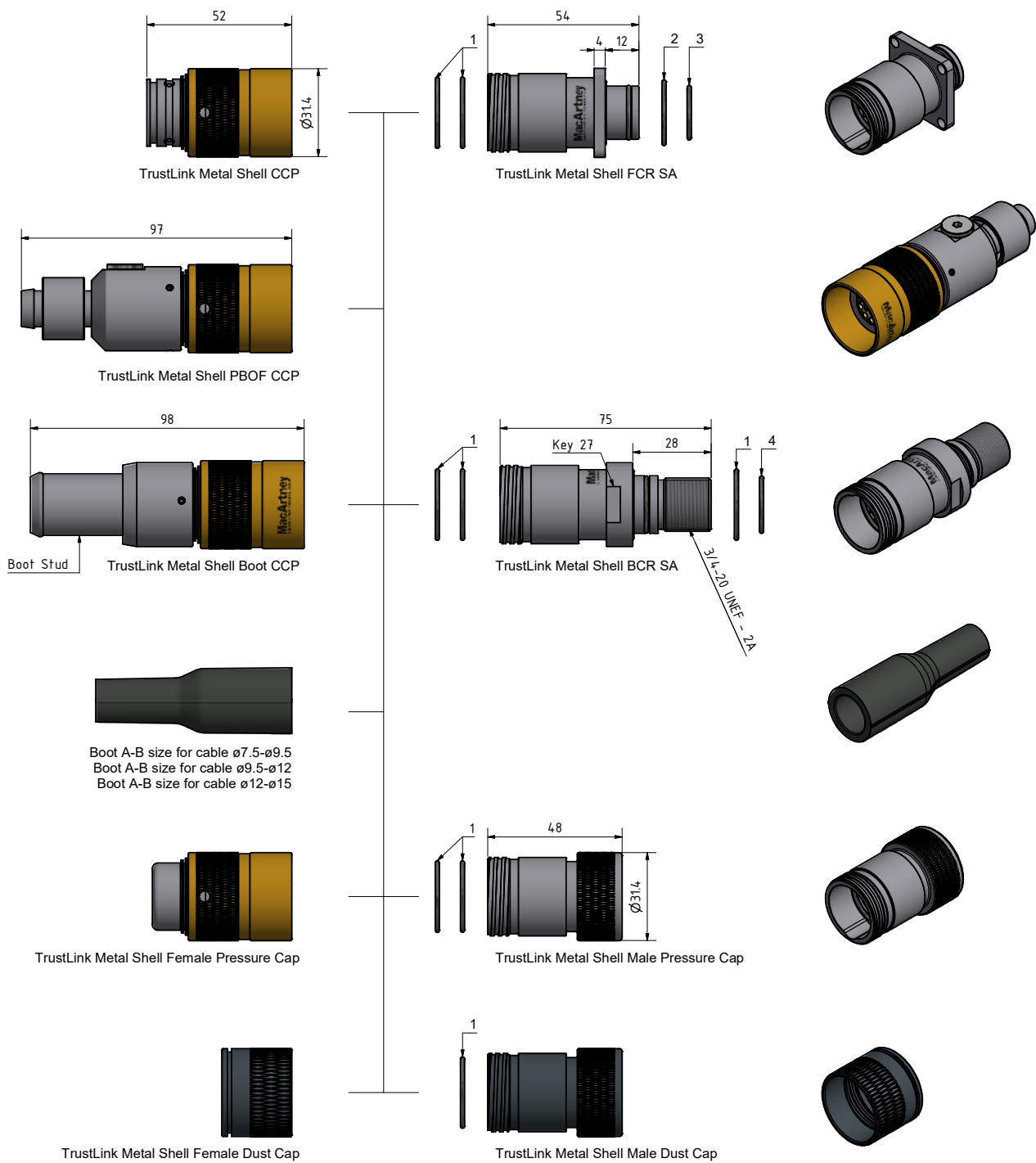
4 conductor:	Type 50041
8 conductor:	Type 50081
12 conductor:	Type 50121

Mounting hole for BCR SA



Mounting hole for FCR SA





O-rings:

1.  $\varnothing 22.5 \times 1.5$  FPM-75
2.  $\varnothing 20.5 \times 1.5$  FPM-75
3.  $\varnothing 16.5 \times 1.5$  FPM-75
4.  $\varnothing 17.5 \times 1.5$  FPM-75

All measurements in millimetres (mm)

## Specifications - size B

## Electrical

	<b>16 contacts</b>	<b>19 contacts</b>
Contact size:	2 x 16 and 14 x 20 AWG	20 AWG
Contact size:	1.3 and 0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>
Voltage rating:	600/250 V	250 V
Dielectric withstand:	4,000/2,500 VAC	2,500 VAC
Current rating 1-4 contacts loaded:	20 and 12 A	12 A
Current rating 5-10 contacts loaded:	11 and 7 A	7 A
Current rating All contacts loaded:	9 and 6 A	6 A

## Materials

Metal shell housing:	Diamond polished AISI 316*	Temperature rating:	
Locking sleeves:	Diamond polished Nickel Aluminium Bronze C63000*	Water:	-4 to 70°C/25 to 158°F
		Air:	-25 to 70°C/13 to 158°F
		Storage:	-25 to 70°C/13 to 158°F
Pressure cap:	Diamond polished AISI 316*		
Dust cap:	POM		
Electrical insert:	Glass reinforced high performance thermoplastic	<b>Standards</b>	
O-ring:	FPM-75	Creepage distances and clearance:	EN 60664-1, tables E2

## Standards

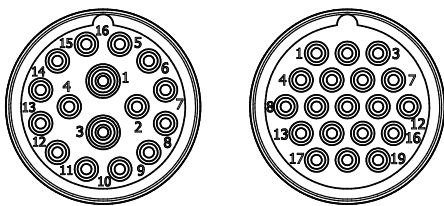
Creepage distances and clearance:	EN 60664-1, tables F2 and F4
Electrical low voltage tests:	EN 50393, table 5

## Environmental

Qualified pressure tested: Mated 720 bar/10,400 psi  
Depth rating: Mated 600 bar/8,700 psi

\*Other materials on request

Face view (male)

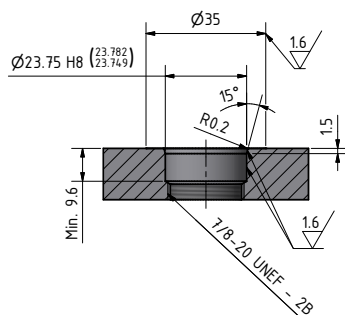


## Recommended cables

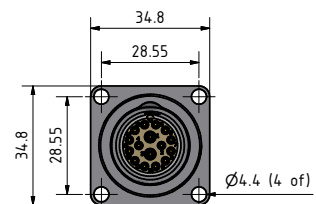
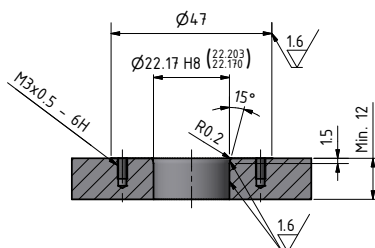
16 conductor: Type 50161

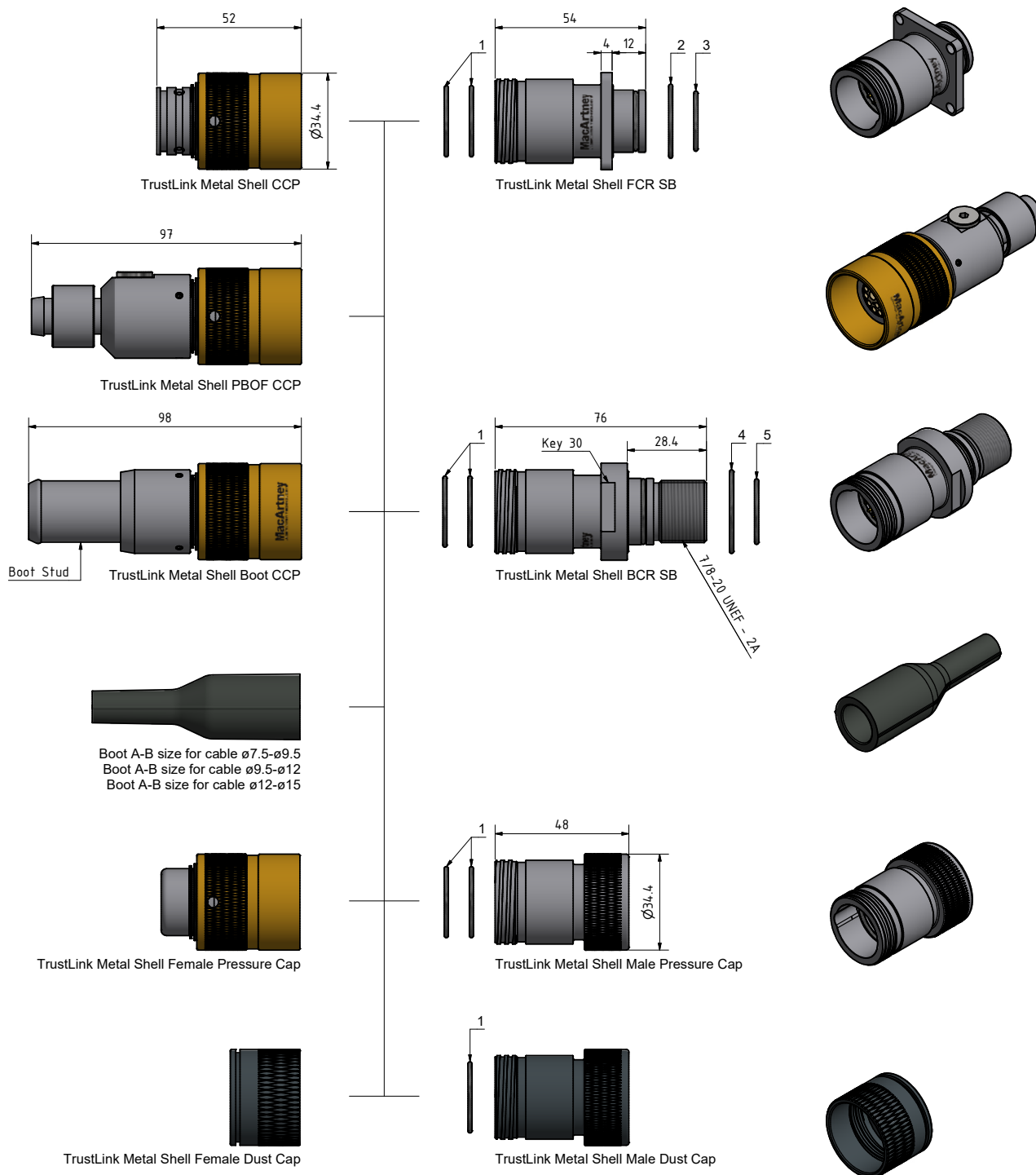
19 conductor: Type 50191

Mounting hole for BCR SB



Mounting hole for FCR SB





O-rings:

1. Ø22.5 x 1.5 FPM-75
2. Ø23.5 x 1.5 FPM-75
3. Ø18.5 x 1.5 FPM-75
4. Ø27.0 x 1.5 FPM-75
5. Ø20.5 x 1.5 FPM-75

All measurements in millimetres (mm)

## Specifications - size C

### Electrical

	26 contacts	37 contacts
Contact size:	20 AWG	20 AWG
Contact size:	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>
Voltage rating:	250 V	250 V
Dielectric withstand:	2,500 VAC	2,500 VAC
Current rating		
1-4 contacts loaded:	12 A	12 A
Current rating		
5-10 contacts loaded:	7 A	7 A
Current rating		
All contacts loaded:	5 A	5 A

### Materials

Metal shell housing:	Diamond polished AISI 316*	Temperature rating:	
Locking sleeves:	Diamond polished	Water:	-4 to 70°C/25 to 158°F
	Nickel Aluminium Bronze	Air:	-25 to 70°C/13 to 158°F
	C63000*	Storage:	-25 to 70°C/13 to 158°F
Pressure cap:	Diamond polished AISI 316*		
Dust cap:	POM		
Electrical insert:	Glass reinforced high performance thermoplastic		
O-ring:	FPM-75		

### Environmental

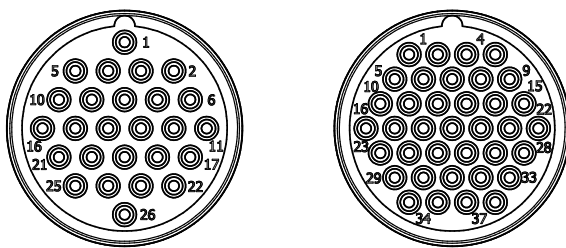
Qualified pressure tested:	Mated 720 bar/10,400 psi
Depth rating:	Mated 600 bar/8,700 psi

### Standards

Creepage distances and clearance:	EN 60664-1, tables F2 and F4
Electrical low voltage tests:	EN 50393, table 5

\*Other materials on request

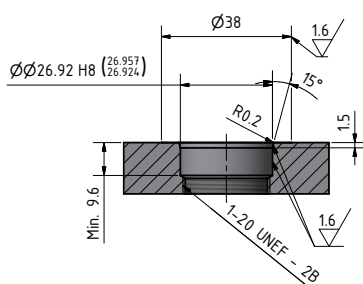
Face view (male)



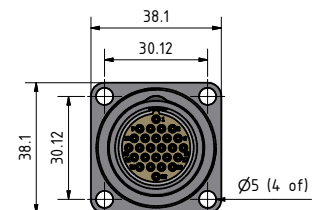
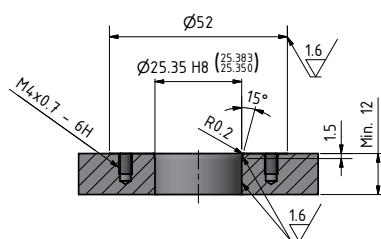
### Recommended cables

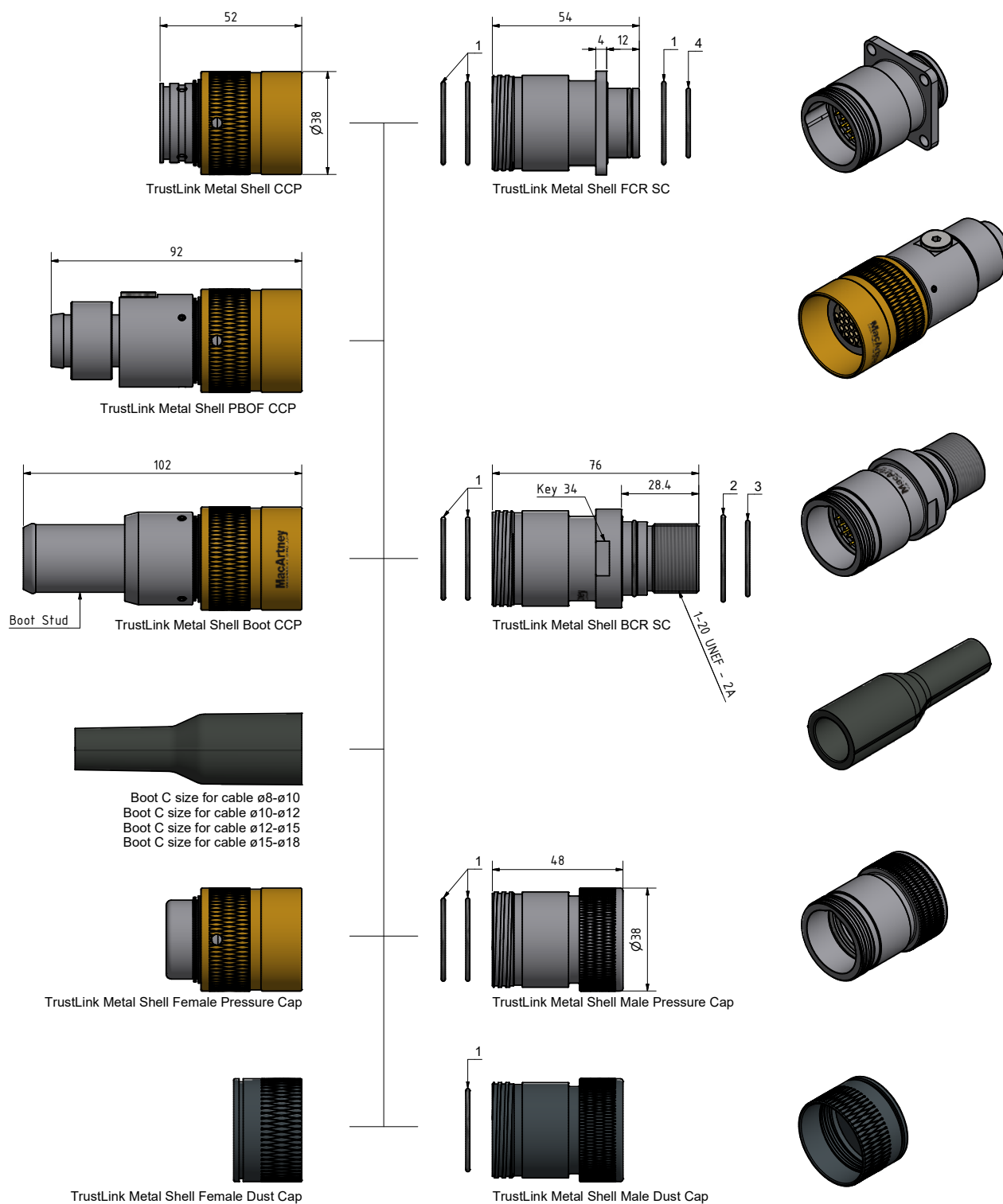
26 conductor:	Type 50261
37 conductor:	Type 50371

Mounting hole for BCR SC



Mounting hole for FCR SC





1.  $\varnothing 27.5 \times 1.5$  FPM-75
2.  $\varnothing 29.0 \times 1.5$  FPM-75
3.  $\varnothing 25.0 \times 1.5$  FPM-75
4.  $\varnothing 22.5 \times 1.5$  FPM-75

All measurements in millimetres (mm)