

# Martec Subsea Booted Connector

## M-SBC Series

The Martec Subsea Booted Connector has been developed for mission critical subsea and downhole instrumentation applications. The push on key located boot-plug and receptacle design allows on-site or workshop harnessing using simple hand-held crimp tools.

- Booted plug provides an alternative to hard wiring ideal for applications requiring periodic maintenance.
- Boot provides a robust and reliable retention of plug to the receptacle, suited to harsh environments.
- Field Installation.
- 15 Kpsi (1,000 Bar) pressure tight hermetic glass sealed receptacle.
- Weld mountable receptacle or custom housed.
- Seawater-tight boot with individual pressure energised wire seals, no need for gels or grease.
- Crimp contacts for 22 AWG wire (field installed or factory preassembled)



## Environmental/Mechanical Specification

Plug Pressure Rating	6,000 psi	(410 Bar)
Depth	13,100 ft	(4,000m)
Test Pressure <sup>a</sup>	6,400 psi	(441 Bar)
Receptacle Pressure Rating	15,000 psi	(1,034 Bar)
Test Pressure <sup>b</sup>	22,500 psi	(1,550 Bar)
Leak rate	< 1 x10 <sup>-8</sup> cc/sec @ 1atm	
Temperature Rating	See Material Specification table	
Suitable Wire type	22AWG Outer Ø .0411 / .0461" 1.04 / 1.17mm	

<sup>a</sup> Tested with NBR (Option 1) boot. <sup>a&b</sup> Both tests were conducted at ambient temperature.

## Electrical Specification

No of ways	4
Insulation Resistance @ 20°C	> 1GΩ @ 50Vdc
Dielectric Strength @ 20°C	>1kV @ 1mA leakage
Max current per pin	2A
Contact resistance	<2.5mΩ

Wire shown for illustrative purposes only.  
Please consult Martec for wire options.

## Material Specification

Receptacle Connector			Operating Temperature	
Shell	Inconel 625			
Pin Contacts	Kovar (Gold plated over nickel)			
Insulation	Fused glass inserts			
Plug			Operating Temperature	
Boot <sup>c</sup>	Option 1:	Nitrile (NBR)	-4 to 212°F	-20 to 100°C
	Option 2 <sup>d</sup> :	Viton <sup>e</sup> (FKM)	-4 to 392°F	-20 to 200°C
	Option 3 <sup>d</sup> :	Hydrogenated Nitrile Rubber (HNBR) <sup>f</sup>	-22 to 257°F	-30 to 125°C
	Option 4 <sup>d</sup> :	EPDM <sup>f</sup>	-67 to 266°F	-50 to 130°C
Insert	PEEK			
Contacts	Gold plated copper alloy & Stainless Steel 304 ferrule.			
Location Pin	Stainless Steel 316L			

<sup>c</sup> All material options stated are sea water chemically compatible. Please contact Martec to discuss specific chemical compatibility requirements

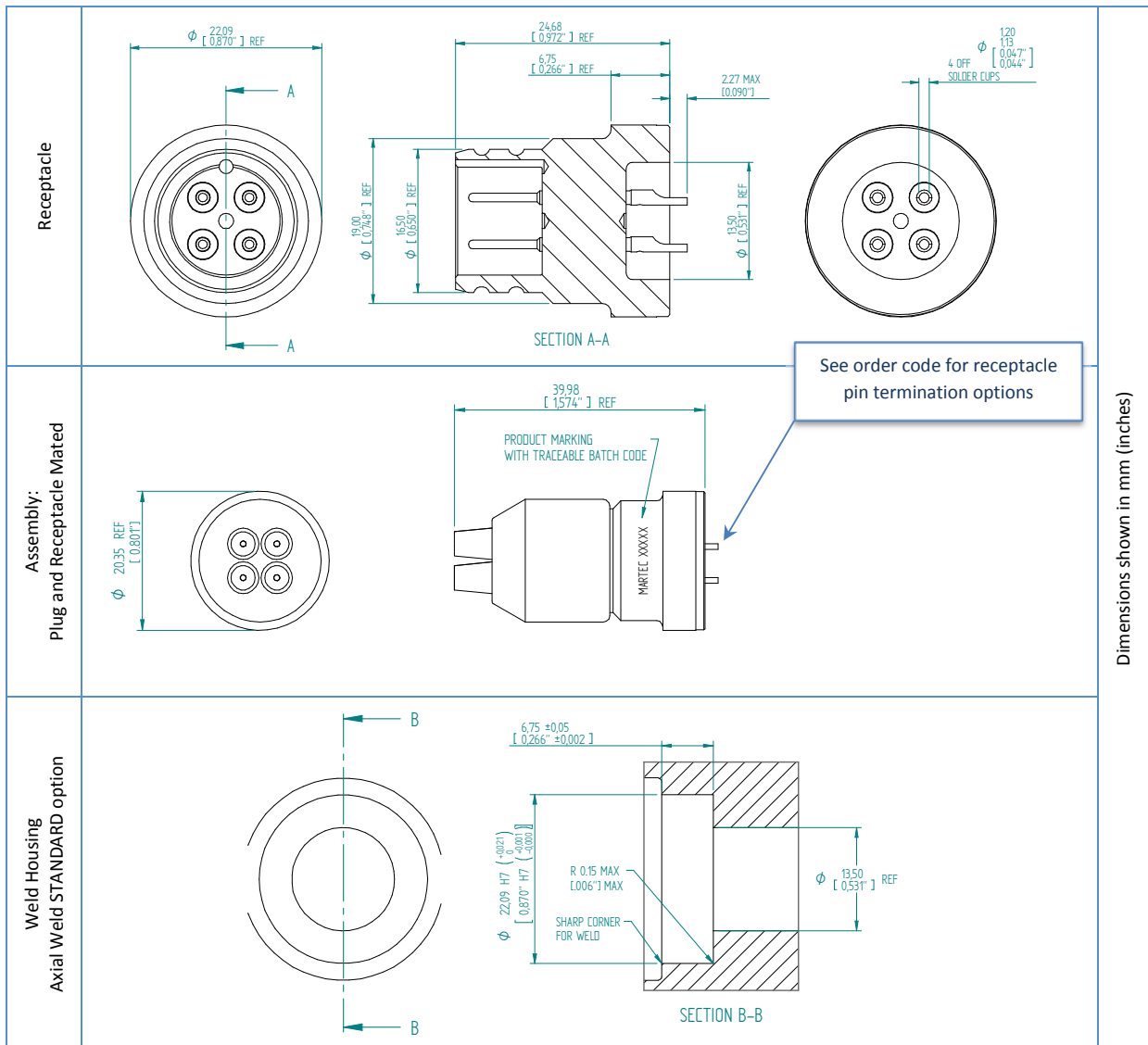
<sup>d</sup> These materials are subject to qualification.

<sup>e</sup> Du Pont registered trademark.

<sup>f</sup> Select for ozone tolerant marine surface use.

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## Dimensional Specification



Dimensions shown in mm (inches)

### Plug Terminations

Wires are terminated using the crimp contacts supplied with the booted connector. Crimp contacts can be terminated to the wires using Martec hand tool: **M-SBC-CT**.

### Boot Removal

The boot can be removed from the receptacle using Martec Tool: **M-SBC-ET**. It is recommended to replace the boot after each extraction.

### Housing Installation

The receptacle is designed to be welded into a housing using an axial electron beam weld. For welding guidance, please consult Martec. Alternative options are available including a radial weld installation and O-ring sealed version. Please contact Martec to discuss.

### Ordering Information

One assembly is constituted from:

- 1 x Receptacle
- 1 x Plug (i.e. Boot, Insert & x4 crimp contacts)

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**M - SBC - X - X - XXXX**

- Boot Materials**
- 1 Nitrile (NBR)
  - 2 Viton<sup>®</sup> (FKM)
  - 3 Hydrogenated Nitrile (HNBR)
  - 4 EPDM

- Pin terminations**
- 1 Solder Bucket
  - 2 Straight rounded pin
  - 3 PCB shoulder pin

**- Customer Deviation Code**  
(Omit for above standard option)

4 digit custom designation e.g:  
Various mounting options,  
Specific material requirements.  
Call Martec to discuss.

- Crimp Contact Tool: **M-SBC-CT**  
 Boot Removal Tool: **M-SBC-ET**  
 Additional Contacts: **M-SBC-SC**  
 Replacement Boot: **M-SBC-BT-X\***

\*(Substitute - 'X' with the appropriate number from the Boot Material Table)