



**SCM**  
Systèmes et Connectique du Mans



## Power 6 series



### P6-MD 300

FPSO Quick Disconnect/Reconnect Turret  
Explosion Proof, Splash Zone



#### • Technical Characteristics

##### Electrical

Number of Contacts : 3 + 3 earth  
Rated Voltage : 6.10 (12) kV  
Rated Current : 300 A per contact (Possible upgrade to 400A)  
Insulation Resistance : > 10 GΩ at 5000 V  
Contact Resistance : < 0.5 mΩ

##### Operational Environment

Operating Temperature : 45 to 140°F (7°C to 60°C)  
Operating Pressure : 40 bars max.  
Protection Index : IP68 (mated)  
Plug with cap : IP66 - Receptacle with cap : IP68  
Storage : -10° to 60°C (14°C to 60°C)

##### Materials

Housing : 316L  
Coupling Parts : Marine bronze

Insulators : PEEK  
Contacts : Copper alloy

##### Contacts and Cables

Termination : soldered  
Cable Dimensions : please see page 3

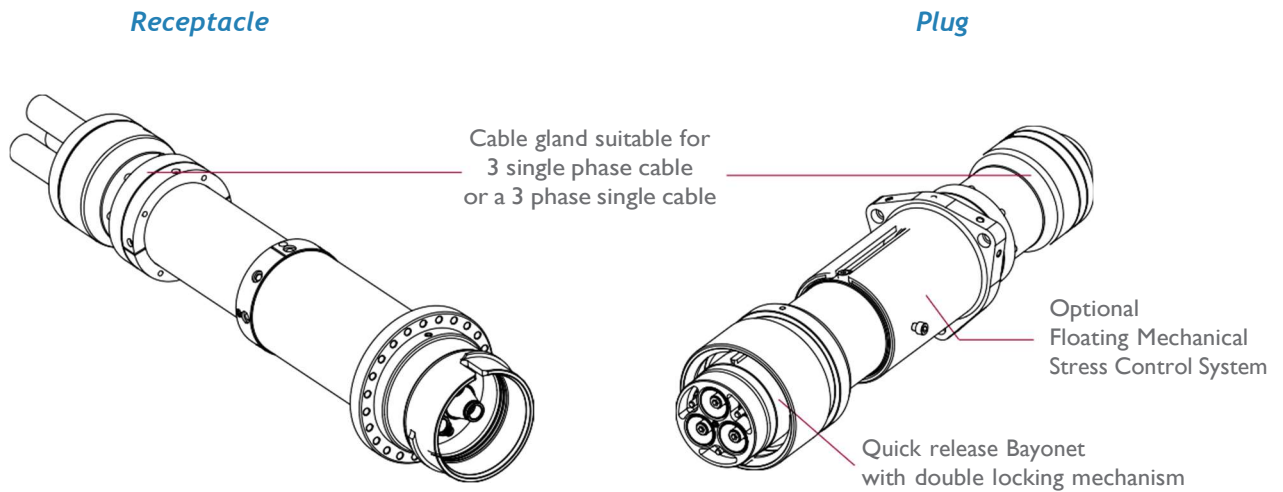
##### Standards

CSA : IEC60079-00 & IEC 60079-1  
CSA : Ex d IIB T4..T6  
ATEX : EEx d IIB T4..T6

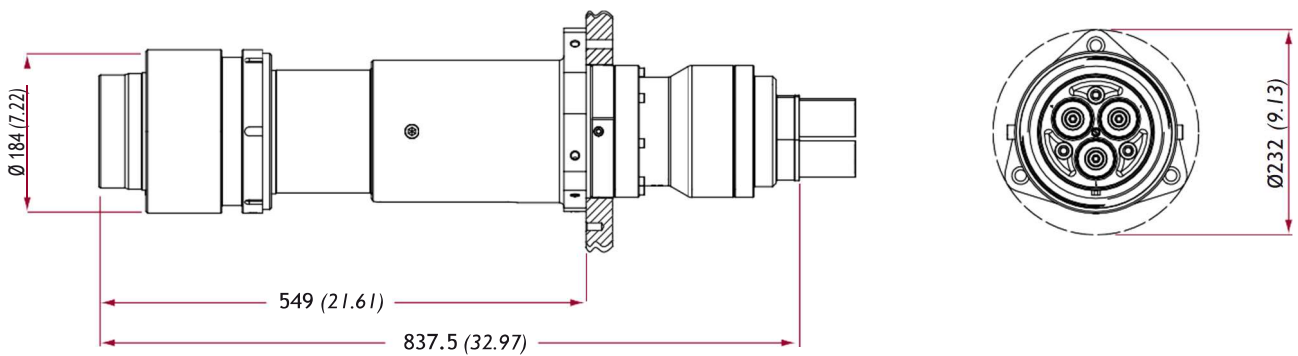
#### • Part Numbers

Designation	Part Numbers
Receptacle	MPD-376-0173-00
Plug	MPD-376-0172-00

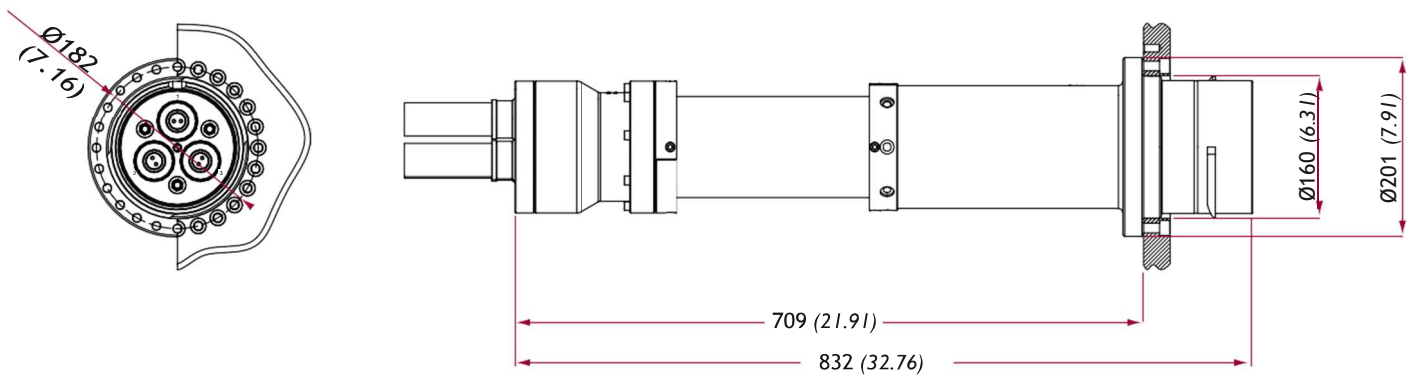
- **Receptacle (MPD-376-0173-00) and Plug (MPD-376-0172-00)**



- **Plug with Backshell Dimensions - mm (inch)**



- **Receptacle with Backshell Dimensions - mm (inch)**



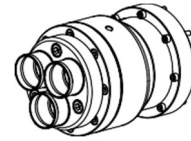
- **Cable gland for 3 single phase cables**

Cable Gland Sizes	Outer bedding diameter		Outer sheath diameter if armored cable
	Min	Max	
<b>Size 30</b>	39.1 (1.539)	40.7 (1.602)	45.4 (1.787)
<b>Size 31</b>	37.4 (1.472)	39.1 (1.539)	45.4 (1.787)
<b>Size 32</b>	35.9 (1.413)	37.4 (1.472)	45.4 (1.787)

mm / (inch)

**P/N : MPD-376-0175-\*\***

\*\* : Cable gland size : 30 - 31 - 32



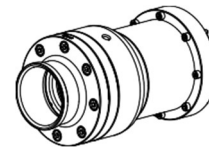
- **Cable gland for a phase single cable**

Cable Gland Sizes	Outer bedding diameter		Outer sheath diameter if armored cable
	Min	Max	
<b>Size 00</b>	60 (2.362)	63 (2.480)	78 (3.070)
<b>Size 01</b>	63 (2.480)	65 (2.559)	78 (3.070)
<b>Size 02</b>	65 (2.559)	67 (1.472)	78 (3.070)
<b>Size 03</b>	67 (2.637)	70 (2.755)	78 (3.070)

mm / (inch)

**P/N : MPD-376-0175-\*\***

\*\* : Cable gland size : 00 - 01 - 02 - 03



- **Qualification Tests - Passed**

Test type	Qualification Tests	Standards	Test conditions Acceptance criteria
<b>Visual Inspection</b>	Dimension & Tolerance Check		Compliant with drawing
	Interface Check		Compliant with drawing
	Verification of Markings		Compliant with drawing
	Weight Measurement		Receptacle : 60 kg - Plug : 75 kg
<b>Electrical Tests</b>	Contact Resistance		< 0.5 m ohms
	Shell Continuity		Compliant with customer specification
	Screen Continuity (if relevant)		Compliant with customer specification
	High Voltage AC Withstanding	IEC 60502-4	24 kV during 4 hours
	Insulation Resistance		> 5 G ohms
	Partial Discharge	IEC 60270 / 60885-2	< 10 pC at 10.4 kV (1,73 U <sub>0</sub> ) < 200 pC at 15 kV (2,5 U <sub>0</sub> ) U <sub>i</sub> > 12.0 kV - U <sub>e</sub> > 12.0 kV
	Temperature Rise		330 A during 24H ΔT < 55°K on conductors ΔT < 25°K on bodies
	Thermal Short Circuit	IEC 60502-4	7.2 kA for 5 seconds ; 2 cycles
	Electrical Breakdown	IEC 60502-4	Breakdown > 36 kV (6 U <sub>0</sub> )
	<b>Mechanical Tests</b>	Helium Leak Test	
Maximum Misalignment			+ 5°, ± 2 mm, x,y direction
Locking Device			Bayonet quick connect/disconnect 150 mating with salty spray each connection
Vibrations		IEC 13628-6	5 to 25 Hz : ± 2 displacement at 1 octave/min 25 Hz to 150 Hz : 5 g acceleration at 1 octave/min
<b>Turbid Tank Tests</b>	Pressure Testing Simulated Design Life		20 mating / unmating Test at 1,5 x design pressure
	Post Turbid Tank Test Inspection		No changes in electrical characteristics after test

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SCM reserves the right to alter the specifications of the products described in this brochure without prior notice.

Overall dimensions and specifications are given for guidance only. For further details, please consult us.