



CIRCULAR SERIES WATERPROOF CONNECTOR

The Total Solution Provider

ABOUT SIMULA

Simula Technology Inc. is a publicly listed company in Taiwan, who designs and manufactures high-performing connectors, cables and accessories. Established in 1990, Simula's mission is to lead the industry with excellent R&D technology, constant innovation and exceptional customer service.

Simula provides both off-the-shelf and customized solutions to accommodate customers in various market segments. To ensure the quality and standard of the products we provide to our customer who puts their trust in us, Simula is in compliance with International Standards recognized worldwide such as ISO13485, ISO 9001, ISO14001 and IATF16949.



Mechanical, Electrical and Environmental Testing Laboratory

Laboratory

Fully equipped laboratory both in Taiwan and China facilities.



LAB Equipments

Electrical



Milliohm Meter (AC)



Withstand Voltage Tester (AC / DC)



Dual DC Power Supply



High-Resistance Meter



LCR Meter



TDR



Networking Analyzer



Scope Machine



Signal Generator / Counter



Package Loss Test Machine

Mechanical



Automatic Inserting / Pulling Force Tester



Single - Pin Contact Resistance / Lifetime Tester



64 - Pin Contact Resistance / Lifetime Tester



Cable Bending Tester



Torque Measurement

Environmental



Thermal Shock Tester



Temperature & Humidity Chamber



Low Temperature Chamber



High Temperature Oven



Salt Spray Test Chamber



Vibration Test System



Steam Ageing Tester



Hot-Air Reflow Machine



Tin Oven

Inspection and Verification



Vertical Profile Projector



Horizontal Profile Projector



30X to 350X Measuring Microscope



2.5D CCD



X Ray Fluorescence Spectrometer (ROHS)



X-Ray Plating Thickness Tester



Hardness Meter



Height Gauge



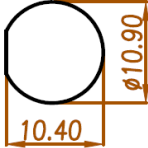
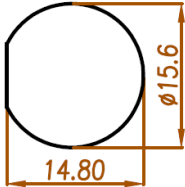
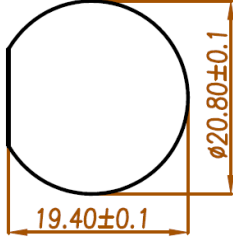
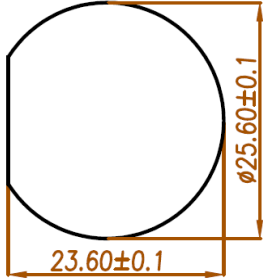
X-ray Inspection System



Waterproof Tank



Electrical and Mechanical Characteristics

Item	A Size	B Size	C Size	D Size
	Mini	Standard	Middle	Large
				
Contact Configuration	2, 3, 4, 5, 6	2, 3, 4, 5, 6, 7, 8, 10, 12, Hybrid (PWR + Signal)	3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 18	2, 3, 4, 5, 6, 7, 18, Hybrid (PWR + Signal)
Screw Thread Size	7/16"-28 UNS	5/8"-27 UNS	13/16"-28 UNS	1"-20 UNEF
Operation Temperature	(1) Ambient temperature (operation) : Plug /Receptacle : - 40 °C to + 105 °C (2) Cable, fixed installation : - 20 °C to + 80 °C			
Waterproof Protection	IP67			
Contact Resistance	< 20 m Ω			
Insulation Resistance (Unmated)	> 100 M Ω			
Dielectric Withstand Voltage	1000 V/s DC			
Mechanical Operation	300 cycles			
Salt Sprays	48 hours			



Simula P/N : **XX 3 XX XX XX 0 - XX 1 Q X 0 - 1 X X 9 P**

1 2 Product :

H2 = Plastic Plug



H3 = Plastic Receptacle

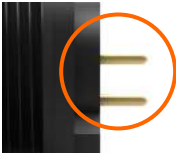


HT = Cap

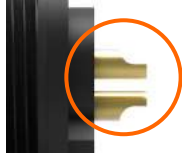


4 Style :

1 = DIP Type



2 = Solder Type



5 Contact Gender :

F = Female



M = Male

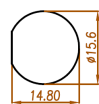


6 7 Type-1 :

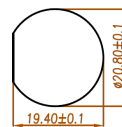
0A=A Size



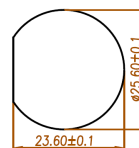
0B=B Size



0C=C Size



0D=D Size



9 10 Number of Contacts :

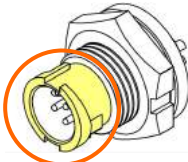
00 = Other, 01 = 1 Pin.....17 = 17 Pin

11 Contact Plating :

1 = Gold Flash

12 Mating Style + Back Shell :

Q = Bayonet Locking



13 IP Rating : (Waterproof)

4 = IPX4

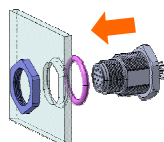
7 = IPX7

16 Mount Type :

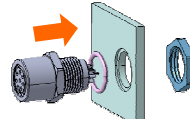
C = Cable End



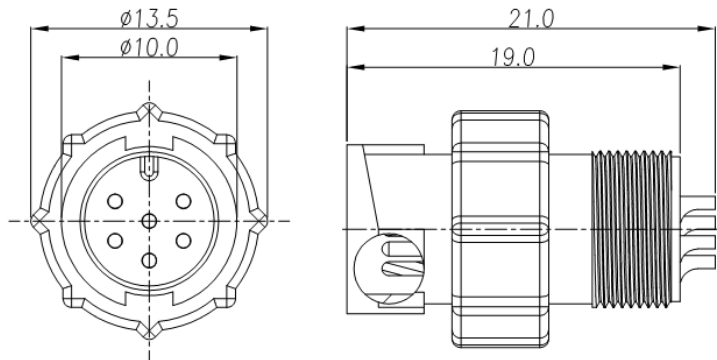
R = Rear Mount



F = Front Mount



Cable Type - Male

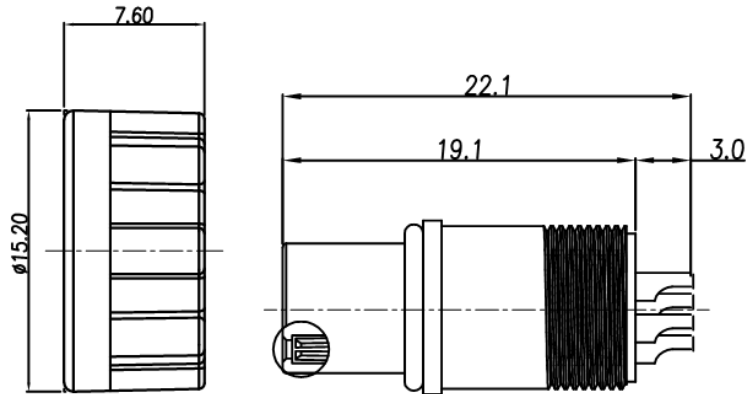


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

	5A	2A
02		
03		
04		
05		
06		

No. of Contacts	Current Rating	
	5A	2A
02	H232M0A0-021Q70-1C09P	-
03	H232M0A0-031Q70-1C09P	-
04	-	H232M0A0-041Q70-1C09P
05	-	H232M0A0-051Q70-1C09P
06	-	H232M0A0-061Q70-1C09P

Cable Type - Female

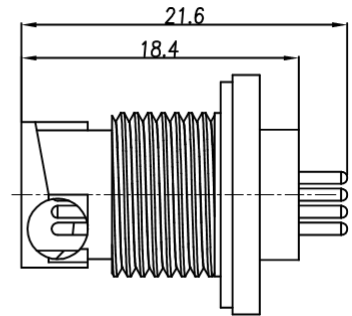
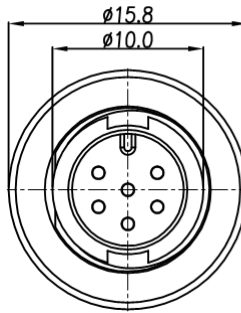


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

Rec.	5A	2A
02		
03		
04		
05		
06		

No. of Contacts	Current Rating	
	5A	2A
02	H332F0A0-021Q70-1C09P	-
03	H332F0A0-031Q70-1C09P	-
04	-	H332F0A0-041Q70-1C09P
05	-	H332F0A0-051Q70-1C09P
06	-	H332F0A0-061Q70-1C09P

Panel Type - Male

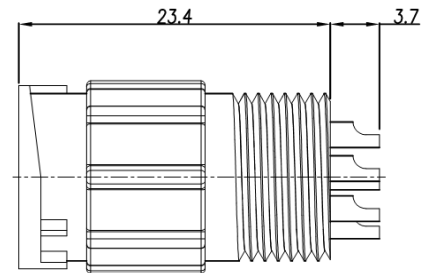
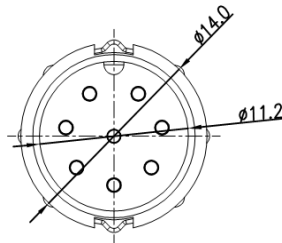


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Male
Contact Type	DIP
Locking System	Bayonet Locking
Flange Type	-

	5A	2A
02		
03		
04		
05		
06		

No. of Contacts	Current Rating	
	5A	2A
02	H231M0A0-021Q70-1R09P	-
03	H231M0A0-031Q70-1R09P	-
04	-	H231M0A0-041Q70-1R09P
05	-	H231M0A0-051Q70-1R09P
06	-	H231M0A0-061Q70-1R09P

Cable Type - Male

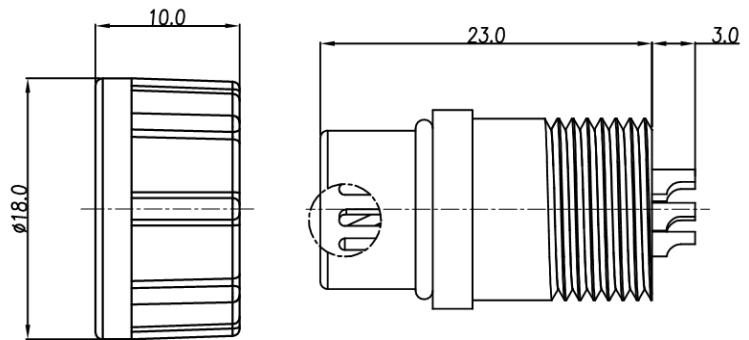


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

	10A	5A	2A
02			
03			
04			
05			
06			
07			
08			
10			
12			

No. of Contacts	Current Rating	
	5A	2A
02	H232M0B0-021Q70-1C09P	-
03	H232M0B0-031Q70-1C09P	-
04	-	-
05	-	-
06	H232M0B0-061Q70-1C09P	-
07	-	-
08	H232M0B0-081Q70-1C09P	-
10	-	-
12	-	-

Cable Type - Female

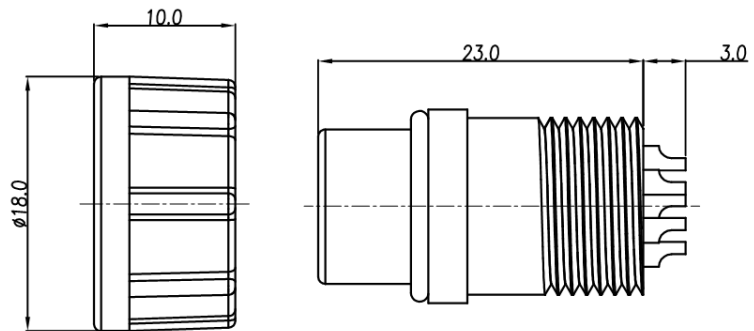


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	10A	5A	10A +5A	5A +2A
02				
03				
04				
05				
06				
08				

No. of Contacts	Current Rating		
	10A	5A	5A+2A
02	-	H232M0B0-021Q70-1C19P	-
03	H232M0B0-031Q70-1C29P	H232M0B0-031Q70-1C19P	-
04	-	-	-
05	-	-	-
06	-	-	-
08	-	-	H232M0B0-081Q70-1C19P

Cable Type - Female

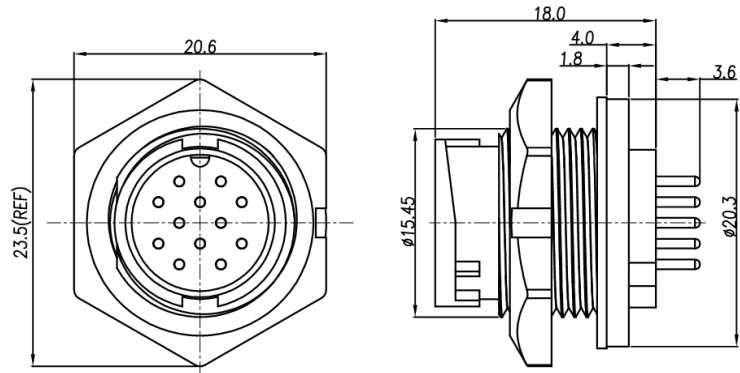


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

	10A	5A	2A
02			
03			
04			
05			
06			
07			
08			
10			
12			

No. of Contacts	Current Rating		
	10A	5A	2A
02	H332F0B0-021Q70-1C19P	H332F0B0-021Q70-1C29P	-
03	H332F0B0-031Q70-1C19P	H332F0B0-031Q70-1C29P	-
04	H332F0B0-041Q70-1C19P	H332F0B0-041Q70-1C29P	-
05	-	H332F0B0-051Q70-1C19P	-
06	-	H332F0B0-061Q70-1C19P	-
07	-	H332F0B0-071Q70-1C09P	-
08	-	H332F0B0-081Q70-1C09P	-
10	-	-	H332F0B0-101Q70-1C09P
12	-	-	H332F0B0-121Q70-1C09P

Panel Type - Male

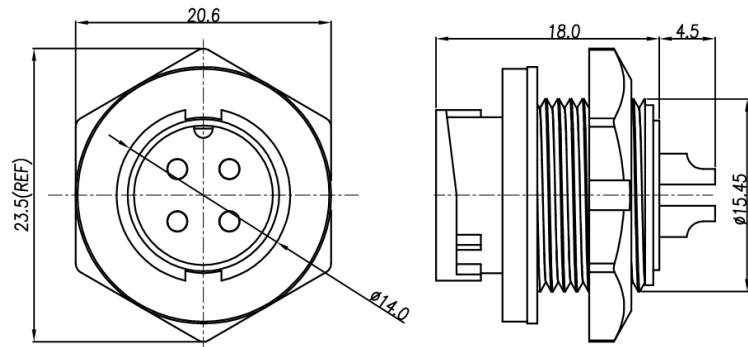


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Male
Contact Type	DIP
Locking System	Bayonet Locking
Flange Type	Circular

	10A	5A	2A
02			
03			
04			
05			
06			
07			
08			
10			
12			

No. of Contacts	Current Rating		
	10A	5A	2A
02	H231M0B0-021Q70-1R09P	H231M0B0-021Q70-1R19P	-
03	H231M0B0-031Q70-1R09P	H231M0B0-031Q70-1R19P	-
04	H231M0B0-041Q70-1R09P	H231M0B0-041Q70-1R19P	-
05	-	H231M0B0-051Q70-1R09P	-
06	-	H231M0B0-061Q70-1R09P	-
07	-	H231M0B0-071Q70-1R09P	-
08	-	H231M0B0-081Q70-1R09P	-
10	-	-	H231M0B0-101Q70-1R09P
12	-	-	H231M0B0-121Q70-1R09P

Panel Type - Male

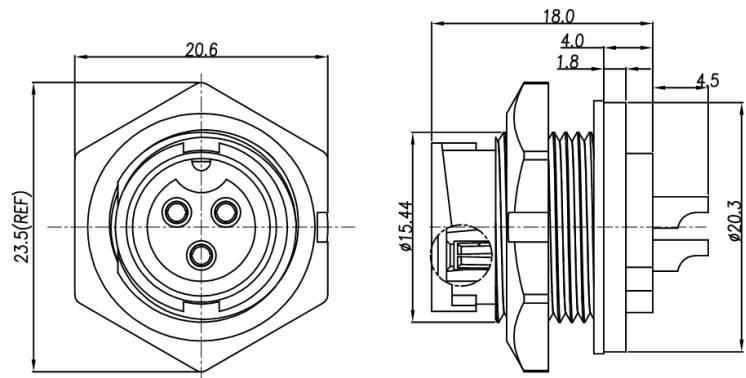


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Front Mount)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Circular

	10A	5A	2A
02			
03			
04			
05			
06			
07			
08			
10			
12			

No. of Contacts	Current Rating	
	10A	5A
02	-	-
03	H232M0B0-031Q70-1F09P	-
04	-	-
05	-	-
06	-	-
07	-	-
08	-	-
10	-	-
12	-	-

Panel Type - Female

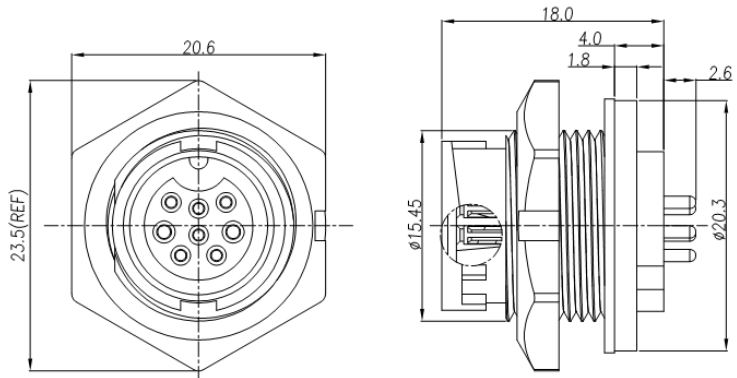


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Circular

No. of Contacts	10A	5A	10A +5A	5A +2A
02				
03				
04				
05				
06				
08				

No. of Contacts	Current Rating	
	10A	5A
02	-	-
03	H332F0B0-031Q70-1R19P	-
04	-	-
05	-	-
06	-	-
08	-	-

Panel Type - Female



Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Female
Contact Type	DIP
Locking System	Bayonet Locking
Flange Type	Circular

No. of Contacts	10A	5A	10A +5A	5A +2A
02				
03				
04				
05				
06				
08				

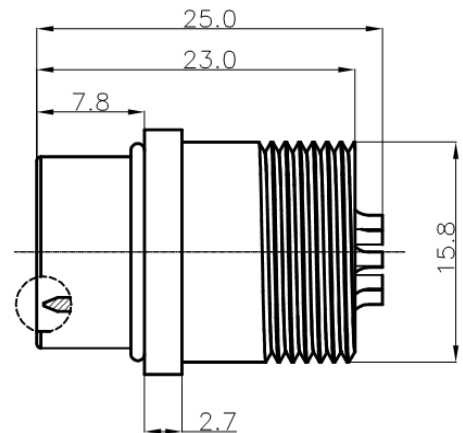
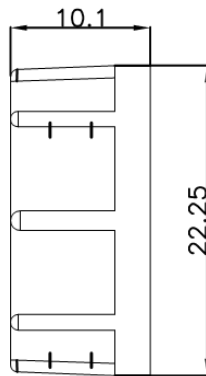
No. of Contacts	Current Rating	
	10A+5A	5A+2A
02	-	-
03	-	-
04	-	-
05	-	-
06	-	-
08	-	H331F0B0-081Q70-1R09P

Cap



Description	Details
Material	Waterproof Cap : Nylon + GF
Connector Type to Mate With	Panel or Cable
Connector Gender to Mate With	Male or Female
Locking System	Bayonet Locking
Style	With Rubber Lead
P/N	HT30M0B0-000Q40-2Y09P

Cable Type - Male

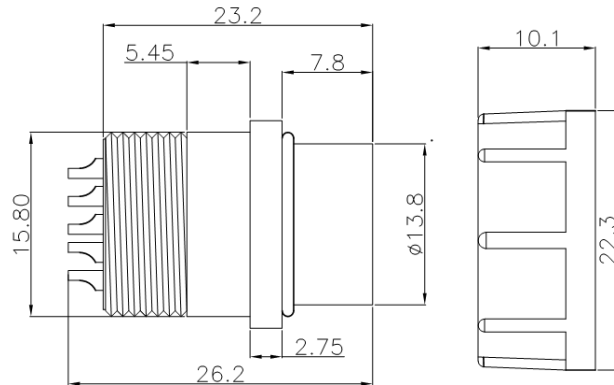


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	10A	5A	2A
03				
04				
05				
06				
07				
08				
09				
10				

No. of Contacts	Current Rating	
	10A	5A
04	-	-
05	-	-
07	-	H232M0C0-071Q70-1C09P
08	-	H232M0C0-081Q70-1C09P
09	-	H232M0C0-091Q70-1C09P

Cable Type - Female

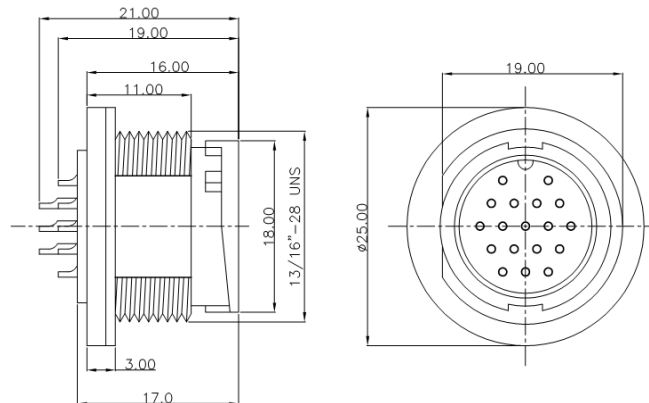


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	10A	5A	2A
03				
04				
05				
06				
07				
08				
09				
10				
12				
14				
18				

No. of Contacts	Current Rating			
	20A	10A	5A	2A
03	H332F0C0-031Q70 -1C09P	-	-	-
04	-	H332F0C0-041Q70 -1C09P	-	-
05	-	H332F0C0-051Q70 -1C09P	-	-
08	-	-	-	-
09	-	-	-	-
10	-	-	-	-
12	-	-	-	-
14	-	-	H332F0C0-141Q70 -1C09P	-
18	-	-	-	H332F0C0-181Q70 -1C09P

Panel Type - Male

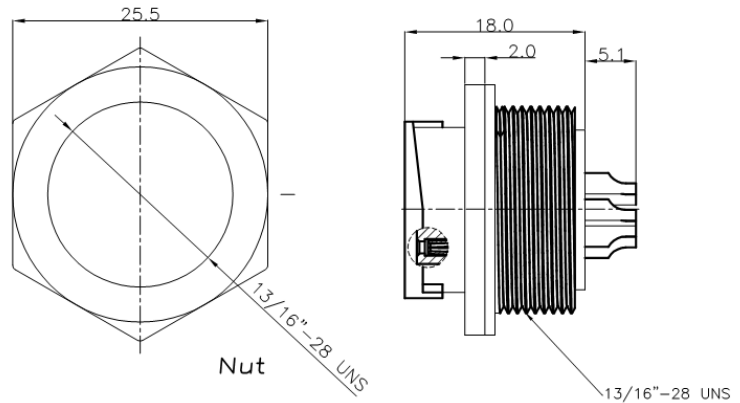


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Circular

No. of Contacts	20A	10A	5A	2A
03				
04				
05				
06				
07				
08				
09				
10				
12				
14				
18				

No. of Contacts	Current Rating			
	20A	10A	5A	2A
03	H232M0C0-031Q70-1R09P	-	-	-
04	-	H232M0C0-041Q70-1R09P	-	-
05	-	H232M0C0-051Q70-1R09P	-	-
08	-	-	-	-
09	-	-	-	-
10	-	-	-	-
12	-	-	-	-
14	-	-	H232M0C0-141Q70-1R09P	-
18	-	-	-	H232M0C0-181Q70-1R09P

Panel Type - Female

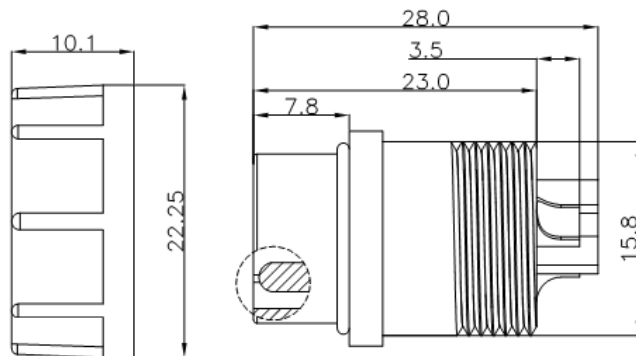


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Front Mount)
Connector Gender	Male
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Circular

No. of Contacts	20A	10A	5A	2A
03				
04				
05				
06				
07				
08				
09				
10				

No. of Contacts	Current Rating	
	10A	5A
04	-	-
05	-	-
07	-	H332F0C0-071Q70-1F09P
08	-	H332F0C0-081Q70-1F09P
09	-	H332F0C0-091Q70-1F09P

Cable Type -Male (Power)

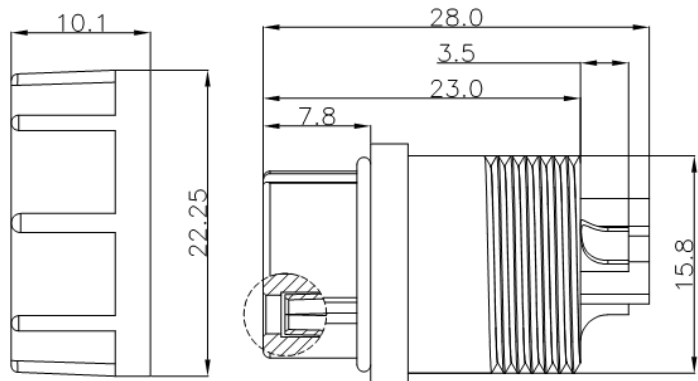


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	10A	5A	2A
03				
04				
05				
06				
07				
08				
09				
10				
12				
14				
18				

No. of Contacts	Current Rating
	20A
03	H232M0C0-031Q70-1C09P

Cable Type - Female (Power)



Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	10A	5A	2A
03				
04				
05				
06				
07				
08				
09				
10				
12				

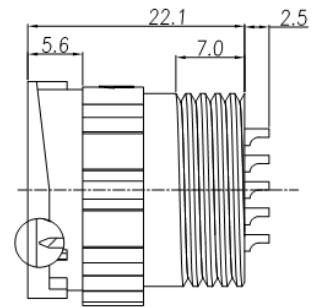
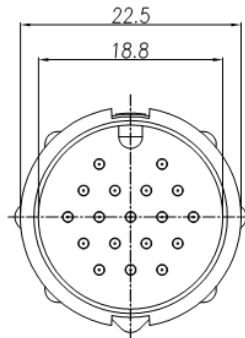
No. of Contacts	Current Rating
	20A
03	H332F0C0-031Q70-1C19P

Cap



Description	Details
Material	Waterproof Cap : Nylon + GF
Connector Type to Mate With	Panel Mount or Cable
Connector Gender to Mate With	Male or Female
Locking System	Bayonet Locking
Style	With Rubber Lead
P/N	HT30M0C0-000Q40-2Y09P

Cable Type - Male

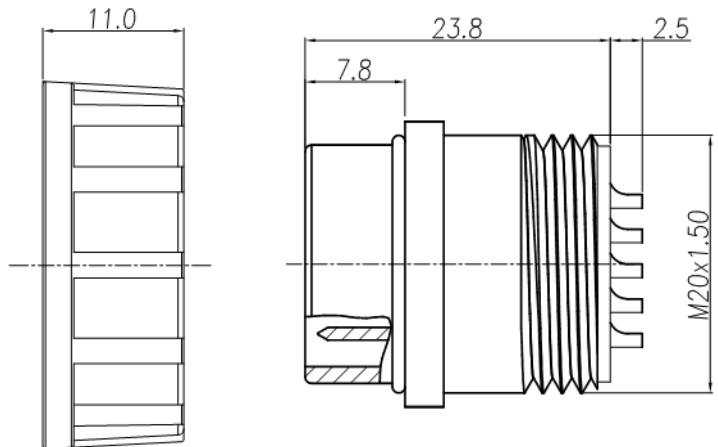


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			

No. of Contacts	Current Rating	
	20A	5A
02	-	-
03	-	-
04	H232M0D0-041Q70-1C09P	-
05	H232M0D0-051Q70-1C09P	-
06	-	-
07	-	-
18	-	H232M0D0-181Q70-1C09P
20	-	-

Cable Type - Male

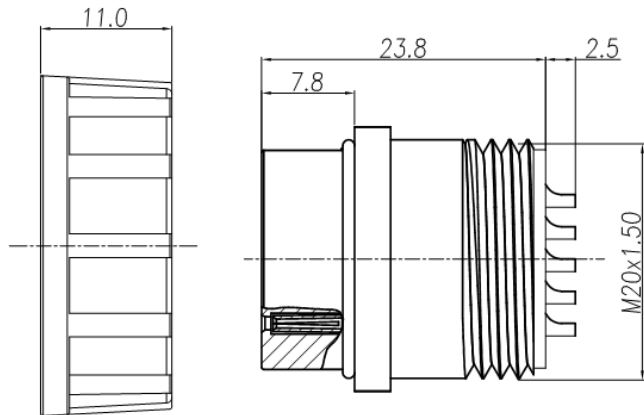


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			

No. of Contacts	Current Rating
	5A
18	H232M0D0-181Q70-1C19P

Cable Type -Female

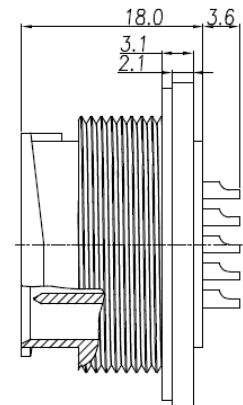
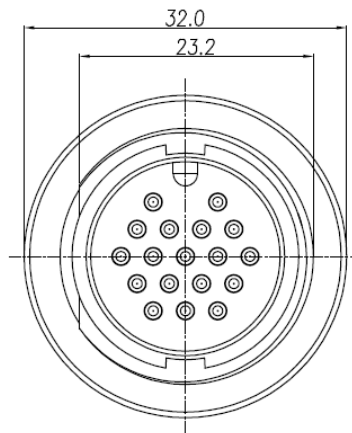


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Cable (Over-Molding)
Connector Gender	Female
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	-

No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			

No. of Contacts	Current Rating	
	20A	5A
02	-	-
03	-	-
04	H332F0D0-041Q70-1C09P	-
05	H332F0D0-051Q70-1C09P	-
06	-	-
07	H332F0D0-071Q70-1C09P	-
18	-	H332F0D0-181Q70-1C09P
20	-	-

Panel Type - Male

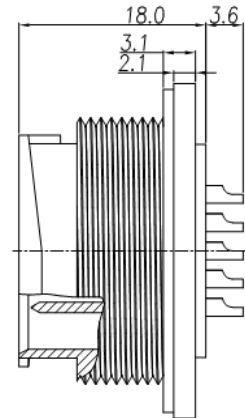
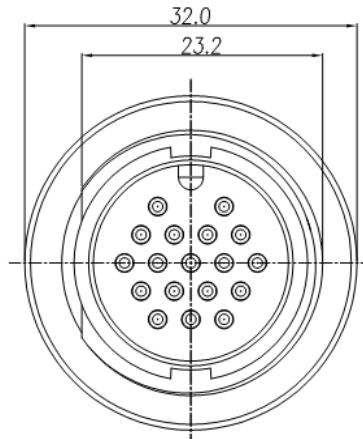


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Circular

No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			
21			
22			

No. of Contacts	Current Rating		
	20A	5A	2A
04	-	-	-
05	H232M0D0-051Q00-1R09P	-	-
06	-	-	-
07	H232M0D0-071Q00-1R09P	-	-
18	-	H232M0D0-181Q00-1R09P	-
20	-	-	H232M0D0-201Q00-1R09P
21	-	-	H232M0D0-211Q00-1R09P
22	-	-	H232M0D0-221Q00-1R09P

Panel Type - Male

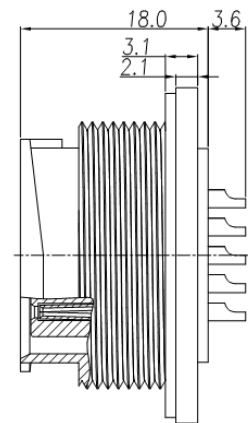
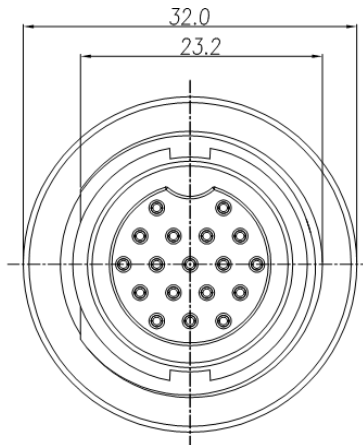


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Male
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Square

No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			

No. of Contacts	Current Rating		
	20A	5A	2A
02	-	-	-
03	-	-	-
04	-	-	-
05	H232M0D0-051Q00-1R09P	-	-
06	-	-	-
07	H232M0D0-071Q00-1R09P	-	-
18	-	H232M0D0-181Q00-1R09P	-
20	-	-	-

Panel Type - Female

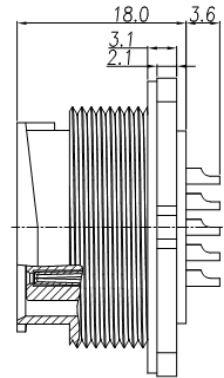
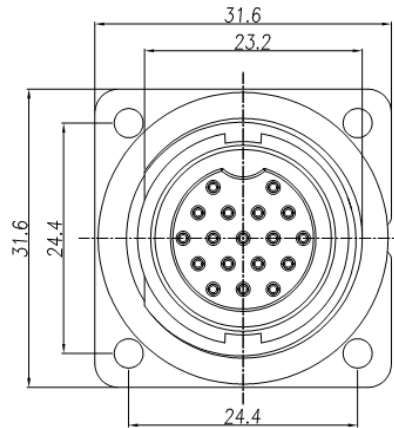


Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Female
Contact Type	Solder Bucket Pin
Locking System	Bayonet Locking
Flange Type	Circular


No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			

No. of Contacts	Current Rating
	5A
18	H332F0D0-181Q70-1R19P

Panel Type - Female



Description	Details
Material	Connector Body : Nylon + GF, Contacts: Copper Alloy, Gold Plated
Connector Type	Panel (Rear Mount)
Connector Gender	Male
Contact Gender	Female
Contact Type	Solder Bucket Pin`
Locking System	Bayonet Locking
Flange Type	Square

No. of Contacts	20A	5A	2A
02			
03			
04			
05			
06			
07			
18			
20			

No. of Contacts	Current Rating
	5A
18	H232M0D0-181Q70-1R09P

Cap



Description	Details
Material	Waterproof Cap : Nylon + GF
Connector Type to Mate With	Panel Mount or Cable
Connector Gender to Mate With	Male or Female
Locking System	Bayonet Locking
Style	With Rubber Lead
P/N	HT30M0D0-000Q40-2Y09P

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