M12 series connector

Brief introduction

——Comply with IEC 61076-2-101
——Standard M12 interface
——Five keyways to anti mis-mating
——Different termination types, meet different operation requirement, can be wired at site
——Protection degree: IP67
——Excellent environmental performance and mechanical performance, can be applied in fierce industry environment
——Various mounting structure, applicable for different panel-cut types
——Various platings available
——Provide the same series cable assemblies
——Enterprise standard: Q/21EJ2105

Main technical characteristics

[Mechanical]
——Vibration: sine: 10~500Hz, acceleration 98m/s^2
——Shock: acceleration 490 m/s^2
——Endurance: ≥500 cycles

[Electrical]
——Insulation resistance: normal≥5000 MΩ；damp heat≥100 MΩ
——Rating voltage and withstanding voltage:

No.	Contact number	Rating voltage (V) DC or 4～400Hz AC effective	Withstanding voltage (V) 4～400Hz AC effective
1	2～4	250	Plastic shell: 2500 Metal shell: 1500
2	5	60	1500
3	6～17	30	800

——Contact resistance and rating current：

Contact size (mm)	Contact resistance (mΩ)	Rating current (A)
φ1.0	5	5
φ0.8	12.5	2
φ0.76	12.5	2
φ0.6	25	1.5

[Environmental]
——Operating temperature: -40℃~ +85℃
——Protection degree: IP67
——Humidity: alternative 240h
——Salt spray: 96h
——Hermetic (glass seal): under 1 atmosphere, air leakage≤1×10^{-3} Pa cm^3/s

Ordering information

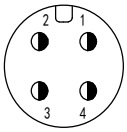
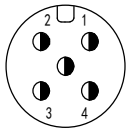
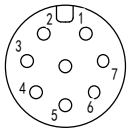
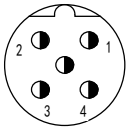
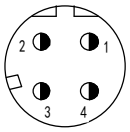
Basic series	M12	04A	3	N	JM	A
Insert arrangement	04A, 05B, 05C, 04D, 05P (See insert arrangement figure)					
Contact plating	3-gold plating 4-silver plating					
Shell plating	G—aluminum alloy, nickel plating N—copper alloy, nickel plating U—316L stainless steel passive F—304 stainless steel passive P—plastic (copper alloy jam nut) T—plastic (aluminum alloy jam nut)					
Structure Mounting side	Embedded mounting: CM—pin CF—socket Square flange mounting: DM—pin DF—socket M16 threaded hole mounting: EM—pin EF—socket M20 threaded hole mounting: FM—pin FF—socket M16 float threaded hole mounting: GM—pin GF—socket M20 float threaded hole mounting: HM—pin HF—socket Jam nut rear mounting (M16 thread): PM—pin PF—socket Jam nut rear mounting (PG 9 thread): QM—pin QF—socket Jam nut front mounting (M16 thread): RM—pin RF—pin Jam nut front mounting (PG 9 thread): SM—pin SF—pin Square flange mounting (Glass seal): WM—pin Soldering (Glass seal): XM—pin Jam nut rear mounting (Glass seal): YM—pin Jam nut front mounting (Glass seal): ZM—pin					
Structure Flexiable side	Flexible side, straight accessory: JM—pin JF—socket Flexible side, right-angle accessory: KM—pin KF—socket Flexible side, straight molded cable: LM—pin LF—socket Flexible side, right-angle molded cable: MM—pin MF—socket Flexible side, right-angle moldedcable (special): NM—pin NF—socket					
Termination connection	E—piercedtype A—crimping D—straight PCB	U—boltcrimping J—soldering Y—right-angle PCB				
Cable length and lead-out dia.	L=XXX (cable length, only for molded and dropped cable products) W=XXX (only for special lead-out diameter)					

Part number example:

1. M12-04A3NJMS
   M12 series bolt crimping male connector, 4 contacts, A code, gold plating pin, copper alloy shell with nickel plating, includes a straight accessory.

2. 034-04A1NPFY L=1000
   M12 series jam nut rear mounting female connector, 4 contacts, A code, gold plating sockets, copper alloy shell with nickel plating, crimping contacts, dropped cable 1000mm.

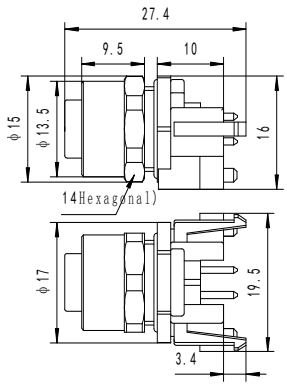
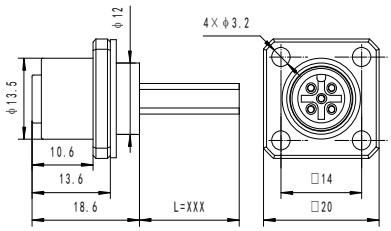
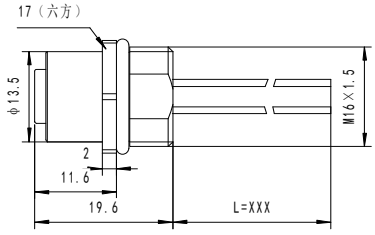
Insert arrangement (mating view of insulator with pin)

○Φ0.8 ◑Φ1.0	04A	05A	08A	05B	04D
					
	4-Φ1	5-Φ1	8-Φ0.8	5-Φ1	4-Φ1

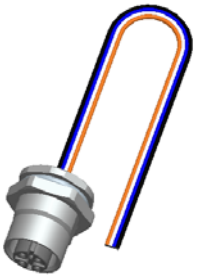
Note: ① in IEC standard, M12 series has 5 different codes: A/B/C/D/P. A code connector has 2～17 contacts available, C code and P code connectors both have 1 PE pin (ground pin). For any further questions, please contact our engineers.

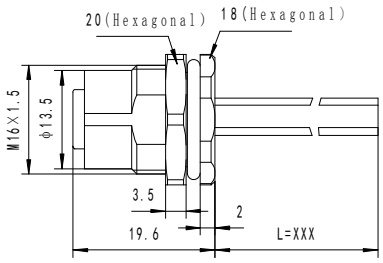
② A code and B code for signal and field bus；D code for ethernet.

Structure

Three-dimensional model	Outline dimensions	Illustration
Embedded mounting 		The picture is straight PCB type, loaded with sockets, embedded mounting, fixed side Structure: loaded with pins or sockets Termination: straight PCB, right-angle PCB Layout: 04A、04D、05A、05B 、08A Applicable PCB thickness: 1.6mm Applicable panel thickness: 3mm (max)
Square flange mounting 		The picture is dropped cable type, loaded with sockets, square flange mounting, fixed side Structure: loaded with pins or sockets Termination: crimping dropped cable Layout: 04A、04D、05A、05B 、08A Applicable panel thickness: 4mm (max)
Threaded hole mounting 		The picture is dropped cable type, loaded with sockets, M16 jam nut mounting, fixed side Structure: loaded with pins or sockets Termination: crimping dropped cable Layout: 04A、04D、05A、05B 、08A Mounting thread type: M16、M20 Applicable panel thickness: 3mm (min)

Jam nut rear mounting



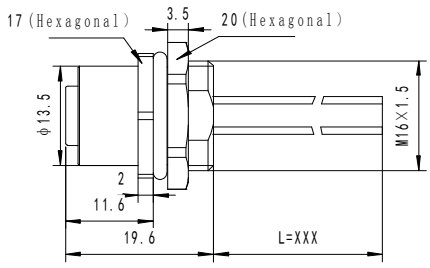


The picture is dropped cable type, loaded with sockets, M16 jam nut rear mounting, fixed side

Structure: loaded with pins or sockets
Termination: crimping dropped cable, straight PCB
Layout: 04A、04D、05A、05B 、08A

Jam nut type: M16、PG 9
Applicable panel thickness: 5mm (max)

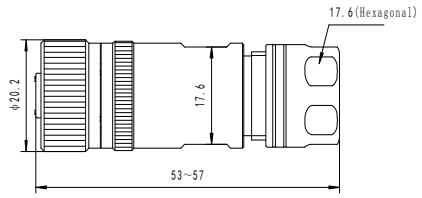
Jam nut front mounting



The picture is dropped cable type, loaded with sockets, M16 jam nut front mounting, fixed side

Structure: loaded with pins or sockets
Termination: crimping dropped cable
Layout: 04A、04D、05A、05B 、08A
Jam nut type: M16、PG 9
Applicable panel thickness: 3.5mm (max)

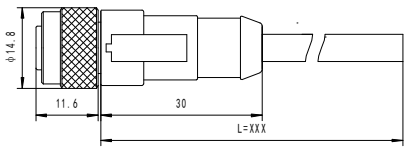
Flexiable side straight accessory



The picture is bolt crimping type, loaded with sockets, straight shielding flexible side

Structure: loaded with pins or sockets, shielding or non-shielding
Termination: bolt crimping, crimping, pierced type
Layout: 04A、04D、05A、05B 、08A
Applicable cable OD: Φ5～Φ7.5mm

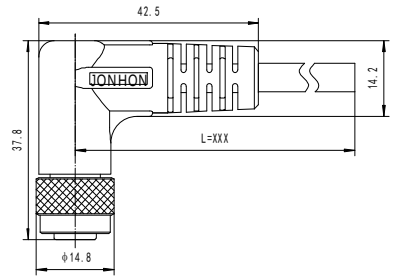
Flexiable side straight molded



The picture is cable molded type, loaded with sockets, straight flexible side

Structure: loaded with pins or sockets, shielding or non-shielding
Termination: cable molded
Layout: 04A、04D、05A、05B 、08A

Flexiable side
right-angle molded



The picture is cable molded type, loaded with sockets, right-angle flexible side

Structure: loaded with pins or sockets, shielding or non-shielding
Termination: cable molded
Layout: 04A、04D、05A、05B 、08A