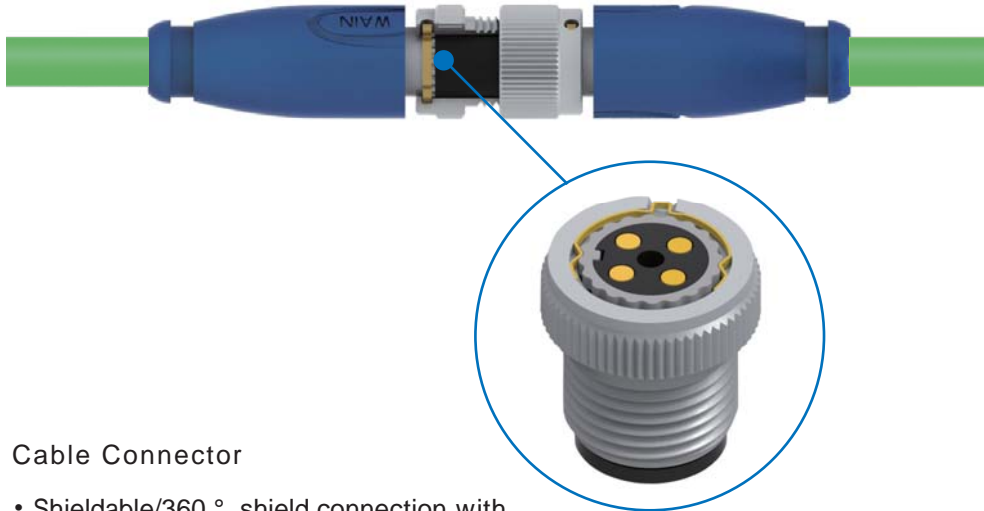


M12 Circular Connector, D-coded



Cable Connector

- Shieldable/360 ° shield connection with shield ring or iris type spring
- Thread locking M12x1
- Screw connection
- Degree of protection IP67
- D - coded for Ethernet/Profinet
- Transmission features
DIN EN 50173/CAT 5, screw termination
- anti - loose spring with nut

M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	screw,crimp
Wire gauge	max.0.75mm ² (max.AWG18)
Cable outlet	4 -6mm,6 -8mm
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-40 ...+85
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Angled cable connectors, shielded

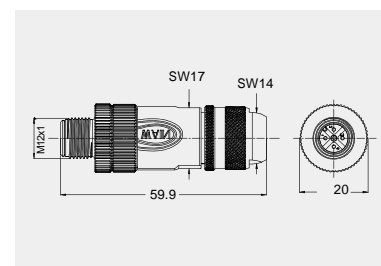
Male cable connector, shieldable,

CAT 5 Screw terminal,
version with shielding ring

D - Code



Contacts	Cable outlet	Designation	Order No.
4	4 - 6 mm	M12 - M04D - T - D6 - SH	163 204 411 2001
	6 - 8 mm	M12 - M04D - T - D8 - SH	163 204 411 2002



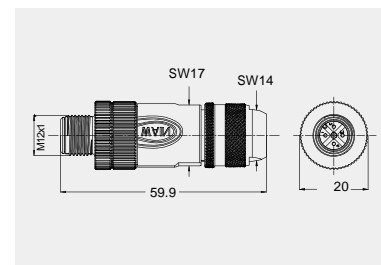
Male cable connector, shieldable,

CAT 5 Crimp terminal,
version with shielding ring
Order crimp contacts separately

D - Code



Contacts	Cable outlet	Designation	Order No.
4	4 - 6 mm	M12 - MC04D - T - D6 - SH	163 004 010 2001
	6 - 8 mm	M12 - MC04D - T - D8 - SH	163 004 010 2002

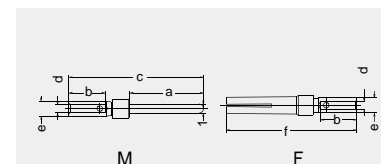


Crimp contacts

Crimp contacts 5A

Contact resistance 3m
gold plated

Wire gauge Male	Order No.	Female	Order No.
0.09 - 0.25 CSGM - 0.25	101 014 210 0101	CSGF - 0.25	101 014 220 0101
0.13 - 0.33 CSGM - 0.33	101 014 210 0201	CSGF - 0.33	101 014 220 0201
0.33 - 0.52 CSGM - 0.52	101 014 210 0501	CSGF - 0.52	101 014 220 0501
0.52 - 0.82 CSGM - 0.82	101 014 210 0701	CSGF - 0.82	101 014 220 0701



Detail please find the crimp contacts series

Tools

Crimping tool



Wire gauge	Designation	Order No.
0.09 - 0.82mm ²	TL03	198 001 001 0002

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	screw, crimp
Wire gauge	max.0.75mm ² (max.AWG18), max.0.82mm²(max.AWG18)
Cable outlet	4 - 6mm,6 - 8mm
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-40 ...+85
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Angled cable connectors, shielded

Female cable connector, shieldable,

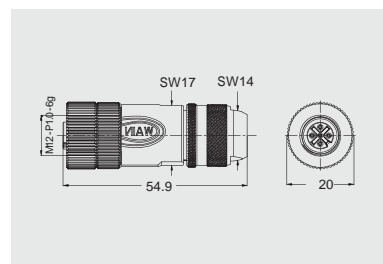
CAT 5 Screw terminal,
version with shielding ring

D - Code



4pin

Contacts	Cable outlet	Designation	Order No.
4	4 - 6 mm	M12 - F04D - T - D6 - SH	163 204 421 2001
	6 - 8 mm	M12 - F04D - T - D8 - SH	163 204 421 2002



Female cable connector, shieldable,

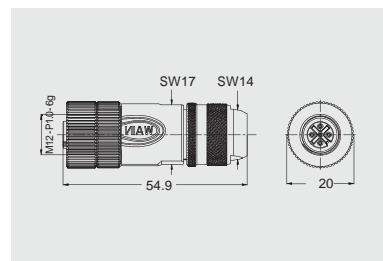
CAT 5 Crimp terminal,
version with shielding ring
Order crimp contacts separately

D - Code



4pin

Contacts	Cable outlet	Designation	Order No.
4	4 - 6 mm	M12 - FC04D - T - D6 - SH	163 004 020 2001
	6 - 8 mm	M12 - FC04D - T - D8 - SH	163 004 020 2002

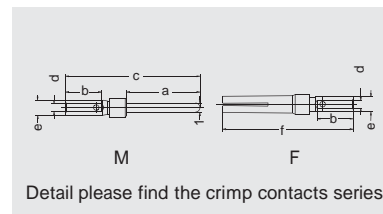


Crimp contacts

Crimp contacts 5A

Contact resistance 3m
gold plated

Wire gauge	Male	Order No.	Female	Order No.
0.09 - 0.25	CSGM - 0.25	101 014 210 0101	CSGF - 0.25	101 014 220 0101
0.13 - 0.33	CSGM - 0.33	101 014 210 0201	CSGF - 0.33	101 014 220 0201
0.33 - 0.52	CSGM - 0.52	101 014 210 0501	CSGF - 0.52	101 014 220 0501
0.52 - 0.82	CSGM - 0.82	101 014 210 0701	CSGF - 0.82	101 014 220 0701



Detail please find the crimp contacts series

Tools

Crimping tool



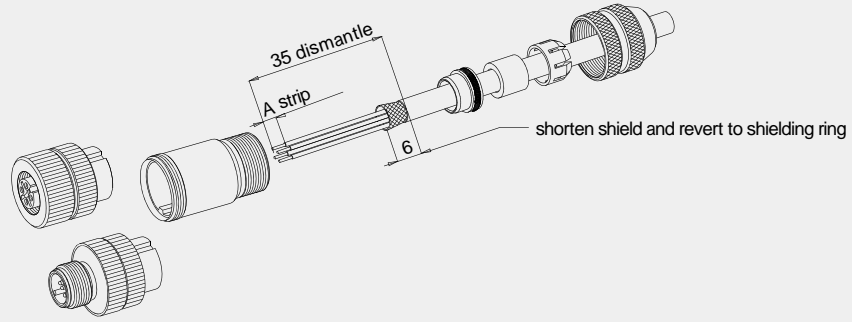
Wire gauge	Designation	Order No.
0.09 - 0.82mm ²	TL03	198 001 001 0002

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

Assembly instruction/Component part drawing

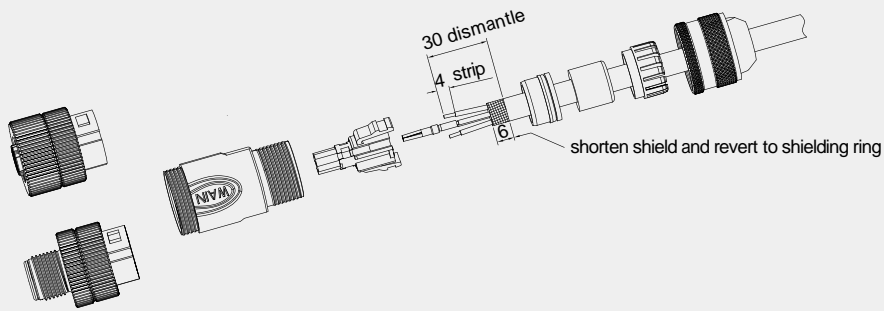
Assembly instruction

Strip measures male/female cable connector, with shielding ring, screw terminal



Assembly instruction

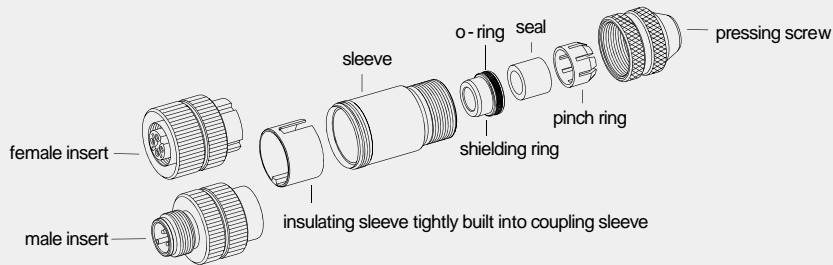
Strip measures male/female cable connector, with shielding ring, crimp terminal



M12-D

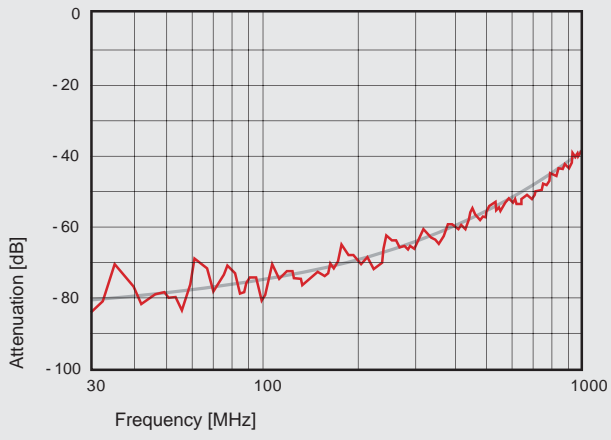
Component part drawing

Cable connector with shielding ring



Rating

Attenuation curve according to DIN 47250-6
for straight cable connectors screw termination
(cable version IEEE 802.3)



M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	crimp, moulded
Wire gauge	0.25mm ² (AWG22)
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 500
Limiting temperature	-20 ...+60
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU

Straight cable connectors , cable

Male cable connector, PROFINET

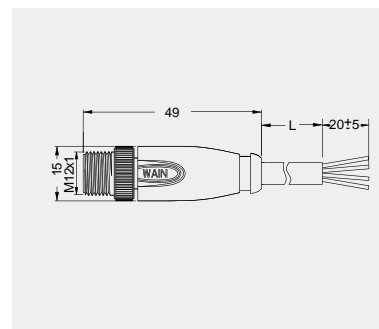


D - Code



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12 - M04D - T - 1.5 - PUR - Cat.5	163 204 401 4081
		M12 - M04D - T - 1.5 - PUR - Cat.5e	163 204 401 4091
	5.0 m	M12 - M04D - T - 5.0 - PUR - Cat.5	163 204 401 4082
		M12 - M04D - T - 5.0 - PUR - Cat.5e	163 204 401 4092



M12-D

•Further cable length upon request, minimum order quantity is 200 pcs.

M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overtoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	crimp, moulded
Wire gauge	0.25mm ² (AWG22)
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 500
Limiting temperature	-20 ...+60
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU

Straight cable connectors , cable

Female cable connector, PROFINET

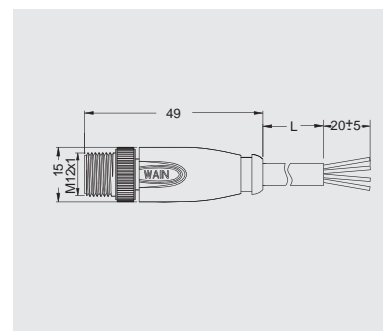


D - Code



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12 - F04D - T - 1.5 - PUR - Cat.5	163 204 402 4081
		M12 - F04D - T - 1.5 - PUR - Cat.5e	163 204 402 4091
	5.0 m	M12 - F04D - T - 5.0 - PUR - Cat.5	163 204 402 4082
		M12 - F04D - T - 5.0 - PUR - Cat.5e	163 204 402 4092



•Further cable length upon request, minimum order quantity is 200 pcs.

M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	crimp, moulded
Wire gauge	0.25mm ² (AWG22)
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 500
Limiting temperature	-20 ...+60
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU

Cable connectors-wire jumper

Male cable connector, PROFINET

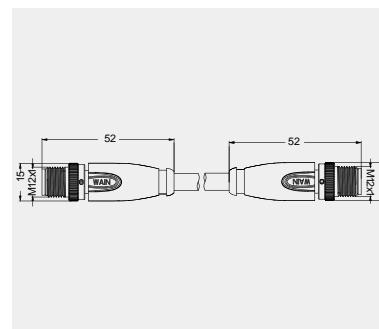


D - Code



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12- M04D- T/M04D- T- 1.5- PUR- Cat.5	163 004 401 4508
		M12- M04D- T/M04D- T- 1.5- PUR- Cat.5e	163 004 401 4510
	5.0 m	M12- M04D- T/M04D- T- 5.0- PUR- Cat.5	163 004 401 4507
		M12- M04D- T/M04D- T- 5.0- PUR- Cat.5e	163 004 401 4509



Female cable connector, PROFINET

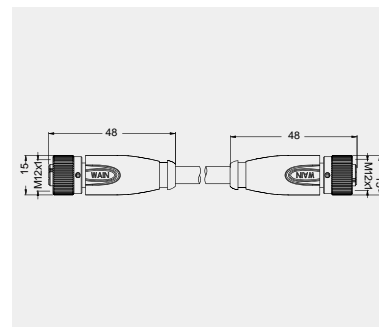


D - Code



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12- F04D- T/F04D- T- 1.5- PUR- Cat.5	163 004 402 4510
		M12- F04D- T/F04D- T- 1.5- PUR- Cat.5e	163 004 402 4512
	5.0 m	M12- F04D- T/F04D- T- 5.0- PUR- Cat.5	163 004 402 4509
		M12- F04D- T/F04D- T- 5.0- PUR- Cat.5e	163 004 402 4511



PROFINET



D - Code D - Code

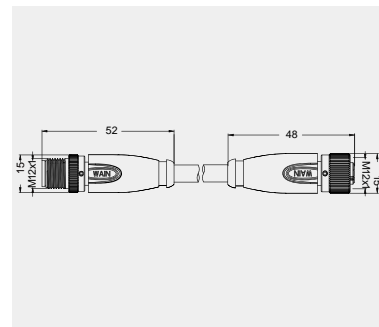


4pin



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12- M04D- T/F04D- T- 1.5- PUR- Cat.5	163 004 400 4016
		M12- M04D- T/F04D- T- 1.5- PUR- Cat.5e	163 004 400 4017
	5.0 m	M12- M04D- T/F04D- T- 5.0- PUR- Cat.5	163 004 401 4502
		M12- M04D- T/F04D- T- 5.0- PUR- Cat.5e	163 004 001 4013



*Further cable length upon request, minimum order quantity is 200 pcs.

M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	crimp, moulded
Wire gauge	0.25mm ² (AWG22)
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 500
Limiting temperature	-20 ...+60
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	TPU

Straight cable connectors , cable

Male cable connector, PROFINET

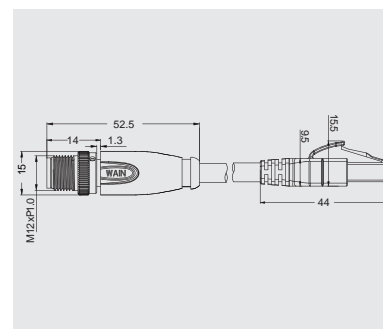


D - Code



4pin

Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-M04D-T/RJ45-1.5-PUR-Cat.5e	163 004 001 4021
	5.0 m	M12-M04D-T/RJ45-5.0-PUR-Cat.5e	163 004 001 4004



Female cable connector, PROFINET

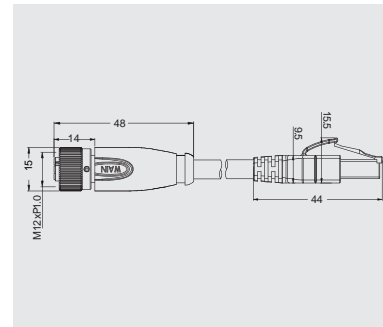


D - Code

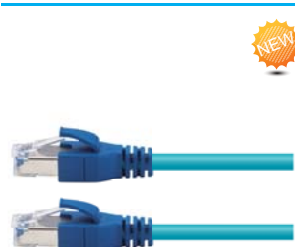


4pin

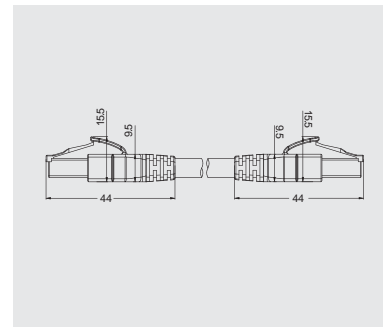
Contacts	Cable length	Designation	Order No.
4	1.5 m	M12-F04D-T/RJ45-1.5-PUR-Cat.5e	163 004 402 4506
	5.0 m	M12-F04D-T/RJ45-5.0-PUR-Cat.5e	163 004 402 4507



PROFINET



Contacts	Cable length	Designation	Order No.
4	1.5 m	RJ45-RJ45-1.5-PUR-Cat.5e	172 004 000 4002
	5.0 m	RJ45-RJ45-5.0-PUR-Cat.5e	172 004 000 4001



Cable Technical characteristics

PROFINET cable

Number of contacts	4
Wire gauge mm ²	2 x 2 x AWG 22
Material jacket	PUR
Insulation wire	Polyolefin
Design of wire (mm)	7 x 0,25 (AWG 22)
Cable jacket (mm)	6.7
Resistance of wire	55 /Km
Temperature range (cable in move)	- 5 ° C / + 60 ° C
Temperature range (cable not in move)	- 20 ° C / + 60 ° C
Bending radius (cable in move)	min. 100 mm
Bending radius (cable not in move)	min. 35 mm
Approval	Profinet, UL 20236

M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	PUR - cable
Wire gauge	AWG 22
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-20 ...+60
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Receptacles

Male panel mount connector ,

with PROFINET-cable, shielded

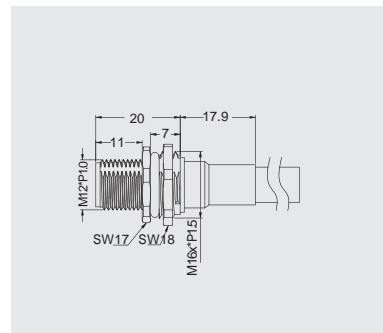


D - Code



4pin

Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12 - M04D - BK - PG9 - Cat.5	163 004 301 4017
	0.5m	M16x1.5	M12 - M04D - BK - M16 - Cat.5	163 204 301 4022



Male panel mount connector ,

with PROFINET-cable, shielded

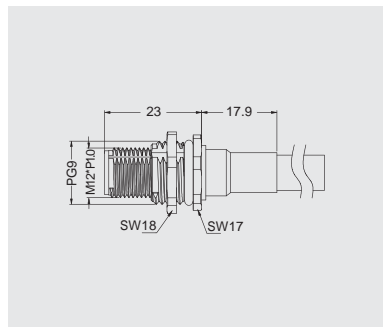


D - Code



4pin

Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12 - M04D - BKR - PG9 - Cat.5	163 204 301 4012
	0.5m	M16x1.5	M12 - M04D - BKR - M16 - Cat.5	163 004 301 4018



M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	PUR - cable
Wire gauge	AWG 22
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-20 ...+60
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Receptacles

Female panel mount connector ,
with PROFINET-cable, shielded

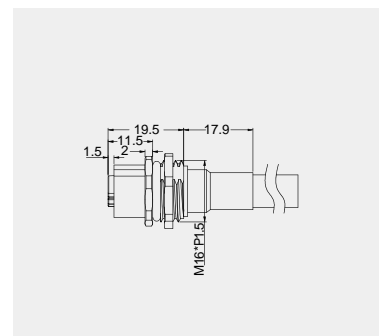


D - Code



4pin

Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12-F04D-BK-PG9-Cat.5	163 004 302 4022
	0.5m	M16x1.5	M12-F04D-BK-M16-Cat.5	163 204 302 4022



Female panel mount connector ,
with PROFINET-cable, shielded

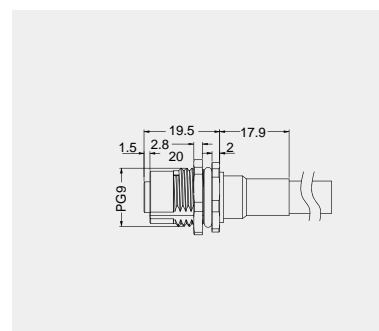


D - Code



4pin

Contacts	Cable length	Thread	Designation	Order No.
4	0.5m	PG9	M12-F04D-BKR-PG9-Cat.5	163 204 302 4012
	0.5m	M16x1.5	M12-F04D-BKR-M16-Cat.5	163 004 302 4023



M12-D

M12-D Circular Connector

250V 4A

Technical characteristics

	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	single wires
Wire gauge	max.0.75mm ² (AWG18)
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-40 ...+85
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Receptacles

Male panel mount connector

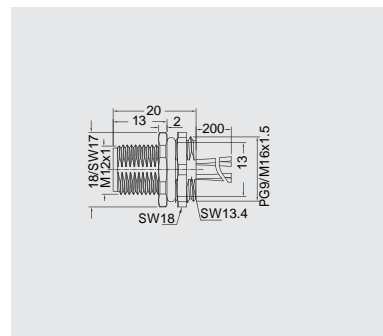
with single wires,0.25mm²

D - Code



4pin

Contacts	Thread	Designation	Order No.
4	PG9	M12 - M04D - BK - PG9 - W0.25	163 004 301 4003
	M16x1.5	M12 - M04D - BK - M16 - W0.25	163 204 301 4021



Male panel mount connector

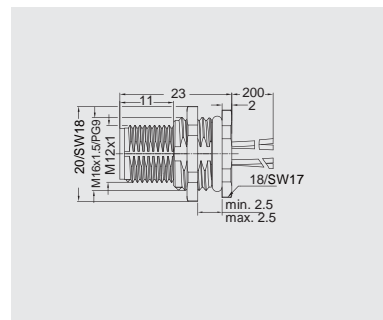
with single wires,0.25mm²

D - Code



4pin

Contacts	Thread	Designation	Order No.
4	PG9	M12 - M04D - BKR - PG9 - W0.25	163 004 301 4014
	M16x1.5	M12 - M04D - BKR - M16 - W0.25	163 004 301 4016



M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw
Termination	dip solder
Wire gauge	-
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	- 40 ...+85
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Socket

Male panel mount connector, dip solder

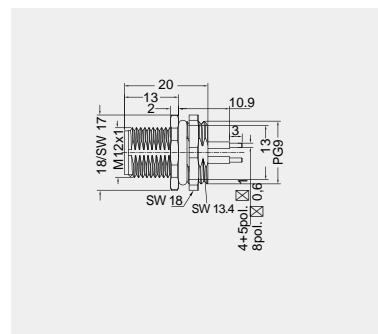


D - Code



4pin

Contacts	Thread	Designation	Order No.
4	PG9	M12 - M04D - BK - PG9 - D	163 004 314 1005
	M16x1.5	M12 - M04D - BK - M16 - D	163 004 314 1006



M12-D

Male panel mount connector, dip solder

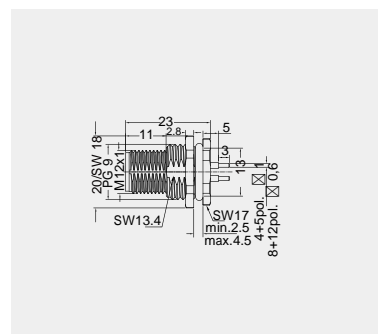


D - Code



4pin

Contacts	Thread	Designation	Order No.
4	PG9	M12 - M04D - BKR - PG9 - D	163 004 314 1007
	M16x1.5	M12 - M04D - BKR - M16 - D	163 004 314 1008



M12-D Circular Connector

250V 4A

Technical characteristics

	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw M12x1
Termination	single wires
Wire gauge	max.0.75mm ² (AWG18)
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	-40 ...+85
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

Receptacles

Female panel mount connector

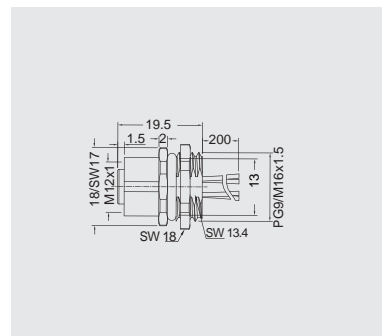
with single wires,0.25mm²

D - Code



4pin

Contacts	Thread	Designation	Order No.
4	PG9	M12 - F04D - BK - PG9 - W0.25	163 204 302 4001
	M16x1.5	M12 - F04D - BK - M16 - W0.25	163 204 302 4021



Female panel mount connector

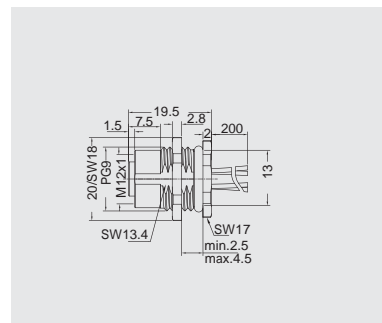
with single wires,0.25mm²

D - Code



4pin

Contacts	Thread	Designation	Order No.
4	PG9	M12 - F04D - BKR - PG9 - W0.25	163 204 302 4011
	M16x1.5	M12 - F04D - BKR - M16 - W0.25	163 204 302 4031



M12-D Circular Connector

250V 4A

Technical characteristics

Number of contacts	4
Rated current (40)	4A
Rated voltage	250V
Rated impulse voltage	2500V
Pollution degree	3
Overvoltage categorie	II
Contact resistance	10 m
Connector locking system	screw
Termination	dip solder
Wire gauge	-
Cable outlet	-
Degree of protection	IP67
Mechanical operation	> 100
Limiting temperature	- 40 ...+85
Material group	II
Material of contact	copper alloy
Contact plating	Au
Insulating material	PA
Material of housing	zinc diecasting nickel plated

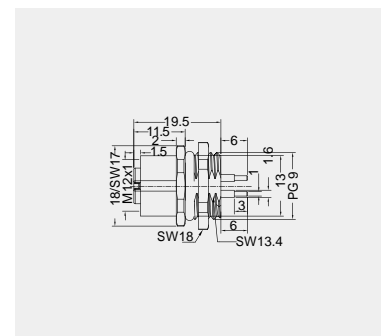
Socket

Female panel mount connector,

dip solder



Contacts	Thread	Designation	Order No.
4	PG9	M12 - F04D - BK - PG9 - D	163 204 324 1001



D - Code



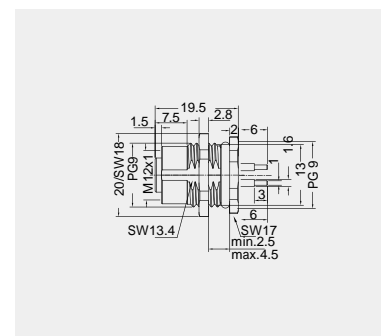
4pin

Female panel mount connector,

dip solder



Contacts	Thread	Designation	Order No.
4	PG9	M12 - F04D - BKR - PG9 - D	163 204 324 1011



D - Code



4pin

Accessories

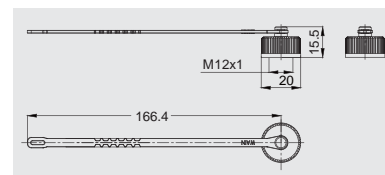
Protection cap IP67

Protection cap

for male cable connector



Description	Designation	Order No.
Without cord	M12 - MCV	163 000 001 9003
With cord	M12 - MCV/1	163 000 001 9001

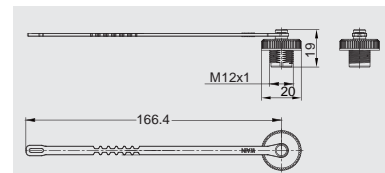


Protection cap

for female cable connector



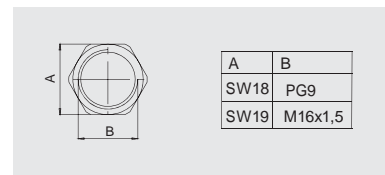
Description	Designation	Order No.
Without cord	M12 - FCV	163 000 002 9003
With cord	M12 - FCV/1	163 000 002 9001



Hexagonal nut for fixing thread



Thread	Designation	Order No.
PG9	WNA - PG9/S	102 105 002 1101
M16X1.5	WNA - M16/S	102 105 013 1101



Contact arrangements

Male insert (mating side)

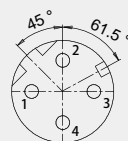
4 contacts



	X	Y
1	2.50	0.00
2	0.00	2.50
3	-2.50	0.00
4	0.00	-2.50

cat.5	cat.5e
1 yellow	1 Orange white
2 white	2 Green and white
3 orange	3 Orange
4 blue	4 green

Female insert (mating side)

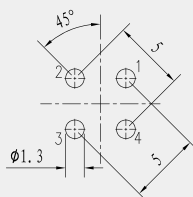


	X	Y
1	-2.50	0.00
2	0.00	2.50
3	2.50	0.00
4	0.00	-2.50

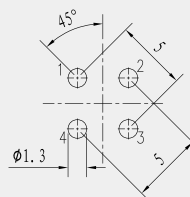
cat.5	cat.5e
1 yellow	1 Orange white
2 white	2 Green and white
3 orange	3 Orange
4 blue	4 green

Drilling schemes male insert (PCB), receptacles

4 contacts

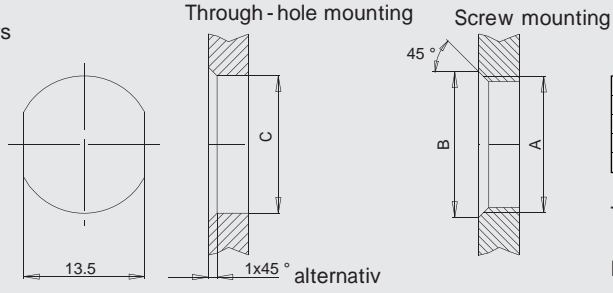


Drilling schemes female insert (PCB), receptacles



Panel cut out

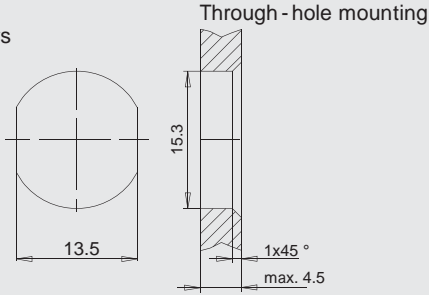
Panel mount connectors



	A	B	C
PG9	PG9	16.2	15.3
PG13.5	PG13.5	21.5	20.5
M16x1.5	M16x1.5	17.0	16.1
M20x1.5	M20x1.5	21.0	20.1

Tightening torque according to DIN VDE 0619
 Metal housing 6.25 Nm
 Plastic housing 3.75 Nm

Panel mount connectors
 Rear panel mounting,
 front tighten



Panel mount connectors
 front tighten



Tightening torque 6.25 Nm