

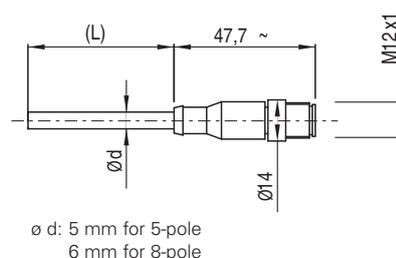
M12 male connectors with cable



Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228 - mobile installation
- Gold-plated contacts
- Self-locking ring nut
- High flexibility cable with oil-resistant PVC sheath suitable to be used in drag chains, acc. to IEC 60332-1-2 and CEI 20-22II. With polyurethane sheath on request

| | |
|-------------------------|--|
| Max. operating voltage: | 250 Vac / 300 Vdc (5-pole) 30 Vac / 36 Vdc (8-pole) |
| Max. operating current: | 4 A (5-pole) 2 A (8-pole) |
| Protection degree: | IP67 acc. to EN 60529 IP69K acc. to ISO 20653 (Protect the cables from direct high-pressure and high-temperature jets) |
| Ambient temperature: | -25°C ... +80°C for fixed installation -15°C ... +80°C for mobile installation |
| Wire cross-sections: | 0.25 mm ² (23 AWG) |
| Minimum bending radius: | > cable diameter x 15 |



Pin assignment

| 5 poles | | 8 poles | |
|---------|--------|---------|--------|
| | | | |
| Pin | Colour | Pin | Colour |
| 1 | Brown | 1 | White |
| 2 | White | 2 | Brown |
| 3 | Blue | 3 | Green |
| 4 | Black | 4 | Yellow |
| 5 | Grey | 5 | Grey |
| | | 6 | Pink |
| | | 7 | Blue |
| | | 8 | Red |

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CF5PD3M

| | |
|-------------------------|------------------------------|
| No. of poles | Connection type |
| 5 5 poles | M M12x1 |
| 8 8 poles | |
| Cable sheath | Cable length (L) |
| P PVC (standard) | 3 3 metres (standard) |
| U PUR | 5 5 metres |
| | 0 10 metres |
| | Other lengths on request |
| Connector type | |
| D straight | |

Stock items

VF CF5PD3M
VF CF8PD3M

Attention! For items not in stock the minimum order quantity is 100 pcs.

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

M12 female connectors with cable



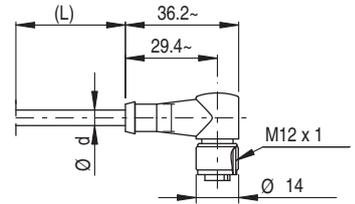
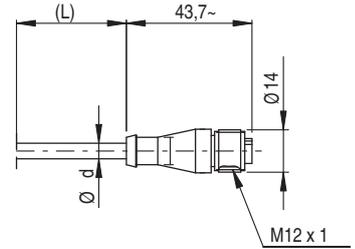
Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228 - mobile installation
- Gold-plated contacts
- Self-locking ring nut
- High flexibility cable with PVC sheath suitable to be used in drag chains, acc. to IEC 60332-3 and CEI 20-22II. With polyurethane sheath on request

| | |
|-------------------------|---|
| Max. operating voltage: | 250 Vac / 300 Vdc (4/5-pole) 30 Vac / 36 Vdc (8/12-pole) |
| Max. operating current: | 4 A (4-5 poles) 2 A (8-pole) 1.5 A (12-pole) |
| Protection degree: | IP67 acc. to EN 60529 IP69K acc. to ISO 20653 <i>(Protect the cables from direct high-pressure and high-temperature jets)</i> |
| Ambient temperature: | -25°C ... +80°C for fixed installation -15°C ... +80°C for mobile installation |
| Wire cross-sections: | 0.34 mm ² (22 AWG) for 4-pole 0.25 mm ² (23 AWG) for 5/8-pole 0.14 mm ² (26 AWG) for 12-pole |
| Minimum bending radius: | > cable diameter x 15 |

Pin assignment

| 4 poles | | 5 poles | | 8 poles | | 12 poles | |
|---------|--------|---------|--------|---------|--------|----------|-----------|
| | | | | | | | |
| Pin | Colour | Pin | Colour | Pin | Colour | Pin | Colour |
| 1 | Brown | 1 | Brown | 1 | White | 1 | Brown |
| 2 | White | 2 | White | 2 | Brown | 2 | Blue |
| 3 | Blue | 3 | Blue | 3 | Green | 3 | White |
| 4 | Black | 4 | Black | 4 | Yellow | 4 | Green |
| | | 5 | Grey | 5 | Grey | 5 | Pink |
| | | | | 6 | Pink | 6 | Yellow |
| | | | | 7 | Blue | 7 | Black |
| | | | | 8 | Red | 8 | Grey |
| | | | | | | 9 | Red |
| | | | | | | 10 | Purple |
| | | | | | | 11 | Grey-Pink |
| | | | | | | 12 | Red-Blue |



ø d: 5 mm for 4 and 5-pole
6 mm for 8 and 12 poles

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CA4PD3M

| | | | |
|-----------------------|---------------------|------------------------|---------|
| No. of poles | | Connection type | |
| 4 | 4 poles | M | M12x1 |
| 5 | 5 poles | | |
| 8 | 8 poles | | |
| 12 | 12 poles | | |
| Cable sheath | | No. of poles | |
| P | PVC (standard) | 4 | |
| U | PUR | 5 | |
| Connector type | | 8 | • • |
| D | straight (standard) | 12 | • • • • |
| G | angled | 0 | • • • • |

Cable length (L)

| | | | | | |
|------------|----------------------|---|---|---|---|
| 1 | 1 metre | | | | |
| 2 | 2 metres | | | | |
| 3 | 3 metres (standard) | • | • | | |
| 4 | 4 metres | | | | |
| 5 | 5 metres (standard) | • | • | • | • |
| ... | | | | | |
| 0 | 10 metres (standard) | • | • | • | • |

Other lengths on request

Stock items

- VF CA4PD3M
- VF CA4PD5M
- VF CA4PD0M
- VF CA5PD3M
- VF CA5PD5M
- VF CA5PD0M
- VF CA8PD5M
- VF CA8PD0M
- VF CA12PD5M
- VF CA12PD0M

Attention! For items not in stock the minimum order quantity is 100 pcs.

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

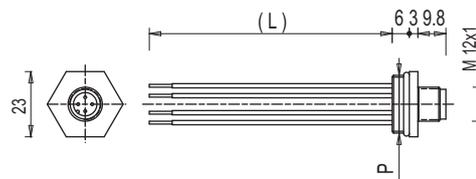
M12 male connectors



Features:

These standard M12 male connectors are ready for the installation on the switches. Their wires have the right length for the connection to the contact blocks and are provided with wire-end sleeves. On request they can be delivered already wired to the switch. The connectors are used where a very short machine down time is required (e.g. in big plants). The connector-provided switch can be replaced very quickly with an identical one with no chance of incorrect wiring.

- Max. operating voltage: 250 Vac / 300 Vdc (4/5-pole)
30 Vac / 36 Vdc (8/12-pole)
- Max. operating current: 4 A (4/5-pole)
2 A (8-pole)
1.5 A (12-pole)
- Protection degree: IP67 acc. to EN 60529
IP69K acc. to ISO 20653
- Ambient temperature: -25°C ... +80°C
- Tightening torque: 1 ... 1.5 Nm
- Wire cross-sections: 0.5 mm² (20 AWG) for 4/5-pole
0.25 mm² (23 AWG) for 8-pole
0.14 mm² (26 AWG) for 12-pole
- Contact type: gold-plated



Pin assignment

| 4 poles | | 5 poles | | 8 poles | | 12 poles | |
|---------|--------|---------|--------|---------|--------|----------|-----------|
| | | | | | | | |
| Pin | Colour | Pin | Colour | Pin | Colour | Pin | Colour |
| 1 | Brown | 1 | Brown | 1 | White | 1 | Brown |
| 2 | White | 2 | White | 2 | Brown | 2 | Blue |
| 3 | Blue | 3 | Blue | 3 | Green | 3 | White |
| 4 | Black | 4 | Black | 4 | Yellow | 4 | Green |
| | | 5 | Grey | 5 | Grey | 5 | Pink |
| | | | | 6 | Pink | 6 | Yellow |
| | | | | 7 | Blue | 7 | Black |
| | | | | 8 | Red | 8 | Grey |
| | | | | | | 9 | Red |
| | | | | | | 10 | Purple |
| | | | | | | 11 | Grey-Pink |
| | | | | | | 12 | Red-Blue |

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CNM5MM-L100

article: VF CNM5MM options: L100

| | |
|----------------------|-------------------------------|
| Body material | Wire length (L) |
| M metal | 8.5 cm (standard) |
| P plastic | L16 16 cm |
| | L100 100 cm |
| | L200 200 cm |
| No. of poles | Connection type |
| 4 4 poles | M M12x1 |
| 5 5 poles | |
| 8 8 poles | Connector thread (P) |
| 12 12 poles | M M20 x 1.5 (standard) |
| | P PG 13.5 |

Stock items

- VF CNP4MM
- VF CNP4PM
- VF CNP5MM
- VF CNP5PM
- VF CNP8MM
- VF CNM4MM
- VF CNM4PM
- VF CNM5MM
- VF CNM5PM
- VF CNM8MM
- VF CNM8PM
- VF CNM12MM-L16

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.
Note: the 12-pole connector is only available in metal with M20x1.5 thread and 16 cm wires.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

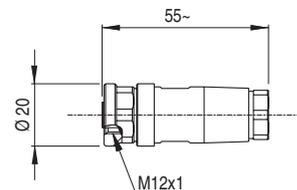
Field wireable M12 female connectors



Features:

- Technopolymer connector body
- Gold-plated contacts
- Screw terminals for cable screw fittings

| | |
|-------------------------|--|
| Max. operating voltage: | 250 Vac/dc (4 and 5-pole) 30 Vac/dc (8-pole) |
| Max. operating current: | 4 A (4 and 5-pole) 2 A (8-pole) |
| Protection degree: | IP67 acc. to EN 60529 |
| Ambient temperature: | -25°C ... +85°C |
| Wire cross-sections: | 0.25 mm ² (23 AWG) ... 0.5 mm ² (20 AWG) |



| Article | Description | no. of poles |
|--------------|---|--------------|
| VF CBMP4DM04 | Field wireable M12 female connector, straight, for Ø 4 ... 6.5 mm multipolar cables | 4 |
| VF CBMP5DM04 | Field wireable M12 female connector, straight, for Ø 4 ... 6.5 mm multipolar cables | 5 |
| VF CBMP8DM04 | Field wireable M12 female connector, straight, for Ø 4 ... Ø 7 mm multipolar cables | 8 |

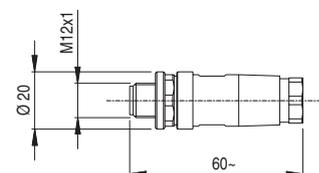
Field wireable M12 male connectors



Features:

- Technopolymer connector body
- Gold-plated contacts
- Screw terminals for cable screw fittings

| | |
|-------------------------|--|
| Max. operating voltage: | 250 Vac/dc (5-pole) 30 Vac/dc (8-pole) |
| Max. operating current: | 4 A (5-pole) 2 A (8-pole) |
| Protection degree: | IP67 acc. to EN 60529 |
| Ambient temperature: | -25°C ... +85°C |
| Wire cross-sections: | 0.25 mm ² (23 AWG) ... 0.5 mm ² (20 AWG) |



| Article | Description | no. of poles |
|--------------|---|--------------|
| VF CCMP5DM04 | Field wireable M12 male connector, straight, for Ø 4 ... Ø 6.5 mm multipolar cables | 5 |
| VF CCMP8DM04 | Field wireable M12 male connector, straight, for Ø 4 ... Ø 7 mm multipolar cables | 8 |

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

Series connection with Y-shaped M12 connectors

To facilitate and simplify the series wiring of the safety devices, a variety of accessories designed specifically for this purpose are available. With the help of the proven M12 round connector, safety equipment of Category 4, SIL3 and PL e with up to 32 elements connected in series is possible. All of which is possible without the risk of connection errors and with a high IP67 protection degree.

The safety circuits consist of a 24 Vdc power supply unit, a number of extensions to the installed devices, Y connectors for branching out from the chain to each individual device and a terminating plug.

In addition to the power supply unit, a suitable safety module is used to assess the state of the safety outputs within the safety chain.

Devices suitable for series connection

The series may consist both of devices that are identical to one another (homogeneous series) or that belong to different series (mixed series).

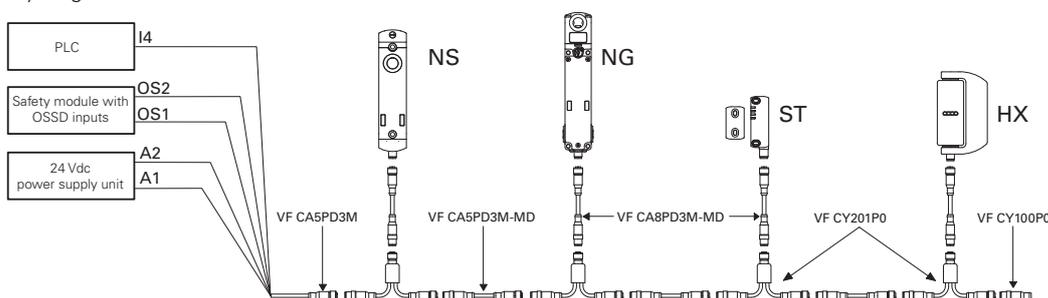
The following Pizzato Elettrica devices may be connected in series using the Y connectors:

- ST series safety sensors with RFID technology: ST D•31•M•, ST D•71•M•
- NG series safety switches with solenoid and RFID technology, any item with an M12 connector for series connection with a "Y" connector or with option: K950, K951, K952.
- NS series switches, any item with an M12 connector for series connection with a "Y" connector or with the option "integrated cable or connector," letter "Q".
- HX series safety hinge switches: HX BEE1••M.

Electrical connection of the chain

| Pin | Colour | Connection |
|-----|--------|------------------------------|
| 1 | Brown | A1 Supply input +24 Vdc |
| 2 | White | OS1 Safety output |
| 3 | Blue | A2 Supply input 0 V |
| 4 | Black | OS2 Safety output |
| 5 | Grey | I4 Solenoid activation input |

Note: By activating/deactivating input I4, all switches of the NG and NS series in the chain simultaneously block/open all guards. Activation and deactivation of input I4 has no effect on the ST sensors and HX hinges in the chain.



Attention! For proper operation of the devices connected in series via cables or Y connectors, it is necessary to pay particular attention to the voltage drop that occurs in the circuit. Pay particular attention to the currents and cross-sections/lengths of the used cables to ensure that the supply voltage of the components at the end of the series connection remains within the specified limit values during effective operation.

M12 extension cable



Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228
- Gold-plated contacts
- Self-locking ring nut
- High flexibility cable with PVC sheath suitable to be used in drag chains, acc. to IEC 60332-3 and CEI 20-22II.

Max. operating voltage: 250 Vac / 300 Vdc (5-pole)
30 Vac / 36 Vdc (8-pole)

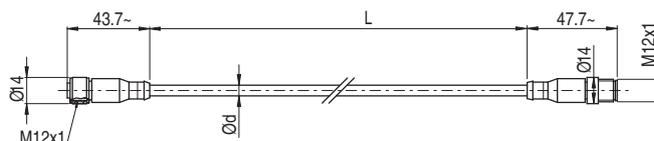
Max. operating current: 4 A (5-pole)
2 A (8-pole)

Protection degree: IP67 acc. to EN 60529
IP69K acc. to ISO 2653
(Protect the cables from direct high-pressure and high-temperature jets)

Ambient temperature: -25°C ... +80°C for fixed installation
-15°C ... +80°C for mobile installation

Wire cross-sections: 0.5 mm² (20 AWG) (5-pole)
0.25 mm² (23 AWG) (8-pole)

Minimum bending radius: > cable diameter x 15



ø d: 6.4 mm for 5-pole
6 mm for 8-pole

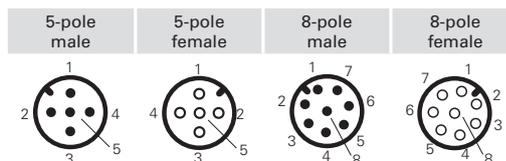
Code structure

VF CA5PD3M-MD

| | | |
|------------------|-----------------------|---|
| No. of poles | 5 poles | 8 poles |
| Connection type | M M12x1 | |
| Cable length (L) | 3 3 metres (standard) | 5 5 metres (standard) 0 10 metres (standard) |
| Cable sheath | P PVC | |
| Connector type | D straight | |

Other lengths on request

Pin assignment



Stock items

- VF CA5PD3M-MD
- VF CA5PD5M-MD
- VF CA5PD0M-MD
- VF CA8PD3M-MD
- VF CA8PD5M-MD

Attention! For items not in stock the minimum order quantity is 100 pcs

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

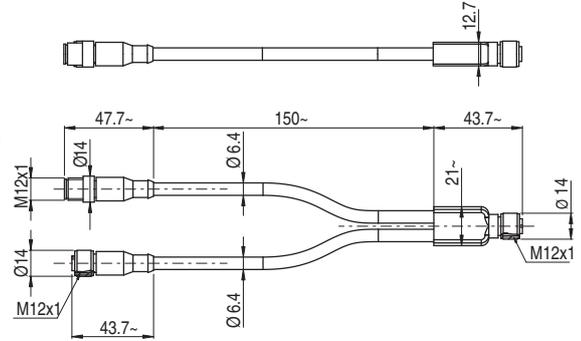
M12 connectors, Y-shaped, for series connections



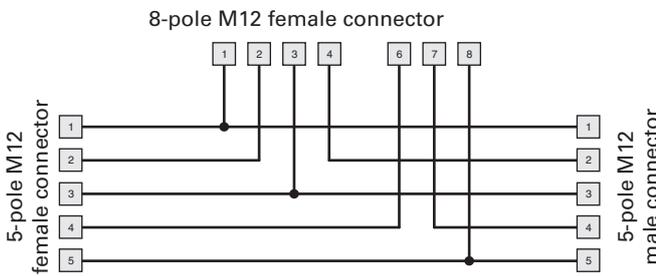
Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228
- Gold-plated contacts
- Self-locking ring nut
- High flexibility cable with PVC sheath suitable to be used in drag chains, acc. to IEC 60332-3 and CEI 20-22II.

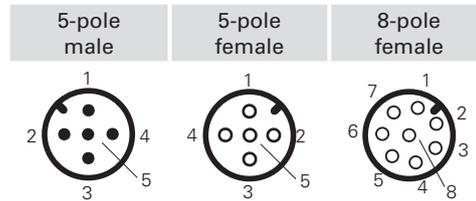
Max. operating voltage: 30 Vac / 36 Vdc
 Max. operating current: 4 A (5-pole)
 2 A (8-pole)
 Protection degree: IP67 acc. to EN 60529
 IP69K acc. to ISO 2653
 (Protect the cables from direct high-pressure and high-temperature jets)
 Ambient temperature: -25°C ... +80°C for fixed installation
 -15°C ... +80°C for mobile installation
 Wire cross-sections: 0.5 mm² (20 AWG)
 Minimum bending radius: > cable diameter x 15



Internal block diagram, Y-shaped connector



Pin assignment



| Article | Description |
|------------|--|
| VF CY201P0 | M12 connectors, Y-shaped, for series connections |

ATTENTION: when used in safety applications, the Y-shaped connectors must be installed in a place that is not directly accessible, in order to avoid shocks or tampering.

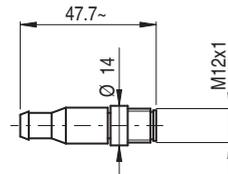
M12 terminating plugs for series connections



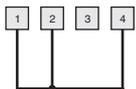
Features:

- Polyurethane connector body
- Gold-plated contacts
- Self-locking ring nut

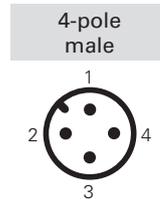
Max. operating voltage: 250 Vac / 300 Vdc
 Max. operating current: 4 A
 Protection degree: IP67 acc. to EN 60529



Internal block diagram of the terminating plug



Pin assignment



| Article | Description |
|------------|--|
| VF CY100P0 | M12 terminating plugs for series connections, 4-pole |

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

M23 male connectors

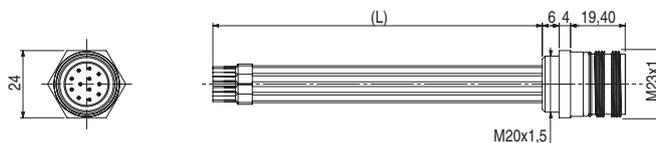


Features:

These standard M23 male connectors are ready for the installation on the switches with M20 cable input (e.g.: FG series and NG series).

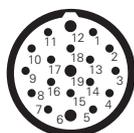
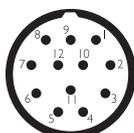
Their wires have the right length for the connection to the contact blocks and are provided with wire-end sleeves. On request they can be delivered already wired to the switch. The connectors are used where a very short machine down time is required (e.g. in big plants). The connector-provided switch can be replaced very quickly with an identical one with no chance of incorrect wiring.

| | |
|-------------------------|--|
| Max. operating voltage: | 250 Vac (12-pole) 100 Vac (19-pole) |
| Max. operating current: | 1.5 A |
| Protection degree: | IP67 acc. to EN 60529 IP69K acc. to ISO 20653 |
| Ambient temperature: | -25°C ... +80°C |
| Tightening torque: | 1 ... 1.5 Nm |
| Wire cross-section: | 0.34 mm ² (22 AWG) |
| Contact type: | gold-plated |



Pin assignment

| 12 poles | | | 19-pole | | |
|----------|--|--|---------|--|--|
|----------|--|--|---------|--|--|



| Pin | Colour | Pin | Colour | Pin | Colour |
|-----|-----------|-----|-----------|-----|--------------|
| 1 | White | 1 | White | 13 | White-Green |
| 2 | Brown | 2 | Brown | 14 | Brown-Green |
| 3 | Green | 3 | Green | 15 | White-Yellow |
| 4 | Yellow | 4 | Yellow | 16 | Yellow-Brown |
| 5 | Grey | 5 | Grey | 17 | White-Grey |
| 6 | Pink | 6 | Pink | 18 | Grey-Brown |
| 7 | Blue | 7 | Blue | 19 | White-Pink |
| 8 | Red | 8 | Red | | |
| 9 | Black | 9 | Black | | |
| 10 | Purple | 10 | Purple | | |
| 11 | Grey-Pink | 11 | Grey-Pink | | |
| 12 | Red-Blue | 12 | Red-Blue | | |

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CNM12MT-L12

| | |
|----------------------|------------------------|
| Body material | Wire length (L) |
| M metal | L12 12 cm |
| | L16 16 cm |
| No. of poles | |
| 12 12 poles | |
| 19 19-pole | |

Note

For applications with NG series switches, use connectors with L12 wire length.
For applications with FG series switches, use connectors with L16 wire length.

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

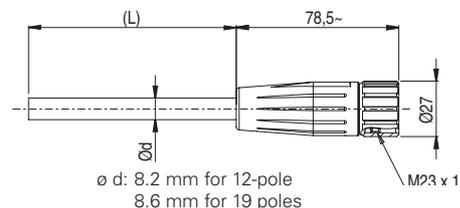
M23 female connectors with cable



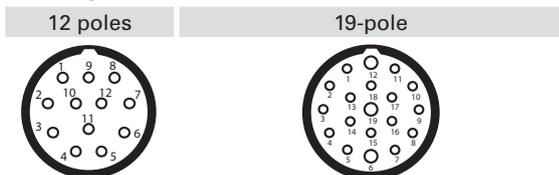
Features:

- Polyurethane connector body
- Class 5 copper conductors acc. to VDE 0295 (12-pole)
- Class 2 copper conductors acc. to VDE 0295 (19-pole)
- Gold-plated contacts
- Self-locking ring nut
- Cable with PVC sheath acc. to IEC 60332-3, CEI 20-22 II e CEI 20-35/1-2 (flame retarding)

| | |
|-------------------------|--|
| Max. operating voltage: | 250 Vac (12-pole) 100 Vac (19-pole) |
| Max. operating current: | 4 A |
| Protection degree: | IP67 acc. to EN 60529 IP69K acc. to ISO 20653 (Protect the cables from direct high-pressure and high-temperature jets) |
| Ambient temperature: | -5°C ... +70°C |
| Wire cross-sections: | 0.5 mm ² (20 AWG) (12-pole) 0.34 mm ² (22 AWG) (19-pole) |
| Minimum bending radius: | > cable diameter x 15 |



Pin assignment



| Pin | Colour | Pin | Colour | Pin | Colour |
|-----|-----------|-----|-----------|-----|--------------|
| 1 | White | 1 | White | 13 | White-Green |
| 2 | Brown | 2 | Brown | 14 | Brown-Green |
| 3 | Green | 3 | Green | 15 | White-Yellow |
| 4 | Yellow | 4 | Yellow | 16 | Yellow-Brown |
| 5 | Grey | 5 | Grey | 17 | White-Grey |
| 6 | Pink | 6 | Pink | 18 | Grey-Brown |
| 7 | Blue | 7 | Blue | 19 | White-Pink |
| 8 | Red | 8 | Red | | |
| 9 | Black | 9 | Black | | |
| 10 | Purple | 10 | Purple | | |
| 11 | Grey-Pink | 11 | Grey-Pink | | |
| 12 | Red-Blue | 12 | Red-Blue | | |

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CA12PD20S

| | |
|--------------------|--------------------------|
| No. of poles | Connection type |
| 12 12 poles | S M23x1 |
| 19 19-pole | |
| Cable sheath | Cable length (L) |
| P PVC | 0 10 metres |
| | 20 20 metres |
| | Other lengths on request |
| Connector type | |
| D straight | |

Stock items

VF CA12PD0S
VF CA12PD20S
VF CA19PD0S
VF CA19PD20S

Attention! For items not in stock the minimum order quantity is 50 pcs.

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

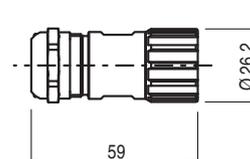
Field wireable M23 female connectors



Features:

- Nickel-plated metal connector body
- Gold-plated contacts
- 12-pole or 19-pole versions

| | |
|-------------------------|--|
| Max. operating voltage: | 250 Vac (12-pole) 100 Vac (19-pole) |
| Max. operating current: | 8 A |
| Protection degree: | IP67 acc. to EN 60529 IP69K acc. to ISO 20653 |
| Ambient temperature: | -40°C ... +125°C |
| Tightening torque: | 1 ... 1.5 Nm |
| Pollution degree: | 3 |
| Switching cycles: | > 1000 |

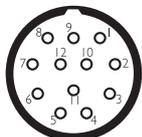


Pin configuration

12 poles

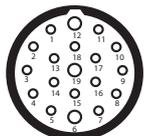


clockwise numbering



counterclockwise numbering

19-pole



clockwise numbering



| Article | Description |
|-----------|--------------|
| VF AC2205 | Mounting key |

Note: Article required for opening and wiring the connector

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CBSM12TC07

Connection type

S M23x1

Body material

M metal

No. of poles

12 12 poles

19 19-pole

Connector type

T clockwise numbering (standard)

D counterclockwise numbering

Cable diameter

07 Ø 7 ... 12 mm

Pin connection type

C crimp connection (standard) 0.34 ... 1 mm²

S solder connection 0.34 ... 1 mm²

Note: Use appropriate crimp pliers for crimp connections (e.g., Knipex, article number 97 52 63).

 **Stock items**

VF CBSM12TC07

VF CBSM19TC07

VF CBSM12TS07

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

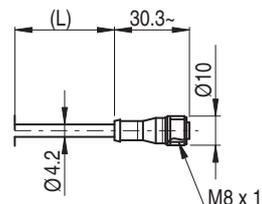
M8 female connectors with cable



Features:

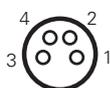
- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228
- Gold-plated contacts
- Self-locking ring nut
- High flexibility cable with PVC sheath suitable to be used in drag chains, acc. to IEC 60332-3 and CEI 20-22II. With polyurethane sheath on request.

| | |
|-------------------------|---|
| Max. operating voltage: | 60 Vac / 75 Vdc |
| Max. operating current: | 4 A |
| Protection degree: | IP67 acc. to EN 60529 IP69K acc. to ISO 20653 <small>(Protect the cables from direct high-pressure and high-temperature jets)</small> |
| Ambient temperature: | -25°C ... +80°C for fixed installation -15°C ... +80°C for mobile installation |
| Wire cross-sections: | 0.25 mm ² (23 AWG) |
| Minimum bending radius: | > cable diameter x 15 |



Pin assignment

4 poles



| Pin | Colour |
|-----|--------|
| 1 | Brown |
| 2 | White |
| 3 | Blue |
| 4 | Black |

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office.

VF CA4PD3K

| | | | |
|-----------------------|----------------|-------------------------|---------------------|
| No. of poles | | Connection type | |
| 4 | 4 poles | K | M8x1 |
| Cable sheath | | Cable length (L) | |
| P | PVC (standard) | 1 | 1 metre |
| U | PUR | 2 | 2 metres |
| Connector type | | 3 | 3 metres (standard) |
| D | straight | 4 | 4 metres |
| | | 5 | 5 metres (standard) |
| | | ... | |
| | | 0 | 10 metres |

Other lengths on request

Stock items

VF CA4PD3K
VF CA4PD5K

Attention!

For items not in stock the minimum order quantity is 100 pcs.

ATTENTION: always disconnect the power supply before removing the connector. The connector is not suitable for separation of electrical loads.

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

Strain relief cable glands

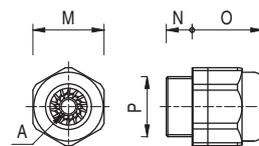
Packs of **10 pcs.**

This particular design ensures high resistance to traction of the cable glands. All cable glands are also suitable for a wide range of cable diameters.

Suitable for circular cross-section cables only.

Features:

Body and ring material: technopolymer without halogen
 Protection degree: IP67 acc. to EN 60529
 Tightening torque: 3 ... 4 Nm (PG 13.5/M20)
 2 ... 2.5 Nm (PG 11/M16)



| | Article | Description | A | Ø _M | N | O | P |
|----------------|-------------|--|--|----------------|-----|----|---------|
| Metric threads | VF PAM25C7N | M25x1.5 cable gland for one cable Ø 10 ... 17 mm | ○ | 30 | 10 | 28 | M25x1.5 |
| | VF PAM20C6N | M20x1.5 cable gland for one cable Ø 6 ... 12 mm | ○ | 24 | 9 | 24 | M20x1.5 |
| | VF PAM20C5N | M20x1.5 cable gland for one cable from Ø 5 ... 10 mm | ○ | 24 | 9 | 24 | M20x1.5 |
| | VF PAM20C3N | M20x1.5 cable gland for one cable Ø 3 ... 7 mm | ○ | 24 | 9 | 24 | M20x1.5 |
| | VF PAM16C5N | M16x1.5 cable gland for one cable Ø 5 ... 10 mm | ○ | 22 | 7.5 | 23 | M16x1.5 |
| | VF PAM16C4N | M16x1.5 cable gland for one cable Ø 4 ... 8 mm | ○ | 22 | 7.5 | 23 | M16x1.5 |
| | VF PAM16C3N | M16x1.5 cable gland for one cable Ø 3 ... 7 mm | ○ | 22 | 7.5 | 23 | M16x1.5 |
| | VF PAM20CBN | M20x1.5 multi-hole cable gland for 2 cables Ø 3 ... 5 mm | ⊗ | 24 | 9 | 23 | M20x1.5 |
| | VF PAM20CDN | M20x1.5 multi-hole cable gland for 3 cables Ø 1 ... 4 mm | ⊗ | 24 | 9 | 23 | M20x1.5 |
| | VF PAM20CEN | M20x1.5 multi-hole cable gland for 3 cables Ø 3 ... 5 mm | ⊗ | 24 | 9 | 23 | M20x1.5 |
| | VF PAM20CFN | M20x1.5 multi-hole cable gland for 4 cables Ø 1 ... 4 mm | ⊗ | 22 | 9 | 23 | M20x1.5 |
| | PG threads | VF PAP13C6N | PG 13.5 cable gland for one cable from Ø 6 ... 12 mm | ○ | 24 | 9 | 24 |
| VF PAP13C5N | | PG 13.5 cable gland for one cable from Ø 5 ... 10 mm | ○ | 24 | 9 | 24 | PG 13.5 |
| VF PAP13C3N | | PG 13.5 cable gland for one cable from Ø 3 ... 7 mm | ○ | 24 | 9 | 24 | PG 13.5 |
| VF PAP11C5N | | PG 11 cable gland for one cable from Ø 5 ... 10 mm | ○ | 22 | 7.5 | 23 | PG 11 |
| VF PAP11C4N | | PG 11 cable gland for one cable from Ø 4 ... 8 mm | ○ | 22 | 7.5 | 23 | PG 11 |
| VF PAP11C3N | | PG 11 cable gland for one cable from Ø 3 ... 7 mm | ○ | 22 | 7.5 | 23 | PG 11 |

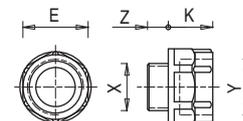
Thread adapters

Packs of **100 pcs.**

Thread adapters make it possible to fulfil requests for switches with a different thread to those generally found in stock. This means it is possible to offer customers a single product type with various threaded connections, while only having to stock the product itself and many kinds of adapters.

Features:

Body material: glass fibre reinforced technopolymer
 Tightening torque: 3 ... 4 Nm



| Article | Description | X | Y | Z | K | Ø _E |
|------------------|-----------------------------------|-----------|---------|---|----|----------------|
| VF ADPG13-PG11 | Adapter from PG 13.5 to PG 11 | PG 13.5 | PG 11 | 9 | 12 | 22 |
| VF ADPG13-M20 | Adapter from PG 13.5 to M20x1.5 | PG 13.5 | M20x1.5 | 9 | 14 | 24 |
| VF ADPG13-1/2NPT | Adapter from PG 13.5 to 1/2 NPT | PG 13.5 | 1/2 NPT | 9 | 14 | 24 |
| VF ADPG11-1/2NPT | Adapter from PG 11 to 1/2 NPT | PG 11 | 1/2 NPT | 7 | 14 | 24 |
| VF ADPG11-PG13 | Adapter from PG 11 to PG 13.5 | PG 11 | PG 13.5 | 7 | 14 | 24 |
| VF ADM20-1/2NPT | Adapter from M20 x 1.5 to 1/2 NPT | M20 x 1.5 | 1/2 NPT | 9 | 14 | 24 |

Protection caps

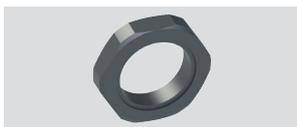
Packs of **10 pcs.****Features:**

Body material: technopolymer, self-extinguishing
 Protection degree: IP67 acc. to EN 60529
 IP69K acc. to ISO 20653
 Tightening torque: 1.2 ... 1.6 Nm
 Cross-recessed screw: PH3

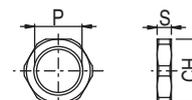


| Article | Description | A | B |
|------------|------------------------|----|---------|
| VF PTM20 | Protection cap M20x1.5 | 24 | M20x1.5 |
| VF PTG13.5 | Protection cap PG13.5 | 24 | PG 13.5 |

Threaded nuts

Packs of **10 pcs.**
Features:

Tightening torque: 1.2 ... 2 Nm

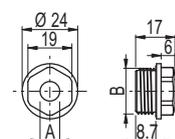


| | Article | Description | S | CH | P |
|---------|-----------|---|---|----|---------|
| Plastic | VF DFPM25 | M25x1.5 threaded technopolymer nut | 6 | 32 | M25x1.5 |
| | VF DFPM20 | M20x1.5 threaded technopolymer nut | 6 | 27 | M20x1.5 |
| | VF DFPM16 | M16x1.5 threaded technopolymer nut | 5 | 22 | M16x1.5 |
| | VF DFPP13 | PG13.5 threaded technopolymer nut | 6 | 27 | PG 13.5 |
| Metal | VF DFMM20 | M20x1.5 threaded nut in nickel-plated brass | 3 | 23 | M20x1.5 |

Chock plugs

Packs of **100 pcs.**
Features:

Body material: technopolymer
 Protection degree: IP54 acc. to EN 60529
 Tightening torque: 0.8 ... 1 Nm



Notes: Use a socket wrench for tightening.

| Article | Description | A | B |
|-------------|---|-----|---------|
| VF PFM20C8N | Chock plug for one cable Ø 8 ... 12 mm, threaded, M20x1.5 | 7.5 | M20x1.5 |
| VF PFM20C4N | Chock plug for one cable Ø 4 ... 8 mm, threaded, M20x1.5 | 3.5 | M20x1.5 |

Torx safety screws

Packs of **10 pcs.**

Pan head screws with Torx fitting and pin, stainless steel.
 Use a thread locker where required for applications acc. to. EN ISO 14119.

| Article | Description |
|----------------|--|
| VF VAM4X10BX-X | M4x10 screw, with Torx T20 fitting, AISI 304 |
| VF VAM4X15BX-X | M4x15 screw, with Torx T20 fitting, AISI 304 |
| VF VAM4X20BX-X | M4x20 screw, with Torx T20 fitting, AISI 304 |
| VF VAM4X25BX-X | M4x25 screw, with Torx T20 fitting, AISI 304 |
| VF VAM4X30BX-X | M4x30 screw, with Torx T20 fitting, AISI 304 |
| VF VAM5X10BX-X | M5x10 screw, with Torx T25 fitting, AISI 304 |
| VF VAM5X15BX-X | M5x15 screw, with Torx T25 fitting, AISI 304 |
| VF VAM5X20BX-X | M5x20 screw, with Torx T25 fitting, AISI 304 |
| VF VAM5X25BX-X | M5x25 screw, with Torx T25 fitting, AISI 304 |
| VF VAM5X35BX-X | M5x35 screw, with Torx T25 fitting, AISI 304 |
| VF VAM5X45BX-X | M5x45 screw, with Torx T25 fitting, AISI 304 |

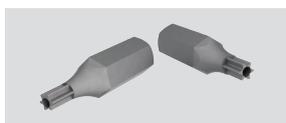
OneWay safety screws

Packs of **10 pcs.**

Pan head screws with OneWay fitting and pin in stainless steel.
 This screw type cannot be removed or tampered with using common tools. Ideal for fixing safety device actuators in accordance with EN ISO 14119.

| Article | Description |
|----------------|--|
| VF VAM4X10BW-X | M4x10 screw, with OneWay fitting, AISI 304 |
| VF VAM4X15BW-X | M4x15 screw, with OneWay fitting, AISI 304 |
| VF VAM4X20BW-X | M4x20 screw, with OneWay fitting, AISI 304 |
| VF VAM4X25BW-X | M4x25 screw, with OneWay fitting, AISI 304 |
| VF VAM5X10BW-X | M5x10 screw, with OneWay fitting, AISI 304 |
| VF VAM5X15BW-X | M5x15 screw, with OneWay fitting, AISI 304 |
| VF VAM5X20BW-X | M5x20 screw, with OneWay fitting, AISI 304 |
| VF VAM5X25BW-X | M5x25 screw, with OneWay fitting, AISI 304 |

Bits for Torx safety screws



Bits for Torx safety screws with pin, with ¼" hexagonal connection.

| Article | Description |
|-------------|--|
| VF VAIT1T20 | Bits for M4 screws with Torx T20 fitting |
| VF VAIT1T25 | Bits for M5 screws with Torx T25 fitting |
| VF VAIT1T30 | Bits for M6 screws with Torx T30 fitting |

All values in the drawings are in mm

→ The 2D and 3D files are available at www.pizzato.com

Fixing plates



Metal fixing plate, for fixing rope switches on the ceiling.

The plate is provided with bore holes for fastening switches of the FD, FL, FC, FP, FR, FM, FZ, FX, FK series. It is supplied without screws.

| Article | Description |
|---------|----------------------|
| VF SFP2 | Ceiling fixing plate |

Fixing plates



Fixing plate (complete with fastening screws) provided with long slots for adjusting the operating point.

Each plate is provided with two pairs of fixing holes, one for standard switches and one for switches with reset device. The actuator thus always has the same actuating point.

| Article | Description |
|---------|--------------------------|
| VF SFP1 | Fixing plate (FR series) |
| VF SFP3 | Fixing plate (FX series) |

LED signalling lights

Packs of 5 pcs.



These signalling lights with high luminosity LEDs are used for signalling that an electric contact has changed its state inside the switch. They can be installed on switches of the FL, FX, FZ, FW, FG, NG or FS series by screwing them on one of the conduit entries not used for electric cables. They can be used for many different purposes: for example, to signal, from a distance, whether the switch has been actuated; whether the guard has closed correctly; or whether the guard is locked or unlocked.

The inner part can rotate in such a way that it can be wired and screwed on the switch without any risk of twisting the wires.

Features:

Protection degree:

IP67 acc. to EN 60529

Ambient temperature:

IP69K acc. to ISO 20653

Operating voltage U_n :

-25°C ... +70°C

24 Vac/dc (10 mA)

120 Vac (20 mA)

230 Vac (20 mA)

Tolerance on the supply voltages:

 $\pm 15\%$ of U_n

Operating current:

10 mA

Connection system:

PUSH-IN spring type

Cross-section of rigid/flexible wires w. wire-end sleeve:

min. 1 x 0.34 mm² (1 x AWG 24)max. 1 x 1.5 mm² (1 x AWG 16)

Wire cross-section with pre-insulated wire-end sleeve:

min. 1 x 0.34 mm² (1 x AWG 24)max. 1 x 0.75 mm² (1 x AWG 18)

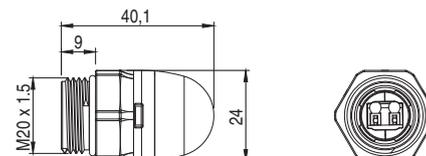
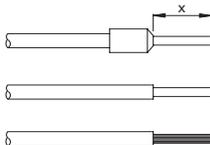
Tightening torque:

1.2 ... 2 Nm

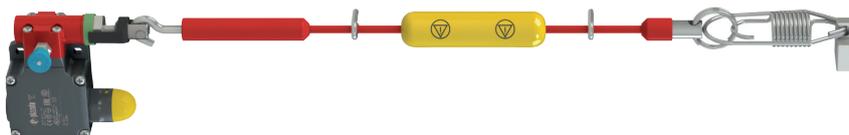
Wire stripping length (x):

min.: 8 mm

max.: 12 mm



Application examples



Status indicator for safety rope switches



Indication of unlocked door

Code structure

Attention! The feasibility of a code number does not mean the effective availability of a product. Please contact our sales office

VF SL1A3PA1

Operating voltage

| | |
|----------|-----------|
| 1 | 24 Vac/dc |
| 3 | 120 Vac |
| 4 | 230 Vac |

Type of light source

| | |
|----------|------------------------------------|
| A | standard LED with continuous light |
|----------|------------------------------------|

Body design

| | |
|----------|---|
| A | Total height 40 mm, spherical lens, threading M20x1.5mm |
|----------|---|

Connection type

| | |
|----------|------------------------|
| P | PUSH-IN terminal strip |
|----------|------------------------|

Lens colour

| | |
|----------|--------|
| 2 | White |
| 3 | Red |
| 4 | Green |
| 5 | Yellow |

Stock items

| |
|-------------|
| VF SL1A3PA1 |
| VF SL1A5PA1 |

Junction box for series connection of up to 4 devices



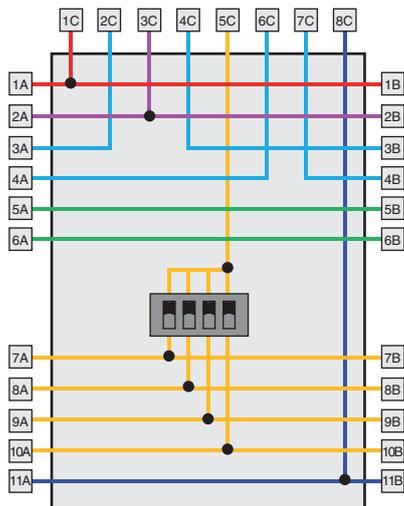
This accessory allows easy and precise series connection of up to 4 devices. Thanks to the numbered terminals and to the internal circuit, it is sufficient to connect the conductors in the slots provided with the practical and fast PUSH-IN spring connections. Thanks to the four internal microswitches, it is possible to easily and immediately direct the device signalling outputs (open or closed, locked or unlocked) to one of the four available auxiliary channels and then manage the information independently for each channel through a PLC.

Features:

- Material:** Self-extinguishing shock-proof polycarbonate with double insulation, UV-resistant and glass fibre reinforced
- Material of the screws:** Stainless steel
- Protection degree:** IP67 acc. to EN 60529, IP69K acc. to ISO 20653, with cable gland of equal or higher protection degree
- Conduit entries:** 2x M20 - 1/2 NPT knock-out side entries
2x M20 - 1/2 NPT - M25 knock-out side entries
2x M16 knock-out base entries
- Ambient temperature:** -40°C ... +80°C
- Tightening torque of the cover screws:** 1 ... 1.4 Nm
- Connection system:** PUSH-IN spring type
- Cross-section of rigid/flexible wires w. wire-end sleeve:** min. 1 x 0.34 mm² (1 x AWG 24)
max. 1 x 1.5 mm² (1 x AWG 16)
- Wire cross-section with pre-insulated wire-end sleeve:** min. 1 x 0.34 mm² (1 x AWG 24)
max. 1 x 0.75 mm² (1 x AWG 18)
- Wire stripping length (x):** min.: 8 mm
max.: 12 mm



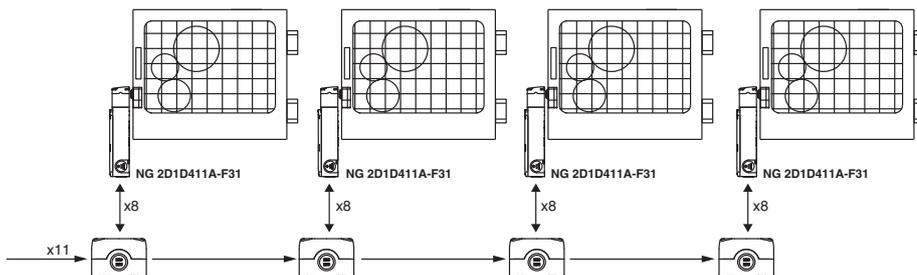
Pin assignment



| Article | Description |
|------------|---|
| VF CY302P0 | Junction box for series connection of up to 4 devices |

| Terminal box | Connection | Terminal box | Connection |
|--------------|--|--------------|--|
| 1A / 1B | A1 Supply input +24 Vdc | 1C | A1 Supply input +24 Vdc |
| 2A / 2B | A2 Supply input 0 V | 2C | OS1 Safety output |
| 3A / 3B | OS1 / IS1 Safety output / safety input | 3C | A2 Supply input 0 V |
| 4A / 4B | OS2 / IS2 Safety output / safety input | 4C | IS1 Safety input |
| 5A / 5B | Auxiliary connection | 5C | O3 Signalling output, actuator inserted |
| 6A / 6B | Auxiliary connection | 6C | O4 Signalling output, actuator inserted and locked |
| 7A / 7B | OAU1 Auxiliary output Oaux1 | 7C | OS2 Safety output |
| 8A / 8B | OAU2 Auxiliary output Oaux2 | 8C | IS2 Safety input |
| 9A / 9B | OAU3 Auxiliary output Oaux3 | | |
| 10A / 10B | OAU4 Auxiliary output Oaux4 | | |
| 11A / 11B | I4 Solenoid activation input | | |

Example of series connection of 4 NG series switches



Wiring diagram

