

## M12 plugs

All measures in the drawings are in mm



These standard M12 plugs are ready for the installation on the switches.

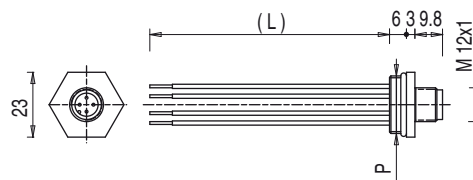
Their wires have the right length for the connection to the contact blocks and are provided with wire-end sleeves. On request they can be delivered already wired to the switch. The connectors are used where a very short machine down time is required (e.g. in big plants). The switch with connector can be replaced with an identical one very quickly, avoiding the possibility of incorrect wiring.

**Technical data:**

Max. operating voltage:	250 Vac / 300 Vdc (4/5 poles) 30 Vac / 36 Vdc (8/12 poles)
Max. operating current:	4 A (4/5 poles) 2 A (8 poles) 1.5 A (12 poles)
Protection degree:	IP67 acc. to EN 60529
Ambient temperature:	-25°C ... +80°C
Tightening torque:	1 ... 1.5 Nm
Wire cross-section:	0.5 mm <sup>2</sup> (20 AWG) for 4/5 poles 0.25 mm <sup>2</sup> (24 AWG) for 8 poles 0.14 mm <sup>2</sup> (26 AWG) for 12 poles
Contact type:	gold-plated

**Conductor configuration**

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.

article		options	
VF CNM5MM		-L100	
<b>Body material</b>		<b>Cable length (L)</b>	
<b>M</b>	metal		8.5 cm (standard)
<b>P</b>	plastic	<b>L16</b>	16 cm
		<b>L100</b>	100 cm
		<b>L200</b>	200 cm
<b>No. of poles</b>		<b>Connection type</b>	
<b>4</b>	4 poles	<b>M</b>	M12x1
<b>5</b>	5 poles	<b>Connector thread (P)</b>	
<b>8</b>	8 poles	<b>M</b>	M20 x 1.5 (standard)
<b>12</b>	12 poles	<b>P</b>	PG 13.5

**Stock items**

VF CNP4MM  
VF CNP4PM  
VF CNM5MM  
VF CNM5PM

**ATTENTION:** always cut off the power supply before disconnecting the connector. The connector is not suitable for separation of electrical loads.

**Note:** the 12-pin connector is only available in metal with M20x1.5 thread and 16 cm cables.

Items with code on **green** background are stock items

→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)

## M12 sockets with cable

All measures in the drawings are in mm



### Technical data:

- Polyurethane connector body (4/5/8 poles)
- Polypropylene connector body (12 poles)
- Class 6 rated copper of the wires acc. to IEC 60228 for mobile installation (4/5/8 poles)
- Class 5 rated copper of the wires acc. to IEC 60228 for fixed installation (12 poles)
- Gold-plated contacts (resistance < 5 mΩ)
- Self locking ring nut
- High flexibility wire suitable to be used in movable chains, with PVC sheath conforming to IEC 60332-3 and CEI 20-22II standards. With polyurethane sheath on request (4/5/8 poles)
- PVC cable, fixed installation (12 poles)

### Technical data:

Max. operating voltage:

250 Vac / 300 Vdc (4/5 poles)

Max. operating current:

30 Vac / 36 Vdc (8/12 poles)

Protection degree:

4 A (4-5 poles) 2 A (8 poles) 1.5 A (12 poles)

IP67 acc. to EN 60529

IP69K acc. to ISO 20653

Ambient temperature:

(Protect the cables from direct high-pressure and high-temperature jets)

-25°C ... +90°C for fixed installation (4/5/8 poles)

-15°C ... +90°C for mobile installation (4/5/8 poles)

-25°C ... +70°C for fixed installation (12 poles)

Wire cross-section:

0.34 mm<sup>2</sup> (22 AWG) for 4 poles

0.25 mm<sup>2</sup> (24 AWG) for 5/8 poles

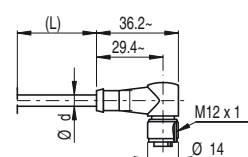
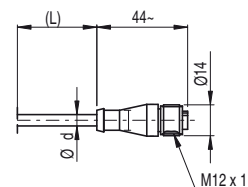
0.14 mm<sup>2</sup> (26 AWG) for 12 poles

> cable diameter x 10

Minimum bending radius:

### Conductor configuration

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 poles  
6 mm for 8 poles  
6.5 mm for 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	
<b>4</b>	4 poles
<b>5</b>	5 poles
<b>8</b>	8 poles
<b>12</b>	12 poles

Sheath coating	
<b>P</b>	PVC (standard)
<b>U</b>	PUR

Connector type	
<b>D</b>	straight (standard)
<b>G</b>	angled

Connection type	
<b>M</b>	M12x1

Cable length (L)		No. of poles			
		4	5	8	12
<b>1</b>	1 metre				
<b>2</b>	2 metres				
<b>3</b>	3 metres (standard)	•	•		
<b>4</b>	4 metres				
<b>5</b>	5 metres (standard)	•	•	•	•
<b>...</b>					
<b>0</b>	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!** No stock item, minimum order quantity 100 pcs.

**ATTENTION:** always cut off the power supply before disconnecting the connector. The connector is not suitable for separation of electrical loads.

Items with code on **green** background are stock items

→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)

## Extension cable with M12 connectors

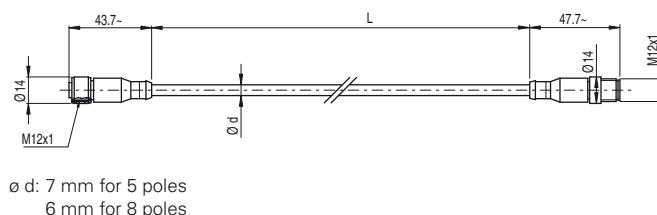


## Technical data:

Polyurethane connector body  
 Class 6 rated copper of the wires acc. to IEC 60228  
 Gold-plated contacts (resistance < 5 mΩ)  
 Self locking ring nut  
 High flexibility cable suitable to be used in drag chains, with PVC sheath conforming to IEC 60332-3 and CEI 20-22II standards.

## Technical data:

Max. operating voltage: 250 Vac / 300 Vdc (5 poles)  
 30 Vac / 36 Vdc (8 poles)  
 Max. operating current: 4 A (5 poles) 2 A (8 poles)  
 Protection degree: IP67 acc. to EN 60529  
 Ambient temperature: -25°C ... +90°C for fixed installation  
 -15°C ... +90°C for mobile installation  
 Wire cross-section: 0.5 mm<sup>2</sup> (20 AWG) (5 poles)  
 0.25 mm<sup>2</sup> (24 AWG) (8 poles)  
 Minimum bending radius: > cable diameter x 10

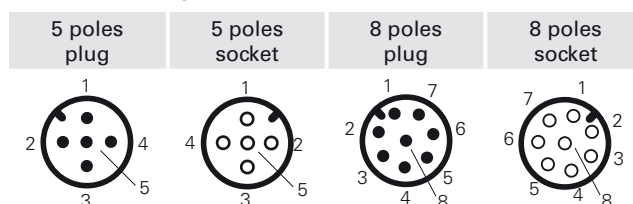


## Code structure

# VF CA5PD3M-MD

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

## Conductor configuration



## Articles

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

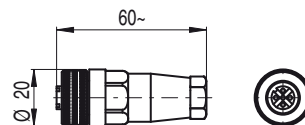
## M12 sockets, field wireable

All measures in the drawings are in mm



## General data

Technopolymer connector body  
 Gold-plated contacts  
 Screw terminals for wiring  
 Max. operating voltages: 250 Vac/dc (4 and 5 poles)  
 30 Vac/dc (8 poles)  
 Maximum current: 4 A  
 Protection degree: IP67 acc. to EN 60529  
 Ambient temperature: -25°C ... +85°C  
 Wire cross-section: from 0.25 mm<sup>2</sup> (24 AWG) to 0.5 mm<sup>2</sup> (20 AWG)



Article	Description	no. of poles
VF CBMP4DM04	Field wireable M12 socket, straight, for multipolar cables from Ø 4 to Ø 6.5 mm	4
VF CBMP5DM04	Field wireable M12 socket, straight, for multipolar cables from Ø 4 to Ø 6.5 mm	5
VF CBMP8DM04	Field wireable M12 socket, straight, for multipolar cables from Ø 4 to Ø 7 mm	8

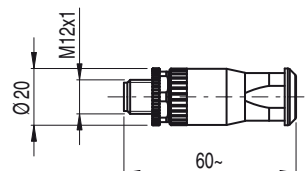
## M12 plugs, field wireable

All measures in the drawings are in mm



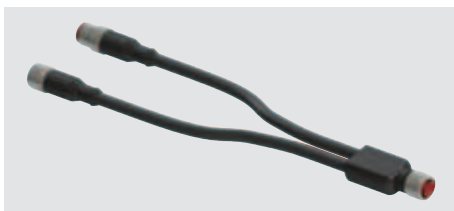
## General data

Technopolymer connector body  
 Gold-plated contacts  
 Screw terminals for wiring  
 Max. operating voltages: 250 Vac/dc (5 poles)  
 30 Vac/dc (8 poles)  
 Maximum current: 4 A  
 Protection degree: IP67 acc. to EN 60529  
 Ambient temperature: -25°C ... +85°C  
 Wire cross-section: from 0.25 mm<sup>2</sup> (24 AWG) to 0.5 mm<sup>2</sup> (20 AWG)



Article	Description	no. of poles
VF CCMP5DM04	Field wireable M12 plug, straight, for multipolar cables from Ø 4 to Ø 6.5 mm	5
VF CCMP8DM04	Field wireable M12 plug, straight, for multipolar cables from Ø 4 to Ø 7 mm	8

## M12 connectors, Y-shaped, for series connections



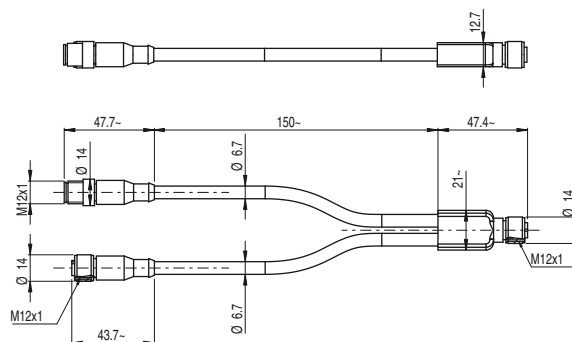
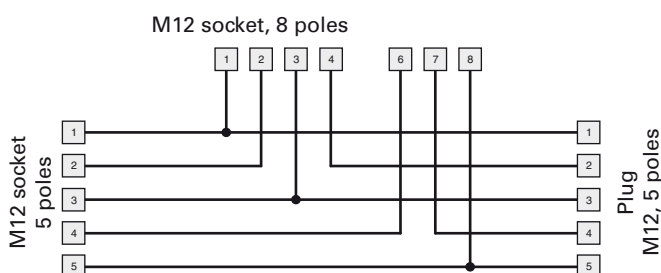
### Technical data:

Polyurethane connector body  
Class 6 rated copper of the wires acc. to IEC 60228  
Gold-plated contacts (resistance < 5 mΩ)  
Self locking ring nut  
High flexibility cable suitable to be used in drag chains, with PVC sheath conforming to IEC 60332-3 and CEI 20-22II standards.

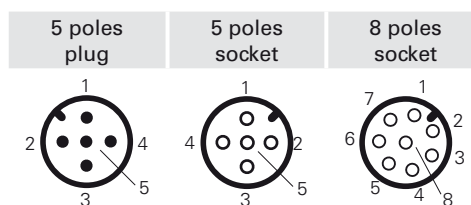
### Technical data:

Max. operating voltage: 30 Vac / 36 Vdc  
Max. operating current: 4 A (4-5 poles) 2 A (8 poles)  
Protection degree: IP67 acc. to EN 60529  
Ambient temperature: -25°C ... +90°C for fixed installation  
-15°C ... +90°C for mobile installation  
Wire cross-section: 0.5 mm<sup>2</sup> (22 AWG)  
Minimum bending radius: > cable diameter x 10

### Internal wiring diagram, Y-shaped connector



### Conductor configuration



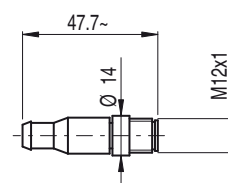
Article	Description
VF CY201P0	M12 connectors, Y-shaped, for series connections

## M12 terminating plugs for series connections

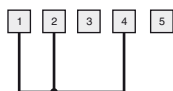


### Technical data:

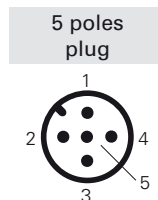
Polyurethane connector body  
Gold-plated contacts (resistance < 5 mΩ)  
Self locking ring nut  
Protection degree: IP67 acc. to EN 60529  
Max. operating voltage: 250 Vac / 300 Vdc  
Max. operating current: 4 A



### Internal wiring diagram of the terminating plug



### Conductor configuration



Article	Description
VF CY100P0	M12 terminating plugs for series connections, 5 poles

## Series connection with Y-shaped M12 connectors

To facilitate and simplify the series wiring of the safety devices, a variety of accessories are available, designed specifically for this purpose. Based on the proven design of the M12 connector, which simply combines standard elements, category 4, PLe and SIL3 safety device chains are available, which can connect up to 32 devices in series. All of which is without the risk of connection errors and with a high IP67 protection degree. The safety chains are composed of a 24Vdc power supply unit, a series of extension cables to reach the various devices in the field, Y connectors to branch away from the chain towards each individual device, and a terminator to close the end of the line.

A suitable safety module is used alongside the power supply unit to assess the state of the safety chain safe outputs.

### Items connected in series

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

Only 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•

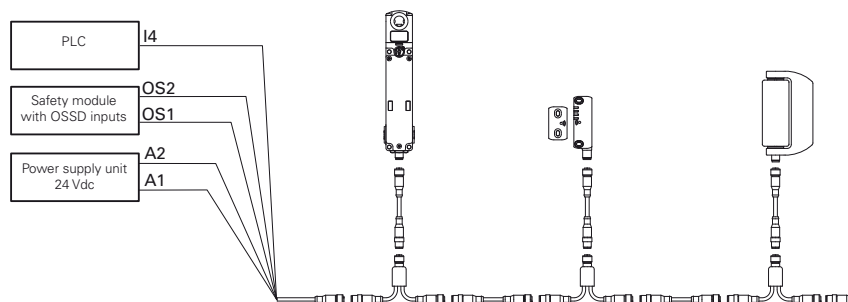
NG series safety switches with solenoid and RFID technology: Any item with an M12 connector for series connection with a "Y" connector or with option: K950, K951, K952

HX series safety hinge switches: HX BEE1••M

### Electrical connection of the chain

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

Note: By activating or deactivating the I4 input, all NG series switches in the chain will lock or unlock all the protections. Activation and deactivation of the I4 input has no effect on the ST sensors and HX hinges in the chain.

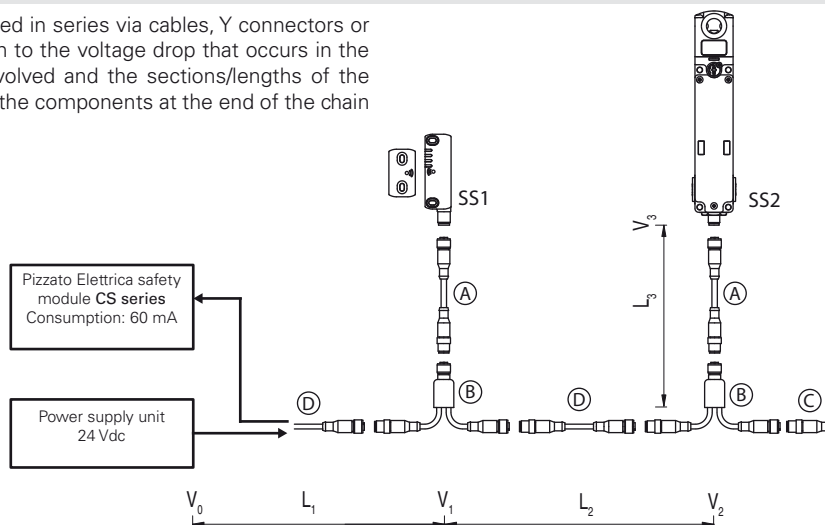


## Connection example and voltage drop verification

**Attention!** For proper operation of the devices connected in series via cables, Y connectors or junction boxes, it is necessary to pay particular attention to the voltage drop that occurs in the circuit. In particular, we must evaluate the currents involved and the sections/lengths of the cables used, to ensure that under real usage conditions the components at the end of the chain are supplied within permissible limits.

### Legend:

- $L_1$  length 1st section (m)
- $L_2$  length 2nd section (m)
- $L_3$  length 3rd section (m)
- $V_0$  Supply voltage (V)
- $V_1$  voltage at point 1 (V)
- $V_2$  voltage at point 2 (V)
- $V_3$  voltage at point 3 (V)
- $I_1$  transfer current 1st section (A)
- $I_2$  transfer current 2nd section (A)
- $I_3$  transfer current 3rd section (A)
- $\rho$  copper resistance =  $0.018 (\Omega \times \text{mm}^2/\text{m})$
- $S$  wire cross-section ( $\text{mm}^2$ )
- SS1 safety sensor, 45 mA consumption (ST series)
- SS2 safety switch with lock, 505 mA consumption (NG series)
- (A): Extension cable with M12 connectors,  $0.25 \text{ mm}^2$  (VF CA8PD5M-MD)
- (B): M12 connectors, Y-shaped (VF CY201P0)
- (C): Terminating plugs for series connections (VF CY100P0)
- (D): Extension cable with M12 connectors,  $0.5 \text{ mm}^2$  (VF CA5PD0M-MD)



### Data:

$$\begin{aligned}
 I_1 &= I_{CS} + I_{SS1} + I_{SS2} = 60 + 45 + 505 = 610 \text{ mA} \\
 I_2 &= I_{SS2} = 505 \text{ mA} \\
 I_3 &= I_{SS2} = 505 \text{ mA} \\
 V_0 &= 24 \text{ V} \\
 L_1 &= 10 \text{ m} \\
 L_2 &= 10 \text{ m} \\
 L_3 &= 5 \text{ m} \\
 S_1 &= 0.5 \text{ mm}^2 \\
 S_2 &= 0.5 \text{ mm}^2 \\
 S_3 &= 0.25 \text{ mm}^2
 \end{aligned}$$

### Calculations:

$$V_1 = V_0 - \rho \times \frac{L_1}{S_1} \times I_1 = 24 - 0.018 \times \frac{10}{0.5} \times 0.61 = 23.7 \text{ V}$$

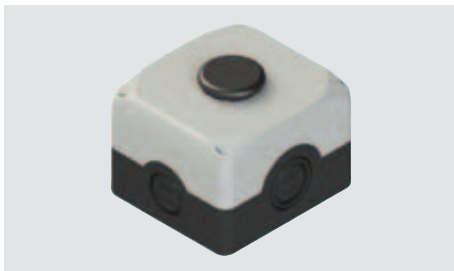
$$V_2 = V_1 - \rho \times \frac{L_2}{S_2} \times I_2 = 23.7 - 0.018 \times \frac{10}{0.5} \times 0.505 = 23.5 \text{ V}$$

$$V_3 = V_2 - \rho \times \frac{L_3}{S_3} \times I_3 = 23.5 - 0.018 \times \frac{5}{0.25} \times 0.505 = 23.3 \text{ V}$$

### Conclusions:

Given the minimum SS2 supply voltage which is equal to  $24 \text{ V} - 10\% = 21.6 \text{ V}$ , which is  $23.3 \text{ V} > 21.6 \text{ V}$ , the device chain described above can be classed as properly dimensioned.

## Junction box for series connection of up to 4 devices



### Technical data:

Material:

Screw material:

Protection degree:

Conduit entries:

Ambient temperature:

Tightening torque of the cover screws:

Connection system:

Cross-section of rigid wires and flexible wires with wire-end sleeve: min.  $1 \times 0.34 \text{ mm}^2$  (1 x AWG 24)  
max.  $1 \times 1.5 \text{ mm}^2$  (1 x AWG 16)

Wire cross-section with pre-insulated wire-end sleeve: min.  $1 \times 0.34 \text{ mm}^2$  (1 x AWG 24)  
max.  $1 \times 0.75 \text{ mm}^2$  (1 x AWG 18)

Cable stripping length (x):

Self-extinguishing shock-proof polycarbonate with double insulation, UV resistant  
fibreglass reinforced, with increased shock resistance.  
stainless steel

IP67 acc. to IEC 60529

IP69K acc. to ISO 20653

with cable gland having equal or higher protection degree

• 2 upper and lower inputs with knock out M20 - 1/2 NPT

• 2 side inputs with knock out M20 - 1/2 NPT - M25

• 2 base inputs with knock out M16

-40°C ... +80°C

1 ... 1.4 Nm

PUSH-IN spring type

max.  $1 \times 1.5 \text{ mm}^2$  (1 x AWG 16)

max.  $1 \times 0.75 \text{ mm}^2$  (1 x AWG 18)

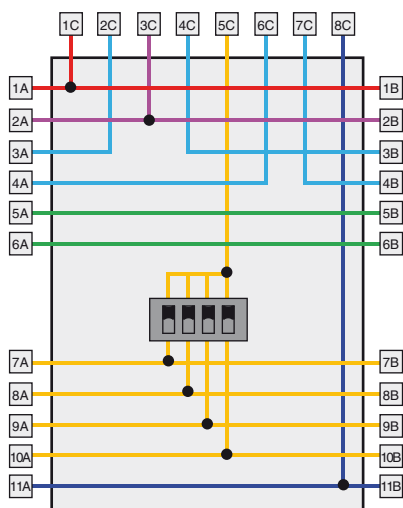
min.: 8 mm

max.: 12 mm



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

### Conductor configuration



### Example of series connection of 4 NG series switches

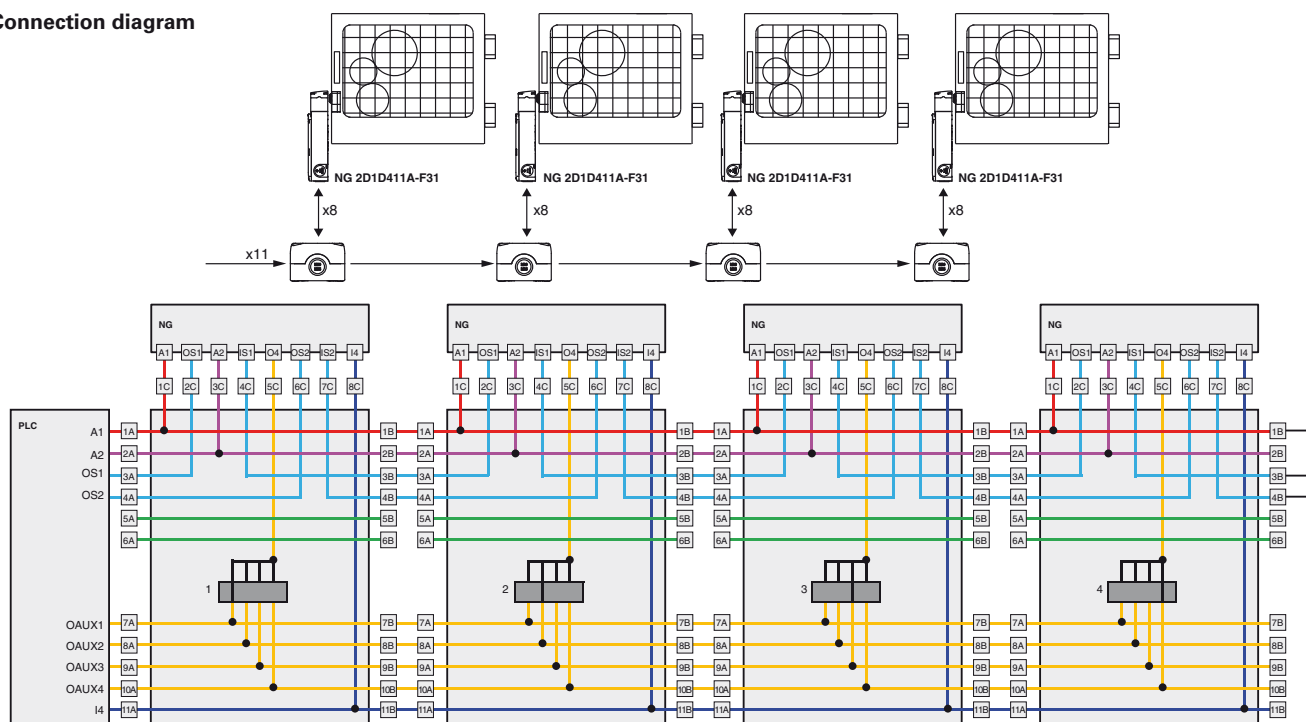
Terminal box	Connection
1A	A1 +24 Vdc supply input
2A	A2 0 V supply input
3A	OS1 Safety output
4A	OS2 Safety output
5A	Auxiliary connection
6A	Auxiliary connection
7A	OAU1 Auxiliary output Oaux1
8A	OAU2 Auxiliary output Oaux2
9A	OAU3 Auxiliary output Oaux3
10A	OAU4 Auxiliary output Oaux4
11A	I4 Solenoid activation input

Terminal box	Connection
1B	A1 +24 Vdc supply input
2B	A2 0 V supply input
3B	IS1 Safety input
4B	IS2 Safety input
5B	Auxiliary connection
6B	Auxiliary connection
7B	OAU1 Auxiliary output Oaux1
8B	OAU2 Auxiliary output Oaux2
9B	OAU3 Auxiliary output Oaux3
10B	OAU4 Auxiliary output Oaux4
11B	I4 Solenoid activation input

Terminal box	Connection
1C	A1 +24 Vdc supply input
2C	OS1 Safety output
3C	A2 0 V supply input
4C	IS1 Safety input
5C	O3 Signalling output, actuator inserted and locked
6C	OS2 Safety output
7C	IS2 Safety input
8C	I4 Solenoid activation input



### Connection diagram



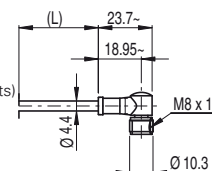
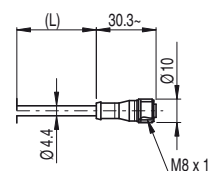
## M8 sockets with cable

**Technical data:**

Polyurethane connector body  
Class 6 rated copper of the wires acc. to IEC 60228  
Gold-plated contacts (resistance < 5 mΩ)  
Self locking ring nut  
High flexibility cable suitable to be used in drag chains, with PVC sheath conforming to IEC 60332-3 and CEI 20-22II standards.  
With polyurethane sheath on request.

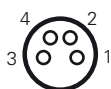
Max. operating voltage: 60 Vac / 75 Vdc  
Max. operating current: 4 A  
Protection degree: IP67 acc. to EN 60529  
IP69K acc. to ISO 20653  
(Protect the cables from direct high-pressure and high-temperature jets)  
Ambient temperature: -25°C ... +90°C for fixed installation  
-15°C ... +90°C for mobile installation  
Wire cross-section: 0.25 mm<sup>2</sup> (24 AWG)  
Minimum bending radius: > cable diameter x 10

All measures in the drawings are in mm



## Conductor configuration

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

<b>4</b>	4 poles (standard)
<b>3</b>	3 poles

## Sheath coating

<b>P</b>	PVC (standard)
<b>U</b>	PUR

## Connector type

<b>D</b>	straight (standard)
<b>G</b>	angled

## Connection type

<b>K</b>	M8x1
----------	------

## Cable length (L)

<b>1</b>	1 metre
<b>2</b>	2 metres
<b>3</b>	3 metres (standard)
<b>4</b>	4 metres
<b>5</b>	5 metres (standard)
...	
<b>0</b>	10 metres

Other lengths on request

**Stock items**

**VF CA4PD3K**  
**VF CA4PD5K**

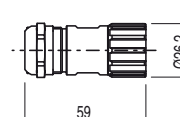
**Attention!** No stock item,  
minimum order quantity 100 pcs.

## M23 sockets, 12 poles, without cable

All measures in the drawings are in mm

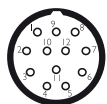
**Technical data:**

Body: metal, nickel-plated  
Max. operating voltage: 300 Vac  
Dielectric strength: 2500 Vac for 1 minute  
Max. operating current: 8 A  
Protection degree: IP67 / IP69K  
Ambient temperature: -40°C ... +125°C  
Tightening torque: 1 ... 1.5 Nm  
Contact type: gold-plated (resistance < 3 mΩ)  
Pollution degree: 3  
Mating cycles: > 1000

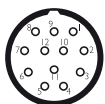


## Pin configuration

12 poles



clockwise numbering



counterclockwise numbering

Article	Description
<b>VF AC2205</b>	Nut fastener M23 connector nut fastener, article: VF CBSM12DS07. Required for opening and wiring the connector.

**Code structure****VF CBSM12TS07**

## Connection type

<b>S</b>	M23x1
----------	-------

## Body material

<b>M</b>	metal
----------	-------

## No. of poles

<b>12</b>	12 poles
-----------	----------

## Cable diameter

<b>07</b>	from Ø 7 to Ø 12 mm
-----------	------------------------

## Pin connection type

<b>S</b>	solder 0.34 ... 1 mm <sup>2</sup>
----------	--------------------------------------

## Connector type

<b>T</b>	clockwise numbering (standard)
<b>D</b>	counterclockwise numbering

**Stock items****VF CBSM12TS07**Items with code on **green** background are stock items→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)



## Wiretrap cable glands

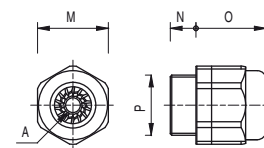
10 pcs. packs



The design of this cable gland improves the retention forces of the wires. Each type of cable gland accepts a wide range of cable diameters.  
Only fit for circular cables.

**Technical data:**

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	ØM	N	O	P
Metric threads	VF PAM25C7N	M25x1.5 cable gland for one cable from Ø 10 ... 17 mm		30	10	28	M25x1.5
	VF PAM20C6N	M20x1.5 cable gland for one cable from 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 from Ø 3 ... 7 mm		24	9	24	M20x1.5
	VF PAM16C5N	M16x1.5 cable gland for one cable from Ø 5 ... 10 mm		22	7.5	23	M16x1.5
	VF PAM16C4N	M16x1.5 cable gland for one cable from Ø 4 ... 8 mm		22	7.5	23	M16x1.5
	VF PAM16C3N	M16x1.5 cable gland for one cable from Ø 3 ... 7 mm		22	7.5	23	M16x1.5
PG threads	VF PAP13C6N	PG 13.5 cable gland for one cable from Ø 6 ... 12 mm		24	9	24	PG 13.5
	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
Metric threads	VF PAM20CBN	M20x1.5 multi hole cable gland for 2 cables from Ø 3 ... 5 mm		24	9	23	M20x1.5
	VF PAM20CDN	M20x1.5 multi hole cable gland for 3 cables from Ø 1 ... 4 mm		24	9	23	M20x1.5
	VF PAM20CEN	M20x1.5 multi hole cable gland for 3 cables from Ø 3 ... 5 mm		24	9	23	M20x1.5
	VF PAM20CFN	M20x1.5 multi hole cable gland for 4 cables from Ø 1 ... 4 mm		24	9	23	M20x1.5

## Thread adapters

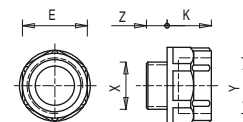
100 pcs. packs



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.

**Technical data:**

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



Article	Description	X	Y	Z	K	ØE
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

100 pcs. packs

**Technical data:**

Body material: technopolymer  
Protection degree: IP67 acc. to EN 60529  
Tightening torque: from 1.2 to 1.6 Nm (PG13.5 / M20)  
1 ... 1.4 Nm (PG11 / M16)



Article	Description	A	B
VF PTM20	Protection cap M20x1,5	25	M20x1.5
VF PTM16	Protection cap M16x1,5	23	M16x1.5
VF PTG13,5	Protection cap PG13,5	25	PG 13.5
VF PTG11	Protection cap PG11	23	PG 11

All measures in the drawings are in mm

Items with code on **green** background are stock items→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)

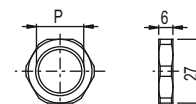


## Plastic nuts, threaded

100 pcs. packs

**Technical data:**

Body material: technopolymer  
Tightening torque: 1.2 ... 2 Nm



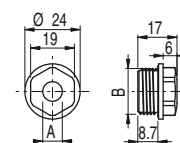
Article	Description	S	CH	P
VF DFPM25	Plastic nut, threaded, M25x1.5	6	32	M25x1.5
VF DFPM20	Plastic nut, threaded, M20x1.5	6	27	M20x1.5
VF DFPM16	Plastic nut, threaded, M16x1.5	5	22	M16x1.5
VF DFPP13	Plastic nut, threaded, PG13.5	6	27	PG 13.5

## Chock plugs

100 pcs. packs

**Technical data:**

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

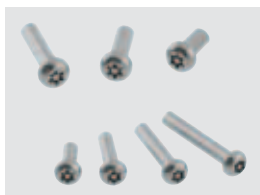


Notes: Use a socket wrench for tightening.

Article	Description	A	B
VF PFM20C8N	Cable gland cap for Ø 8 ... Ø 12 mm cable, threaded M20x1.5	7.5	M20x1.5
VF PFM20C4N	Cable gland cap for Ø 4 ... Ø 8 mm cable, threaded M20x1.5	3.5	M20x1.5

## Safety screws Torx

10 pcs. packs



Pan head screws with Torx fitting and pin, stainless steel.  
Where required for applications conforming to EN ISO 14119 use a thread locker.

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 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

## Safety screws One-Way

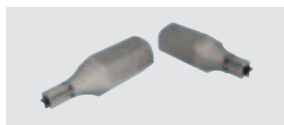
10 pcs. packs



Pan head screws with OneWay fitting 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 1/4" hexagonal connection

Article	Description
VF VAIT1T20	Bits for M4 screws with Torx T20 fitting
VF VAIT1T25	Bits for M5 screws with Torx T25 fitting

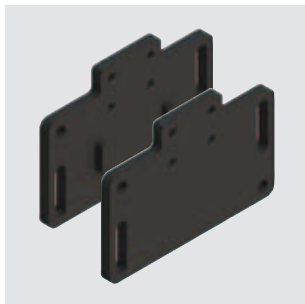
## Fixing plates



Metal fixing plate, designed to fix rope switches on the ceiling.  
The plate is provided with many fixing holes suitable for all series of switches. 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 the adjustment of the operating point.

Every plate has a double couple of fixing holes, one for standard switches and the other one for switches with reset device. In this way the actuator will always have the same actuating point.

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

## Indicator lights

5 pcs. packs

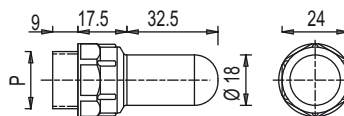


These indicator lights are used for visualizing a change of the state of an electric contact inside the switch. They can be installed only on series FL, FX, FZ, FW, FG or FS switches by screwing them on one of the conduit entries not used for electric cables, and they can have many different functions: for example, combined with a rope switch (e.g. FL 1878-M2) they can indicate (also in the distance) if the switch has been actuated.

Otherwise, combined with safety switches with separate actuator (e.g. FL 693-M2), they can indicate if the protection is closed correctly or not. Combined with a safety switch with solenoid (FS or FG series), they can indicate if the protection is locked or unlocked. Combined with any switch of FL, FX,, FW or FZ series they can be used to calibrate the actuator. The light indicators are decomposable in two parts for bulb replacement without removing the lamp holder from the switch, and their inner part can rotate in such a way that it can be wired and screwed on the switch without any risk of kinking the wires.

### Technical data:

Max. operating voltage $U_i$ :	250 Vac/dc
Rated impulse withstand voltage ( $U_{imp}$ ):	4 kV
Bulb max. power:	3 W
Protection degree:	IP67 acc. to EN 60529
Bulb connection:	BA9
Cable cross-section:	min. 0.5 mm <sup>2</sup> max. 1.5 mm <sup>2</sup>
Ambient temperature:	-25°C ... +40°C
Tightening torque:	3 ... 4 Nm



## Code structure

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

# VF ILI024GM

### Bulb type

<b>I</b>	incandescence
<b>X</b>	without bulb

### Thread (P)

<b>M</b>	M20 x 1.5 (standard)
<b>P</b>	PG 13.5

### Bulb voltage

<b>024</b>	24 Vac/dc ±10%
<b>110</b>	110 Vac/dc ±10%
<b>220</b>	220 Vac/dc ±10%
<b>000</b>	without bulb

### Cover colour

<b>G</b>	yellow
<b>R</b>	red
<b>V</b>	green
<b>W</b>	white

### Stock items

VF ILI024GM
VF ILI024RM
VF ILI024VM
VF ILX000GM
VF ILX000RM
VF ILX000VM

Items with code on **green** background are stock items

→ The 2D and 3D files are available at [www.pizzato.com](http://www.pizzato.com)