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#### M12 male connectors with cable



#### eatures:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228 mobile installation
- Gold-plated contacts
- Anti-vibration self-locking ring nut
- High flexibility cable with oil resistant PVC or PUR sheath suitable to be used in drag chains, acc. to IEC 60332-1-2

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

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

Ambient temperature: -25°C ... +80°C, PVC sheath, fixed installation

-15°C ... +80°C, PVC sheath, mobile installation -40°C ... +80°C, PUR sheath, fixed installation

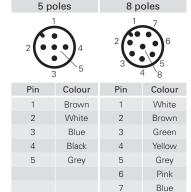
 $-25^{\circ}\text{C} \dots + 80^{\circ}\text{C}, \text{ PUR sheath, mobile installation}$  Wire cross-sections: 0.34 mm² (22 AWG) for 4-pole

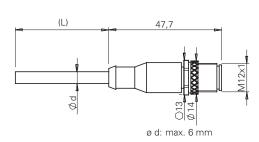
0.25 mm<sup>2</sup> (23 AWG) for 5/8-pole 0.14 mm<sup>2</sup> (26 AWG) for 12-pole

Minimum bending radius: > cable diameter x 15

Tightening torque of the ring: 0.6 ... 0.8 Nm

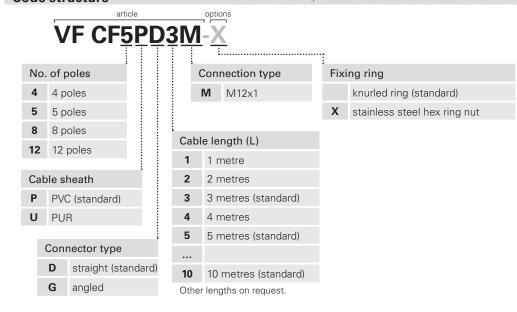
#### Pin assignment





#### Code structure

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



Stock items
VF CF5PD3M
VF CF8PD3M

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

#### M12 female connectors with cable



#### Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228 mobile installation
- Gold-plated contacts
- Anti-vibration self-locking ring nut made of nickel-plated brass, available on request in AISI 316L stainless steel hex version
- High flexibility cable with oil resistant PVC or PUR sheath suitable to be used in drag chains, acc. to IEC 60332-1-2

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: 1P67 acc. to EN 60529, IP69K acc. to ISO 20653

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

Ambient temperature:  $-25^{\circ}\text{C}$  ...  $+80^{\circ}\text{C}$ , PVC sheath, fixed installation  $-15^{\circ}\text{C}$  ...  $+80^{\circ}\text{C}$ , PVC sheath, mobile installation

-40°C ... +80°C, PUR sheath, fixed installation -25°C ... +80°C, PUR sheath, mobile installation

12 poles

Red-Blue

12

Wire cross-sections: 0.34 mm² (22 AWG) for 4-pole

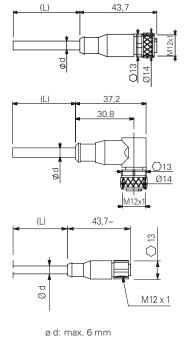
0.25 mm<sup>2</sup> (23 AWG) for 5/8-pole 0.14 mm<sup>2</sup> (26 AWG) for 12-pole

8 poles

Minimum bending radius: > cable diameter x 15 Tightening torque of the ring: 0.6 ... 0.8 Nm

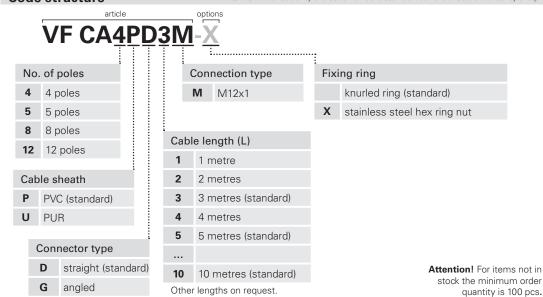
#### Pin assignment 4 poles

40	2	40	2 5	600	3	7 0 6	5 \ 4
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



#### Code structure

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



Stock items VF CA4PD3M VF CA4PD5M VF CA4PD10M VF CA5PD3M VF CA5PD5M VF CA5PD10M VF CA8PD3M VF CA8PD5M VF CA8PD10M VF CA8PD20M VF CA12PD3M VF CA12PD5M VF CA12PD10M VF CA12PD20M VF CA12PD30M VF CA8UD5M-X VF CA8UD10M-X VF CA12UD10M-X

#### M12 male connectors for panel mounting



#### Features:

- Technopolymer or metal connector body
- Gold-plated contacts
- Wires with crimped ferrules
- Directly installable on the device, these ensure quick replacement, reducing machine down time

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)

Protection degree: 1.5 A (12-pole) IP67 acc. to EN 60529

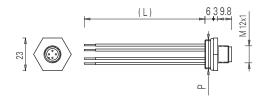
IP69K acc. to ISO 20653 Ambient temperature: -25°C ... +80°C

Tightening torque: 1 ... 1.5 Nm

Wire cross-sections: 0.5 mm² (20 AW/G

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

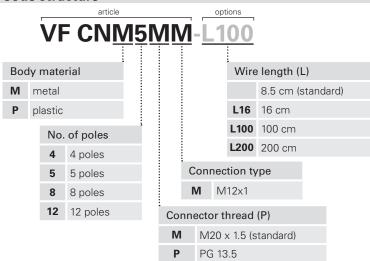


#### Pin assignment

4 p	4 poles		oles	8 poles		12 poles		
2 4		2 4 5		2 7 6 5 8		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		
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.





**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.

#### 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 mm² (23 AWG) ... 0.5 mm² (20 AWG)

Tightening torque of the ring: 0.6 ... 0.8 Nm

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

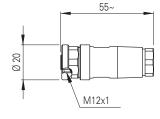
Max. operating voltage: 250 Vac/dc (5-pole) 30 Vac/dc (8-pole) 4 A (5-pole)

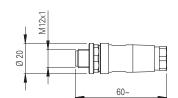
2 A (8-pole)
Protection degree: IP67 acc. to EN 60529
Ambient temperature: -25°C ... +85°C

Wire cross-sections: 0.25 mm² (23 AWG) ... 0.5 mm² (20 AWG)

Tightening torque of the ring: 0.6 ... 0.8 Nm

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





#### 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, SIL 3 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

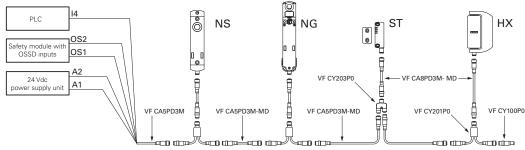
The series may consist both of devices that are identical to one another (homogeneous series) or that belong to different series (mixed series). The following Pizzato Elettrica devices may be connected in series using

- ST series RFID safety sensors: ST ••31•M•, ST ••71•M•.
- NG series RFID safety switches with lock: NG ••••••--K950, NG •••••--K951, NG ••••---K952.
- NS series RFID safety switches with lock: NS •••••Q•.
- HX series safety hinge switches: HX BEE1-••M.

#### Electrical connection of the chain

Pin	Colour	Connect	ion
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	14	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 cables



#### Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228
- Gold-plated contacts
- Anti-vibration 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

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

30 Vac / 36 Vdc (8-pole) 4 A (5-pole), 2 A (8-pole) IP67 acc. to EN 60529

IP69K acc. to ISO 2653

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

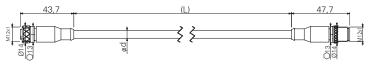
-25°C ... +80°C for fixed installation Ambient temperature:

-15°C ... +80°C for mobile installation

0.5 mm<sup>2</sup> (20 AWG) (5-pole) Wire cross-sections: 0.25 mm<sup>2</sup> (23 AWG) (8-pole)

Minimum bending radius: > cable diameter x 15

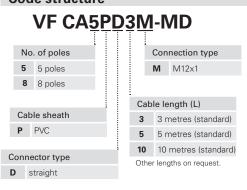
Tightening torque of the ring: 0.6 ... 0.8 Nm



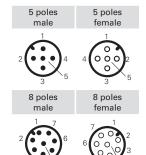
ø d: 6.4 mm for 5-pole 6 mm for 8-pole

#### **Code structure**

Max. operating current: Protection degree:



#### Pin assignment



#### Stock items

VF CA5PD3M-MD VF CA5PD5M-MD VF CA5PD10M-MD VF CA8PD3M-MD VF CA8PD5M-MD VF CA8PD10M-MD

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

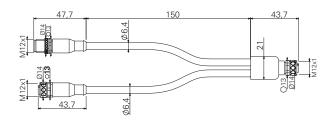
## M12 connectors, Y-shaped, for series connections

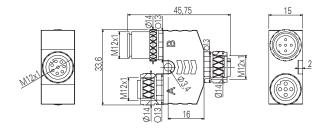


Article	Description
VF CY201P0	M12 connector, Y-shaped, for series connections with 150 mm cable length



Article	Description
VF CY203P0	M12 connector, Y-shaped, for series connections without cable





#### Features:

- Polyurethane connector body
- Gold-plated contacts
- Anti-vibration self-locking ring nut
- Class 6 copper conductors acc. to IEC 60228
- High flexibility cable with oil resistant PVC sheath suitable to be used in drag chains, acc. to IEC 60332-1-2

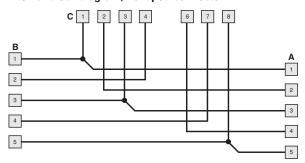
Max. operating voltage: 30 Vac / 36 Vdc Max. operating current: 4 A (5-pole) 2 A (8-pole)

IP67 acc. to EN 60529 Protection degree:

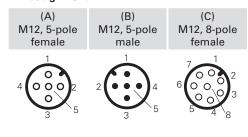
-25°C ... +80°C for fixed installation Ambient temperature: -15°C ... +80°C for mobile installation

Wire cross-sections: 0.5 mm<sup>2</sup> (20 AWG) Minimum bending radius: > cable diameter x 15 Tightening torque of the ring: 0.6 ... 0.8 Nm

#### Internal block diagram, Y-shaped connector



#### Pin assignment



IMPORTANT: When used in safety applications, the Y connectors must be installed in a location that is not directly accessible, so as to avoid shocks or tampering.

## M12 terminating plugs for series connections

4 A



#### Features:

- Polyurethane connector body
- Gold-plated contacts
- Anti-vibration self-locking ring nut

Max. operating voltage: 250 Vac / 300 Vdc

Max. operating current: IP67 acc. to EN 60529 Protection degree: Tightening torque of the ring: 0.6 ... 0.8 Nm

#### Internal block diagram of the terminating plug



#### Pin assignment

4-pole

male

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

#### M23 male connectors for panel mounting



#### Features:

- Threaded connection M20 for installation on switches with M20 cable entry (for example: FG series and NG series)
- Nickel-plated metal connector body
- Gold-plated contacts
- 12-pole or 19-pole versions
- Wires with pre-insulated ferrules
- Directly installable on the device, these ensure quick replacement, reducing machine down time

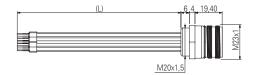
Max. operating voltage: 250 Vac (12-pole) 100 Vac (19-pole)

Max. operating current: 3 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 mm² (22 AWG)
Contact type: gold-plated





#### Pin assignment

12 poles

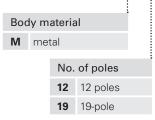


Pin	Colour	Pin	Colour	Pin	Colour
1	White	1	White	13	White-Green
2	Brown	2	Brown	14	Brown-Green
3	Green	3	Green	15	White-Yellow
4	Yellow	4	Yellow	16	Yellow-Brown
5	Grey	5	Grey	17	White-Grey
6	Pink	6	Pink	18	Grey-Brown
7	Blue	7	Blue	19	White-Pink
8	Red	8	Red		
9	Black	9	Black		
10	Purple	10	Purple		
11	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-L10**



Wire length (L)

L10 10 cm

L16 16 cm

#### Note:

For applications with NG series switches, use connectors with L10 wire length. For applications with FG series switches, use connectors with L16 wire length.

#### M23 female connectors for panel mounting



- Threaded connection M20
- Nickel-plated metal connector body
- Gold-plated contacts
- 12-pole or 19-pole versions
- Wires with pre-insulated ferrules
- Directly installable on the device, these ensure quick replacement, reducing machine down

250 Vac (12-pole) Max. operating voltage: 100 Vac (19-pole)

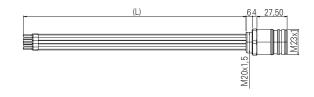
Max. operating current: 3 A

IP67 acc. to EN 60529 Protection degree:

IP69K acc. to ISO 20653

Ambient temperature: -25°C ... +80°C 1 ... 1.5 Nm Tightening torque: 0.34 mm<sup>2</sup> (22 AWG) Wire cross-section: Contact type: gold-plated





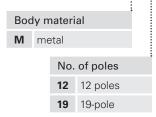
Pin ass	signment							
12	poles	19-pole						
20 1 3 0	9 8 0 0 0 0 0 <sup>2</sup> 0 <sup>7</sup> 0 06 0 0 <sub>5</sub>		O O O O O O O O O O O O O O O O O O O	O12 O11 O10 O10 O10 O10 O10 O10 O10 O10 O10				
ъ.	0 1	D:	0-1	D:	0-1			

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 CPM12MT-L10**



Wire length (L) **L10** 10 cm **L20** 20 cm

#### M23 female connectors with cable



#### Features:

- Polyurethane connector body
- Class 5 tin-plated copper conductors acc. to IEC 60228 (12-pole)
- Class 5 tin-plated copper conductors acc. to IEC 60228 (19-pole)
- Gold-plated contacts
- Anti-vibration self-locking ring nut
- Cable with PVC sheath acc. to IEC 60332-1-2 (flame retardant)

Max. operating voltage: 160 Vac (12-pole)

63 Vac (19-pole)

Maximum operating current with 12

 $5\,\mathrm{A}\times0.5\,\mathrm{mm^2}$  (20 AWG), the currents are per

Maximum operating current with 19

conductor

poles:

 $8~\textrm{A}\times0.75~\textrm{mm}^2$  +  $4~\textrm{A}\times0.34~\textrm{mm}^2$  (22 AWG), the currents are per conductor

Protection degree:

IP67 acc. to EN 60529 IP69K acc. to ISO 20653

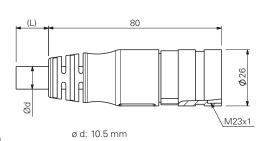
(Protect the cables from direct high-pressure and high-temperature jets)

-5°C ... +70°C Ambient temperature: 12x0,5 mm² (12-pole) Wire cross-section:

17x0.34 mm<sup>2</sup> + 2x0.75 mm<sup>2</sup> (19-pole)

> cable diameter x 15 Minimum bending radius:

Tightening torque of the ring: 1 ... 1.5 Nm



#### Pin assignment

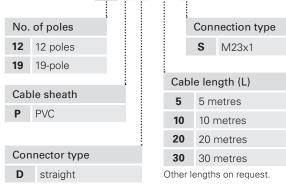
Pin as	ssignment								
12	2 poles	19-pole							
<sup>1</sup> 0 <sup>2</sup> 0 <sup>3</sup> 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q	012 010 010 010 010 010 010 010 010 010	)				
Pin	Colour	Pin	Colour	Pin	Colour				
-1	\ \ / / /   - ! + -	1	1 A / 1	40	14/1:				

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





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

#### Field wireable M23 female connectors



- 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

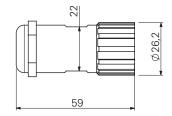
IP67 acc. to EN 60529 Protection degree:

IP69K acc. to ISO 20653

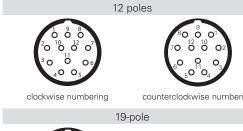
-40°C ... +125°C Ambient temperature: Tightening torque of the ring: 1 ... 1.5 Nm

Pollution degree:

3



#### Pin configuration







Article	Description
VF AC2205	Mounting key

Note: Article required for opening and wiring of 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

	Con	nection	type			
	S	M23x1	l			
	Bod	y mater	ial			
	M	metal				
			No.	of poles		
			12	12 poles		
			19	19-pole		
Со	nnect	or type				
Т	clo	ckwise r	numb	ering (star	ndard)	
D	COL	unterclo	ckwis	e numberi	ing	

Cable diameter **07** Ø 7 ... 12 mm Pin connection type crimp connection (standard) 0.34 ... 1 mm<sup>2</sup> solder connection 0.34 ... 1 mm<sup>2</sup>

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

Stock items VF CBSM12TC07 VF CBSM19TC07 VF CBSM12TS07

#### M23 extension cables with male and female connector



#### Features:

- Polyurethane connector body
- Class 5 tin-plated copper conductors acc. to IEC 60228
- Gold-plated contacts
- Anti-vibration self-locking ring nut
- Cable with PVC sheath acc. to IEC 60332-1-2 (flame retardant)

Max. operating voltage: 63 Vac

Maximum operating current with 19  $8 \text{ A} \times 0.75 \text{ mm}^2 + 4 \text{ A} \times 0.34 \text{ mm}^2$  (22 AWG), the

poles: cur

currents are per conductor

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

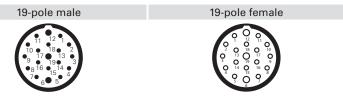
Wire cross-section:  $17x0.34 \text{ mm}^2 + 2x0.75 \text{ mm}^2$ Minimum bending radius: > cable diameter x 15

Tightening torque of the ring: 1 ... 1.5 Nm

# 80 (L) 80 M23x1

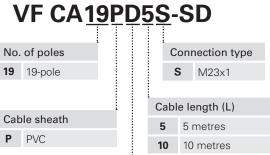
#### Pin assignment

Protection degree:



#### Code structure

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



Connector type

**D** straight

20 20 metres
Other lengths on request.

#### M8 female connectors with cable



#### Features:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228
- Gold-plated contacts
- Anti-vibration self-locking ring nut
- High flexibility cable with oil resistant PVC or PUR sheath suitable to be used in drag chains, acc. to IEC 60332-1-2

Max. operating voltage: Max. operating current:

Protection degree:

60 Vac / 75 Vdc 4 A

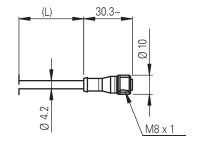
nt: 4 A

IP67 acc. to EN 60529 IP69K acc. to ISO 20653

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

Ambient temperature:  $-25^{\circ}\text{C} \dots +80^{\circ}\text{C}$  for fixed installation  $-15^{\circ}\text{C} \dots +80^{\circ}\text{C}$  for mobile installation

 $\begin{array}{ll} \mbox{Wire cross-sections:} & 0.25 \mbox{ mm}^2 \mbox{ (23 AWG)} \\ \mbox{Minimum bending radius:} & > \mbox{cable diameter x 15} \\ \mbox{Tightening torque of the ring:} & 0.3 \mbox{ } \dots 0.5 \mbox{ Nm} \\ \end{array}$ 



#### Pin assignment

4 poles

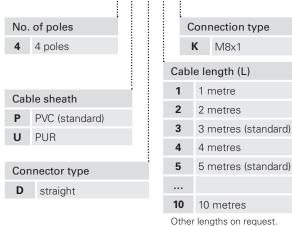


Pin	Colour
1	Brown
2	White
3	Blue
4	Black

#### **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



Stock items

VF CA4PD3K

VF CA4PD5K

#### Attention!

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

#### Strain relief cable glands

Packs of 10 pcs.



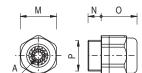
This particular design ensures high resistance to traction of the cable glands. All cable glands are also suitable for a wide range of cable diameters.

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	Α	Ом	N	0	Р
	VF PAM25C7N	M25x1.5 cable gland for one cable Ø 10 17 mm	0	33	10	31	M25x1.5
	VF PAM20C6N	M20x1.5 cable gland for one cable Ø 6 12 mm	0	24	9	24	M20x1.5
	VF PAM20C5N	M20x1.5 cable gland for one cable from Ø 5 10 mm	0	24	9	24	M20x1.5
	VF PAM20C3N	M20x1.5 cable gland for one cable Ø 3 7 mm	0	24	9	24	M20x1.5
ic s	VF PAM16C5N	M16x1.5 cable gland for one cable Ø 5 10 mm	0	22	7.5	23	M16x1.5
Metric threads	VF PAM16C4N	M16x1.5 cable gland for one cable Ø 4 8 mm	0	22	7.5	23	M16x1.5
≥ 높	VF PAM16C3N	M16x1.5 cable gland for one cable Ø3 7 mm	0	22	7.5	23	M16x1.5
	VF PAM20CBN	M20x1.5 multi-hole cable gland for 2 cables Ø 3 5 mm	0	24	9	23	M20x1.5
	VF PAM20CDN	M20x1.5 multi-hole cable gland for 3 cables Ø 1 4 mm	8	24	9	23	M20x1.5
	VF PAM20CEN	M20x1.5 multi-hole cable gland for 3 cables Ø 3 5 mm	8	24	9	23	M20x1.5
	VF PAM20CFN	M20x1.5 multi-hole cable gland for 4 cables Ø 1 4 mm	8	22	9	23	M20x1.5
	VF PAP13C6N	PG 13.5 cable gland for one cable from Ø 6 12 mm	0	24	9	24	PG 13.5
	VF PAP13C5N	PG 13.5 cable gland for one cable from Ø 5 10 mm	0	24	9	24	PG 13.5
PG threads	VF PAP13C3N	PG 13.5 cable gland for one cable from Ø 3 7 mm	0	24	9	24	PG 13.5
P	VF PAP11C5N	PG 11 cable gland for one cable from Ø 5 10 mm	0	22	7.5	23	PG 11
-	VF PAP11C4N	PG 11 cable gland for one cable from Ø 4 8 mm	0	22	7.5	23	PG 11
	VF PAP11C3N	PG 11 cable gland for one cable from Ø 3 7 mm	0	22	7.5	23	PG 11

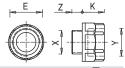
Thread adapters Packs of 100 pcs.



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.

Featu	ıres:
Rody	materia

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



Article	Description	X	Υ	Z	K	<b>⊘</b> 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 M20x1.5 to 1/2 NPT	M20×1.5	1/2 NPT	9	14	24

Packs of 10 pcs. **Protection caps** 



Article

VF PTM20

Features:

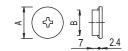
Protection cap M20x1.5

Description

Body material: technopolymer, self-extinguishing Protection degree: IP67 acc. to EN 60529

IP69K acc. to ISO 20653 Tightening torque: 1.2 ... 1.6 Nm

РН3 Cross-recessed screw:



M20x1.5

24

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	СН	Р
	VF DFPM25	M25x1.5 threaded technopolymer nut	6	32	M25x1.5
Diantia	VF DFPM20	M20x1.5 threaded technopolymer nut	6	27	M20x1.5
Plastic	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

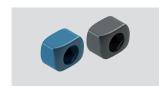
**Note:** Use a socket wrench for tightening.



Article	Description	Α	В
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

#### **Tampering protection for M12 connectors**

Packs of 10 pcs.



#### Features:

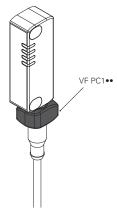
These tampering protections are composed of two identical snap-on shells. They are applied to the device connectors, thereby making them inaccessible. The shells can only be removed by breaking them. Thus, any attempt to tamper with them will be immediately evident.

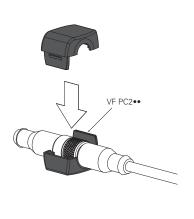
The protection can be installed quickly and easily by pressing the two shells lightly into place.

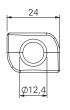
The protections are suitable for all devices with an M12 connector (e.g. NS, ST, SR series) but they can also be used for junctions between cables with male - female connectors.

A version made of detectable plastic is available for the food industry, and it can easily be detected during the process using common optical vision technologies, X-rays or metal detectors.

## Installation:

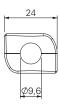














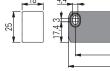


Article	Description	Colour / material
VF PC1A9	Tamper-proof protection for device-side connector	Grey technopolymer
VF PC2A9	Tamper-proof protection for male - female connector	Grey technopolymer
VF PC1B6	Tamper-proof protection for device-side connector	Blue detectable technopolymer
VF PC2B6	Tamper-proof protection for male - female connector	Blue detectable technopolymer

#### **Door holding magnets**



Article	Description
SM H9ZF	Door holding magnet (holding force 40 N)
SM H9ZQ	Door holding magnet (holding force 40 N, opposite polarity to SM $\mbox{\sc H9ZF)}$



Holding magnets for use on machinery doors. The magnets are sealed inside a plastic cover and will not rust even in damp environments.

#### 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, FY, 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:

Ambient temperature: Operating voltage  $U_n$ :

Tolerance on the supply voltages:
Operating current:
Connection system:

Cross-section of rigid/flexible wires w.

wire-end sleeve:

Wire cross-section with pre-insulated

wire-end sleeve: Tightening torque. Wire stripping length (x): IP67 acc. to EN 60529 IP69K acc. to ISO 20653

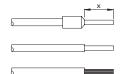
-25°C ... +70°C 24 Vac/dc (10 mA) 120 Vac (20 mA) 230 Vac (20 mA)

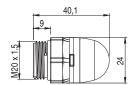
±15% of U<sub>n</sub> 10 mA

PUSH-IN spring type

min. 1 x 0.34 mm² (1 x AWG 24) max. 1 x 1.5 mm² (1 x AWG 16) min. 1 x 0.34 mm² (1 x AWG 24) max. 1 x 0.75 mm² (1 x AWG 18)

1.2 ... 2 Nm 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 Standard LED with

continuous light

: :	±			
Во	dy design			
А	Total height 40 mm, spherical lens, threading M20x1.5 mm			
Connection type				
Р	PUSH-IN terminal strip			

Lens colour			
2	White		
3	Red		
4	Green		
5	Yellow		

Stock items
VF SL1A3PA1
VF SL1A5PA1

#### **Fixing plates**



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

The plate is provided with bore holes for fasting 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 mounting 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)

#### 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 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
VF VAIT1T30	Bits for M6 screws with Torx T30 fitting

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



3C 4C 5C 6C 7C 8C

Pin assignment

2C

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

IP67 acc. to EN 60529, IP69K acc. to ISO 20653, with cable Protection degree:

gland of equal or higher protection degree 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 PUSH-IN spring type Connection system:

Cross-section of rigid/flexible wires

min. 1 x 0.34 mm<sup>2</sup> (1 x AWG 24) w. wire-end sleeve:

max. 1 x 1.5 mm<sup>2</sup> (1 x AWG 16)

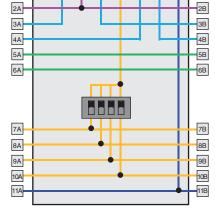
Wire cross-section

Conduit entries:

min. 1 x 0.34 mm<sup>2</sup> (1 x AWG 24) with pre-insulated wire-end max. 1 x 0.75 mm<sup>2</sup> (1 x AWG 18) sleeve:

Wire stripping length (x): min.: 8 mm

max.: 12 mm

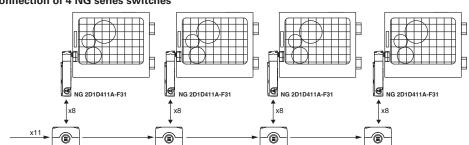


Article	Description
VF CY302P0	Junction box for series connection of up to 4 devices

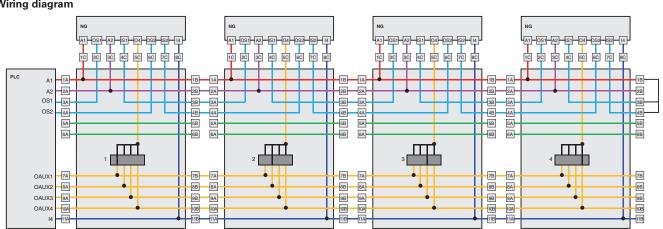


Terminal box	Connection		Terminal box	Connection	
1A / 1B	A1	Supply input +24 Vdc	1C	A1	Supply input +24 Vdc
2A / 2B	A2	Supply input 0 V	2C	OS1	Safety output
3A / 3B	OS1 / IS1	Safety output / safety input	3C	A2	Supply input 0 V
4A / 4B	OS2 / IS2	Safety output / safety input	4C	IS1	Safety input
5A / 5B		Auxiliary connection		03	Signalling output, actuator inserted
6A / 6B		Auxiliary connection	5C	03	
7A / 7B	OAUX1	Auxiliary output Oaux1	50	04	Signalling output, actuator inserted
8A / 8B	OAUX2	Auxiliary output Oaux2		04	and locked
9A / 9B	OAUX3	Auxiliary output Oaux3	6C	OS2	Safety output
10A / 10B	OAUX4	Auxiliary output Oaux4	7C	IS2	Safety input
11A / 11B	14	Solenoid activation input	8C	14	Solenoid activation input

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



#### Wiring diagram



## По вопросам продаж и поддержки обращайтесь:

Магнитогорск (3519)55-03-13

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