

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 and the connection of standard elements, 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 24Vdc 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).

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.

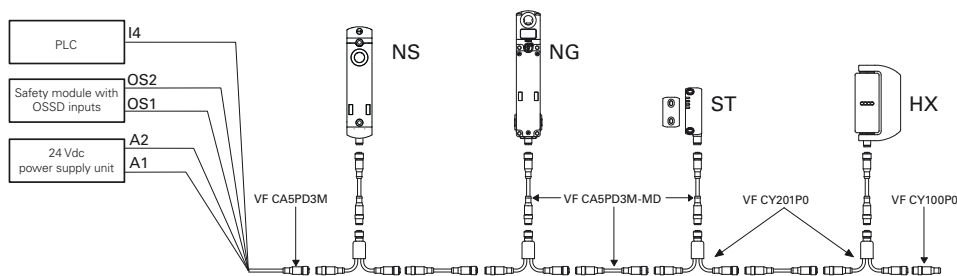
NS: Any item with an M12 connector for series connection with a "Y" connector or with the option "integrated cable or connector", letter "Q".

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, Y connectors or junction boxes, it is necessary to pay particular attention to the voltage drop that occurs in the circuit. Pay particular attention to the flowing currents and cross-section/length 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

All values in the drawings are in mm

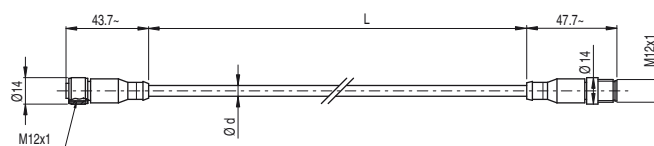


Technical data:

- Polyurethane connector body
- Class 6 copper conductors acc. to IEC 60228
- Gold-plated contacts (resistance < 5 mΩ)
- 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.

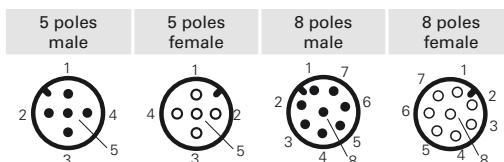
Technical data:

- 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-section: 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

Pin assignment



Stock items

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

Code structure

VF CA5PD3M-MD

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

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

Items with code on green background are stock items