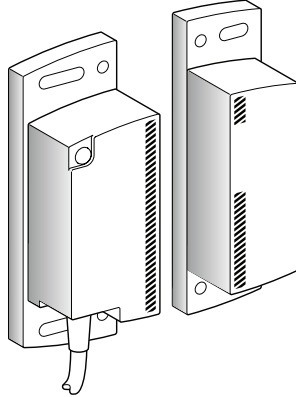


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**Coded magnetic system
Pre-cabled connection**

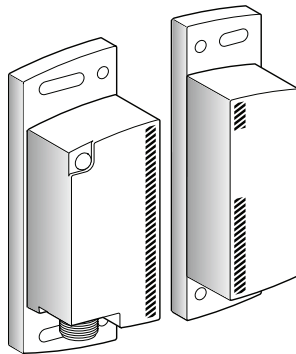
SIL 2/PL=d, category 3 and SIL 3/PL=e, category 4
XCS DM3791●●/XCS DM4801●●



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**Coded magnetic system
M12 connector connection**

SIL 2/PL=d, category 3 and SIL 3/PL=e, category 4
XCS DM3791M12/XCS DM4801M12



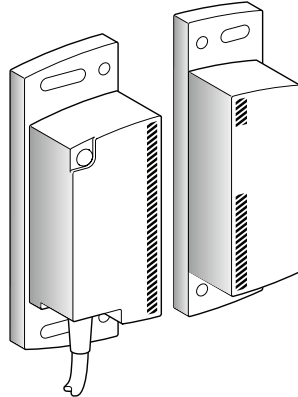
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Coded magnetic system type		SIL 2/PL= d, category 3 XCS DM3	SIL 3/PL=e, category 4 XCS DM4
Environment			
Conformity to standards		EN/IEC 60947-5-1; EN/IEC 60947-5-2; EN/IEC 60947-5-3 EN/ISO 14119	
Product certifications		CE, UL, CSA, TÜV	
Maximum safety level (1)		SIL 2 or SIL 3 conforming to EN/IEC 61508, PL=d, category 3 or PL=e, category 4 conforming to EN/ISO 13849-1 and SIL 3 conforming to EN/IEC 61508	
Reliability data		MTTF _d = 182 years PFH = 3.94E ⁻⁹ /PPFD = 1.15E ⁻⁵ SFF = 92.5%/HFT = 1	
Ambient air temperature	For operation	°C	- 25...+ 70°C
	For storage	°C	- 40...+ 85°C
Vibration resistance	Conforming to EN/IEC 60068-2-6		10 gn (10...500 Hz)
Shock resistance	Conforming to EN/IEC 60068-2-7		30 gn, 11 ms
Sensitivity to magnetic fields		mT	≤ 0.5
Electric shock protection	Conforming to EN/IEC 61140		Class III
Degree of protection	Conforming to EN/IEC 60529		Pre-cabled version: IP 66, IP 67 Connector version: IP 67
	Conforming to DIN 40050		Pre-cabled version: IP 69K
Materials		Thermoplastic case (PBT); PVC cable	
Characteristics			
Rated operational characteristics		Ub: 24 V \pm 10% - 20%	
Rated insulation voltage (Ui)		Ui: 36 V \pm	
Rated impulse withstand voltage (U _{imp})	Conforming to EN/IEC 60947-5-1	kV	2.5
Integrated output protection		Overload and short-circuit protection	
Connection	Conforming to EN/IEC 60947-5-2-A3 and EN/IEC 61076		Pre-cabled, 6 x 0.25 mm ² , length: 2, 5 or 10 m depending on model or M12 connector (A coding) Pre-cabled, 8 x 0.25 mm ² , length: 2, 5 or 10 m depending on model or M12 connector (A coding)
Cable diameter		mm	6.1 +/-0.3
Cable resistance		mΩ/m	90
Safety outputs OSSD (Output Signal Switching Devices)		2 PNP type (NO) solid-state outputs, 1.5 A (2 A up to 60° C) 24 V \pm (short-circuit protected)	
Alarm output			1 solid-state output, 0.5 A, 24 V \pm , PNP
Signalling			LED (green/red/orange)
Maximum switching frequency		Hz	3
Activation delay		ms	100
Discordance time		s	2
HFT (Hardware Fault Tolerance)			1 Test interval: 12 months
Tightening torque		Nm	1.8 max.
Chaining in series			32 maximum with 2 m long cable -
Functions			
Functions		- LED status signalling	- Auto/Manual start via "Start" input - Monitoring of external switching devices (EDM: External Device Monitoring) - Display of operating modes (LED) - Monitoring of the function (open or closed) as well as the response time of the power components.

(1) Using an appropriate and correctly connected control system.

1

Type **Magnetic system with dedicated transmitter**
Pre-cabled connection



References				
Description	Type of connection	SIL 2/PL=d, category 3	SIL 3/PL=e, category 4	Weight kg
Coded magnetic system with dedicated transmitter (1)	Pre-cabled L = 2 m	XCS DM379102	XCS DM480102	0.320
	Pre-cabled, L = 5 m	XCS DM379105	XCS DM480105	0.480
	Pre-cabled, L = 10 m	XCS DM379110	XCS DM480110	0.745

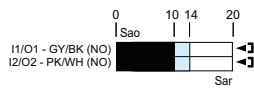
(1) Self-contained system not requiring the use of a safety module or non-magnetic shim.

Detection characteristics	
Assured operating distance	Sao: 10 mm
Assured tripping distance	Sar: 20 mm
Approach directions	9
Approach speed	0.01 m/s min.

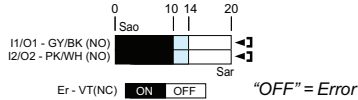
Output status (pre-cabled connection)

Output states shown are with the dedicated transmitter positioned in front of the receiver

XCS DM3791●●



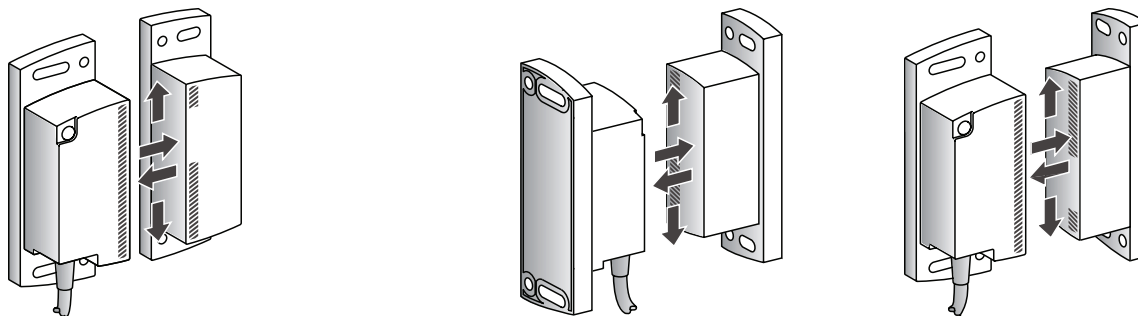
XCS DM4801●●



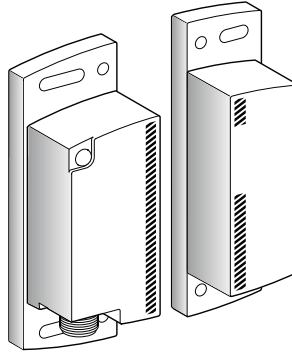
- Output closed
- Output open
- Transitional state

Sao: Assured operating distance.
Sar: Assured tripping distance.
Conforming to EN/IEC 60947-5-3

Approach directions



Type	Magnetic system with dedicated transmitter M12 connector connection
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References				
Description	Type of connection	SIL 2/PL=d, category 3	SIL 3/PL=e, category 4	Weight kg
Magnetic system with dedicated transmitter (1)	M12 connector	XCS DM3791M12	XCS DM4801M12	0.215

(1) Self-contained system not requiring the use of a safety module or non-magnetic shim.

Detection characteristics	
Assured operating distance	Sao: 10 mm
Assured tripping distance	Sar: 20 mm
Approach directions	9
Approach speed	0.01 m/s min.

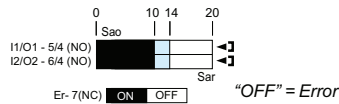
Output status (M12 connector connection)

Output states shown are with the dedicated transmitter positioned in front of the receiver

XCS DM3791M12



XCS DM4801M12



- Output closed
- Output open
- Transitional state

Sao: Assured operating distance.
Sar: Assured tripping distance.
Conforming to EN/IEC 60947-5-3

1

Accessories

Description	For use with	Reference	Weight kg
Replacement dedicated transmitter	XCS DM3/4●●●02/05/10 XCS DM3/4●●●M12	XCS DMT	0.100
Arc suppressor (pair)	XCS DM3/4●●●02/05/10 XCS DM3/4●●●M12	XUS LZ500	0.020

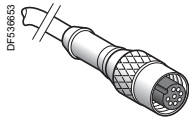
Pre-wired female connectors for connector version coded magnetic systems

Pre-wired connector characteristics

Pre-wired connector type		XZ CP29P12L●	
Type of connection		Screw threaded (metal clamping ring)	
Number of contacts		8	
Degree of protection		IP 67 (with clamping ring correctly tightened)	
Ambient air temperature	Operation	°C	- 25...+ 70
	Storage	°C	- 40...+ 85
Cabling	Conforming to EN/IEC 60947-5-2		PUR cable, Ø 6.1 mm wire c.s.a.: 8 x 0.25 mm ²
LED signalling			–
Nominal current		A	2
Insulation resistance		Ω	> 10 ⁹
Contact resistance		mΩ	≤ 5

References of pre-wired connectors

Type of connector	Number of pins	For use with	Type	Cable length m	Reference	Weight kg
Female, M12 (A coding)	8	XCS DM3/4●●●02	Straight	2	XZ CP29P12L2	0.100
		XCS DM3/4●●●05		5	XZ CP29P12L5	0.290
		XCS DM3/4●●●10		10	XZ CP29P12L10	0.470



XZ CP29P12L●

Coded magnetic systems

Pre-cabled connection

XCS DM3/4●●●02/05/10

M12 connector (A coding)
connection

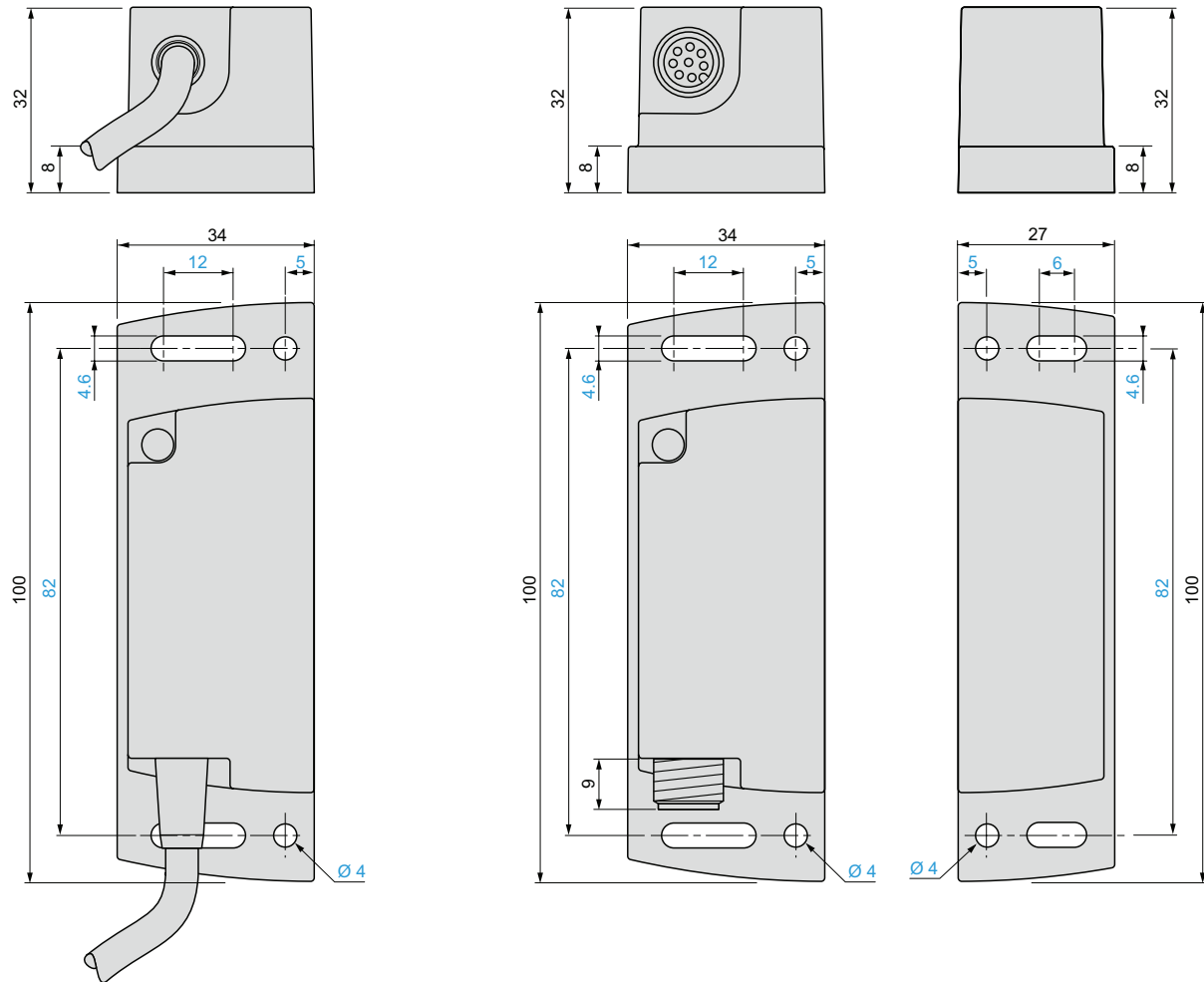
XCS DM3/4●●●M12

Accessory

Replacement dedicated transmitter

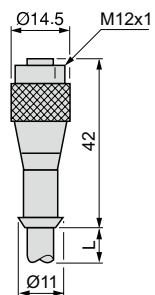
XCS DMT

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Pre-wired connectors

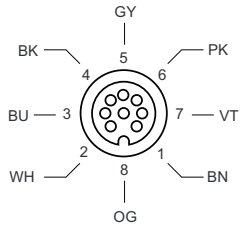
XZ CP29P12L●



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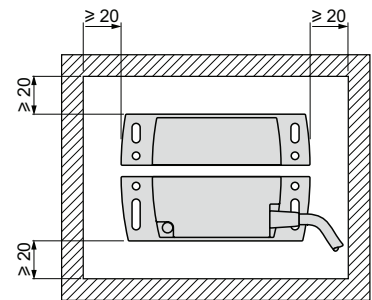
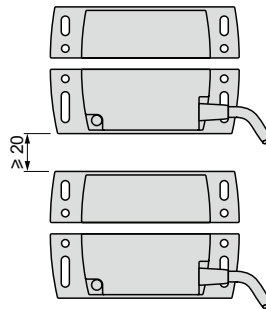
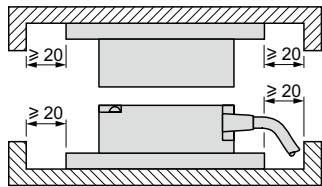
Connection

M12 pre-wired female connector
XZ CP29P12L●



Mounting

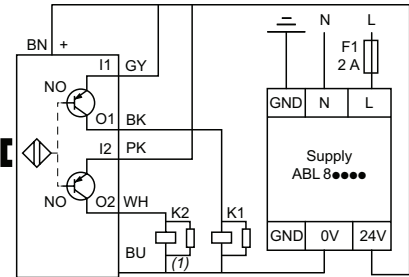
XCS DM3/DM4



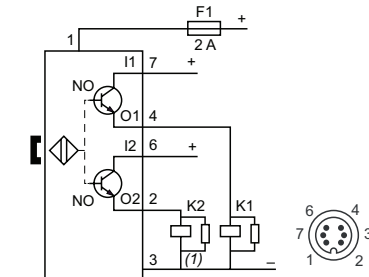
Schemes

Category 3 (this scheme can achieve SIL 2/PL=d, category 3)

Pre-cabled connection
XCS DM3791●●

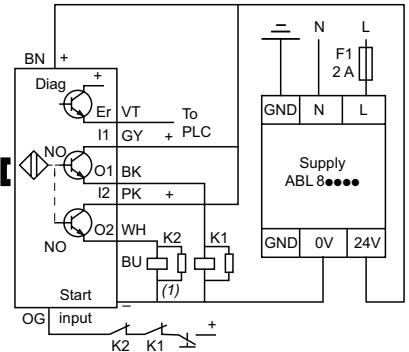


M12 connector (A coding) connection
XCS DM3791M12

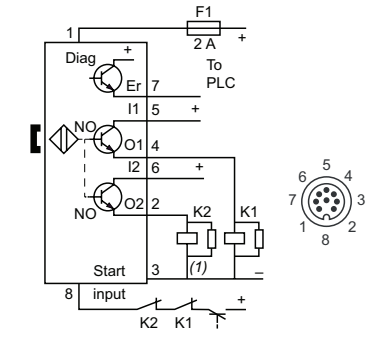


SIL 3/PL=e, category 4

Pre-cabled connection
XCS DM4801●●

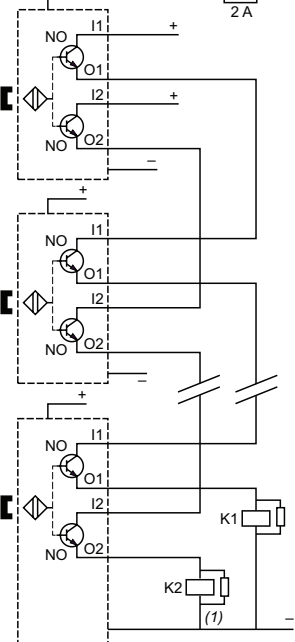


M12 connector (A coding) connection
XCS DM4801M12

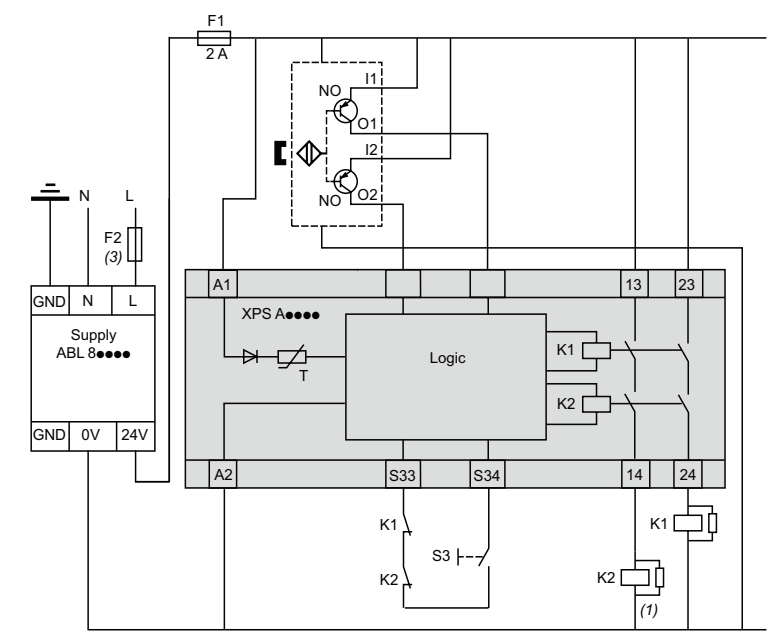


Chaining coded magnetic systems (2)

XCS DM3791●●



Wiring to SIL 3/PL=e, category 4 with Preventa module
Example: XCS DM3●●●●● + XPS AFL5130



(1) Mechanically linked contacts
(2) Maximum chaining: 32 maximum with 2 m long cable.
(3) 2 A max.