Main features

- Metal housing, one conduit entry
- Protection degree IP67
- 17 contact blocks available
- 28 actuators available
- Versions with M12 connector
- Versions with gold-plated silver contacts

Technical data

Housing

Metal housing, baked powder coating	
One threaded conduit entry:	M20x1.5 (standard)
Protection degree:	IP67 according to EN 60529 with cable gland having equal or higher protection degree

General data

Ambient temperature:	-25°C … +80°C
Max. actuation frequency:	3600 operating cycles[1]/hour
Mechanical endurance:	20 million operating cycles[1]
Mounting position:	any
Safety parameters:	
B_{10d}:	40,000,000 for NC contacts
Mechanical interlock, not coded:	type 1 according to EN ISO 14119
Tightening torques for installation:	see pages 235-246

(1) One operation cycle means two movements, one to close and one to open contacts, as defined in EN 60947-5-1.

Cable cross section (flexible copper strands)

Contact blocks 20, 21, 22, 33, 34:	min.	1 x 0.34 mm²	(1 x AWG 22)
	max.	2 x 1.5 mm²	(2 x AWG 16)
Contact block 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18:	min.	1 x 0.5 mm²	(1 x AWG 20)
	max.	2 x 2.5 mm²	(2 x AWG 14)
Contact block 2:	min.	1 x 0.5 mm²	(1 x AWG 20)
	max.	2 x 1.5 mm²	(2 x AWG 16)

In conformity with standards:
IEC 60947-5-1, EN 60947-5-1, EN 60947-1, EN 50041, IEC 60204-1, EN 60204-1, EN ISO 14119, EN ISO 12100, IEC 529, EN 60529, UL 508, CSA 22.2 No.14.
Approvals:
IEC 60947-5-1, UL 508, CSA 22.2 No.14, GB14048.5-2001.

Markings and quality marks:

IMQ approval:	EG605
UL approval:	E131787
CCC approval:	2007010305230000
EAC approval:	RU C-IT ДМ94.B.01024

In conformity with the requirements of:
Low Voltage Directive 2006/95/EC, Machinery Directive 2006/42/EC and EMC Directive 2004/108/EC.
Positive contact opening in conformity with standards:
IEC 60947-5-1, EN 60947-5-1.

Installation for safety applications:
Use only switches marked with the symbol ⊖ aside the product code. Always connect the safety circuit to the **NC contacts** (normally closed contacts: 11-12, 21-22 or 31-32) as stated in **standard EN 60947-5-1, encl. K, par. 2**. Actuate the switch **at least up to the positive opening travel** shown in the travel diagrams on page 238. Operate the switch **at least with the positive opening force**, indicated between brackets below each article, aside the minimum force value.

⚠ **If not expressly indicated in this chapter, for correct installation and utilization of all articles see chapter utilization requirements from page 235 to page 246.**

	Electrical data		Utilization category
without connector	Thermal current (Ith):	10 A	Alternating current: AC15 (50÷60 Hz)
	Rated insulation voltage (Ui):	500 Vac 600 Vdc 400 Vac 500 Vdc (contact blocks 2, 11, 12, 20, 21, 22, 33, 34)	Ue (V) 250 400 500 Ie (A) 6 4 1
	Rated impulse withstand voltage (U_{imp}):	6 kV 4 kV (contact blocks 20, 21, 22, 33, 34)	Direct current: DC13
	Conditional short circuit current:	1000 A according to EN 60947-5-1	Ue (V) 24 125 250
	Protection against short circuits:	type aM fuse 10 A 500 V	Ie (A) 6 1.1 0.4
	Pollution degree:	3	
with M12 connector 5 poles	Thermal current (Ith):	4 A	Alternating current: AC15 (50÷60 Hz)
	Rated insulation voltage (Ui):	250 Vac 300 Vdc	Ue (V) 24 120 250
	Protection against short circuits:	type gG fuse 4 A 500 V	Ie (A) 4 4 4
	Pollution degree:	3	Direct current: DC13
			Ue (V) 24 125 250
			Ie (A) 4 1.1 0.4
with M12 connector 8 poles	Thermal current (Ith):	2 A	Alternating current: AC15 (50÷60 Hz)
	Rated insulation voltage (Ui):	30 Vac 36 Vdc	Ue (V) 24
	Protection against short circuits:	type gG fuse 2 A 500 V	Ie (A) 2
	Pollution degree:	3	Direct current: DC13
			Ue (V) 24
			Ie (A) 2

Characteristics approved by IMQ

Rated insulation voltage (Ui): 500 Vac
400 Vac (for contact blocks 2, 11, 12, 20, 21,22, 33, 34)
Conventional free air thermal current (Ith): 10 A
Protection against short circuits: type aM fuse 10 A 500 V
Rated impulse withstand voltage (U_{imp}): 6 kV
4 kV (for contact blocks 20, 21, 22, 33, 34)Protection degree of the housing: IP67
MV terminals (screw terminals)
Pollution degree 3
Utilization category: AC15
Operating voltage (Ue): 400 Vac (50 Hz)
Operating current (Ie): 3 A
Forms of the contact element: Za, Zb, Za+Za, Y+Y, X+X, Y+Y+X, Y+Y+Y, Y+X+X
Positive opening of contacts on contact block 5, 6, 7, 9, 11, 13, 14, 16, 18, 20, 21, 22, 33, 34, 66
In conformity with standards: EN 60947-1, EN 60947-5-1+ A1:2009, fundamental requirements of the Low Voltage Directive 2006/95/EC.

Please contact our technical service for the list of approved products.

Characteristics approved by UL

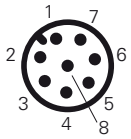
Utilization categories Q300 (69 VA, 125 … 250 Vdc)
A600 (720 VA, 120 … 600 Vac)
Data of housing type 1, 4X "indoor use only", 12, 13
For all contact blocks except 2 and 3 use 60 or 75°C copper (Cu) conductor, rigid or flexible, wire size AWG 12/14. Terminal tightening torque of 7.1 lb in (0.8 Nm).
For contact blocks 2 and 3 use 60 or 75 °C copper (Cu) conductor, rigid or flexible, wire size AWG 14. Terminal tightening torque of 12 lb in (1.4 Nm).

In conformity with standard: UL 508, CSA 22.2 No.14

Please contact our technical service for the list of approved products.

Connection diagram for M12 connectors

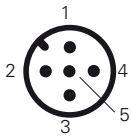
Contact block 2 — 1NO-1NC+1NO-1NC



M12 connector, 8 poles

Contacts	Pin no.
NO	3-4
NC	5-6
NC	7-8
NO	1-2

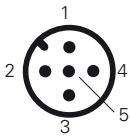
Contact block 5 — 1NO+1NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NO	3-4
ground	5

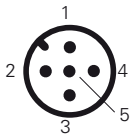
Contact block 6 — 1NO+1NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NO	3-4
ground	5

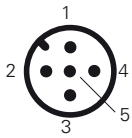
Contact block 7 — 1NO+1NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NO	3-4
ground	5

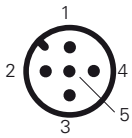
Contact block 9 — 2NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NC	3-4
ground	5

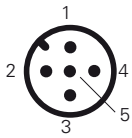
Contact block 10 — 2NO



M12 connector, 5 poles

Contacts	Pin no.
NO	1-2
NO	3-4
ground	5

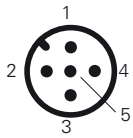
Contact block 11 — 2NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NC	3-4
ground	5

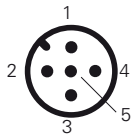
Contact block 12 — 2NO



M12 connector, 5 poles

Contacts	Pin no.
NO	1-2
NO	3-4
ground	5

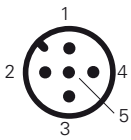
Contact block 13 — 2NC



M12 connector, 5 poles

Contacts	Pin no.
NC (1°)	1-2
NC (2°)	3-4
ground	5

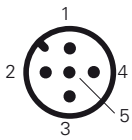
Contact block 14 — 2NC



M12 connector, 5 poles

Contacts	Pin no.
NC (1°)	1-2
NC (2°)	3-4
ground	5

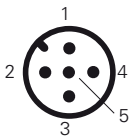
Contact block 15 — 2NO



M12 connector, 5 poles

Contacts	Pin no.
NO (1°)	1-2
NO (2°)	3-4
ground	5

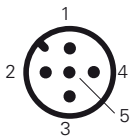
Contact block 16 — 2NC



M12 connector, 5 poles

Contacts	Pin no.
NC, lever at the right	1-2
NC, lever to the left	3-4
ground	5

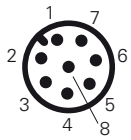
Contact block 18 — 1NO+1NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NO	3-4
ground	5

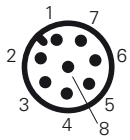
Contact block 20 — 2NC+1NO



M12 connector, 8 poles

Contacts	Pin no.
NC	3-4
NC	5-6
NO	7-8
ground	1

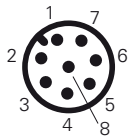
Contact block 21 — 3NC



M12 connector, 8 poles

Contacts	Pin no.
NC	3-4
NC	5-6
NC	7-8
ground	1

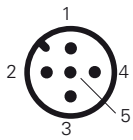
Contact block 22 — 1NC+2NO



M12 connector, 8 poles

Contacts	Pin no.
NC	3-4
NC	5-6
NO	7-8
ground	1

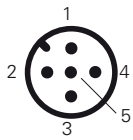
Contact block 33 — 1NC+1NO



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NO	3-4
ground	5

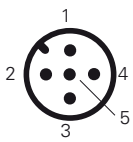
Contact block 34 — 2NC



M12 connector, 5 poles

Contacts	Pin no.
NC	1-2
NC	3-4
ground	5

Contact block E1 — PNP



M12 connector, 5 poles

Contacts	Pin no.
+	1
-	3
NC	2
NO	4
ground	5