

Safety Switches with Separate Actuator, Plastic Housing **EUCHNER**

Safety switch NP

- ▶ Mounting with 40 mm spacing
- ▶ Cable entry M20 x 1.5
- ▶ Plug connector optional



Approach direction



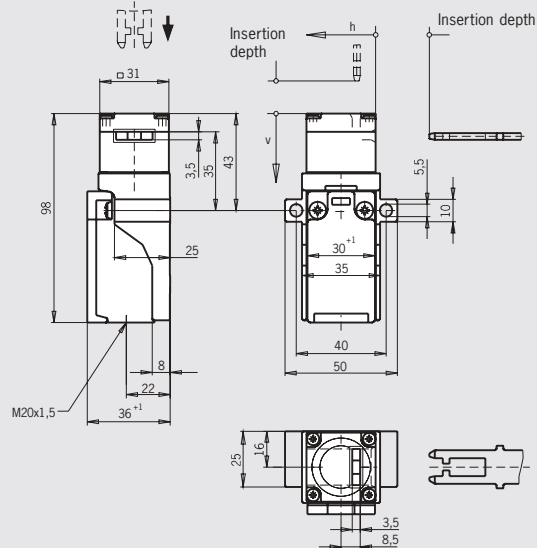
Horizontal and vertical
Can be adjusted in 90° steps

Switching elements

- ▶ **618** Slow-action switching element
1 NC \ominus
- ▶ **628** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **638** Slow-action switching element
2 NC \ominus
- ▶ **648** Slow-action switching element
2 NC \ominus + 1 NO

Cable entry M20 x 1.5

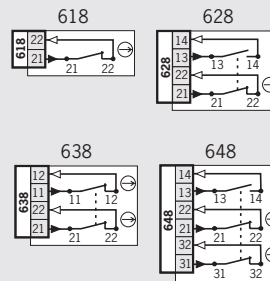
Dimension drawing



Please order actuator separately (see pages 78-81)

For cable glands see page 89

Wiring diagrams Actuator inserted



Ordering table

Series	Mounting	Connection	Switching element	Order No. / Item
NP	AB With 40 mm hole spacing	1 Cable entry 1 x M20 x 1.5	618 1 NC \ominus	083 680 NP1-618AB-M
			628 1 NC \ominus + 1 NO	083 686 NP1-628AB-M
			638 2 NC \ominus	083 690 NP1-638AB-M
			648 ¹⁾ 2 NC \ominus + 1 NO	082 276 ¹⁾ NP1-648AB-M

1) No \ominus approval

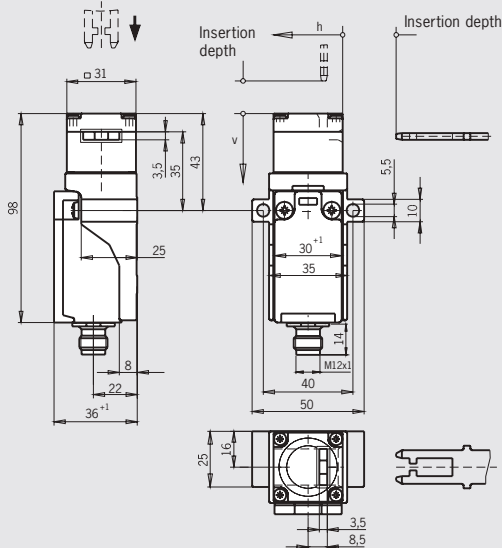
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Plug connector SM4 M12 plug, 4-pin

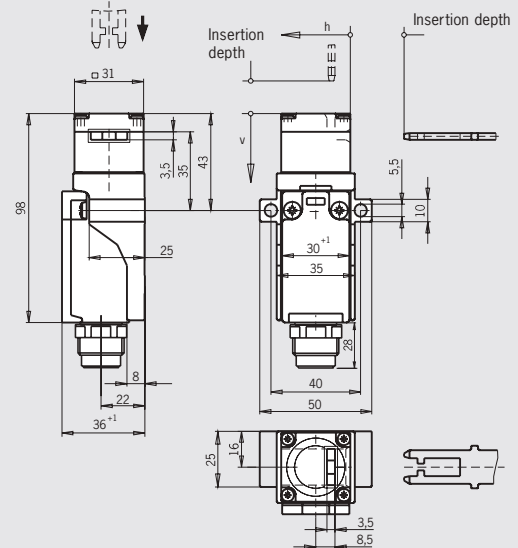
Plug connector SR6 6-pin + PE

Dimension drawing



Please order actuator separately (see pages 78-81)

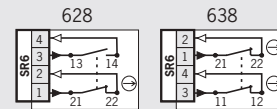
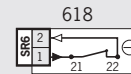
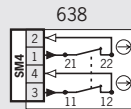
For plug connectors see page 87



Please order actuator separately (see pages 78-81)

For plug connectors see page 88

Wiring diagrams Actuator inserted

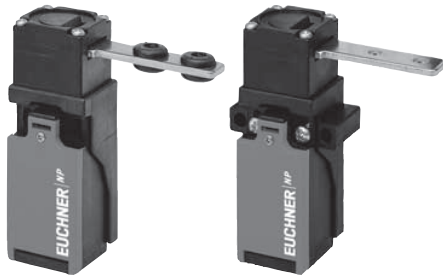


Ordering table


Series	Mounting	Connection	Switching element	Order No. / Item
NP	AB With 40 0mm spacing	3 Plug connector SM4	638 2 NC ⊖	094 509 NP3-638AB
		2 Plug connector SR6	618 1 NC ⊖	059 446 NP2-618AB
			628 1 NC ⊖ + 1 NO	059 448 NP2-628AB
			638 2 NC ⊖	059 450 NP2-638AB





Safety switch NP




The technical data on switches and switching elements apply to all connections. Further technical data are given for the connection selected.

Switch			
Parameter		Value	Unit
Housing material		Reinforced thermoplastic	
Mechanical life		10 ⁶ operating cycles	
Ambient temperature		- 20 ... + 80	°C
Weight		approx. 0.11	kg
Max. approach speed		20	m/min
Actuating force		5	N
Extraction force		15	N
Retention force		2	N
Insertion depth (minimum required travel + permissible overtravel)	Standard actuators	Overtravel actuator	
Approach direction side (h)	28 + 2	28 + 7	mm
Approach direction from top (v)	29.5 + 1.5	29.5 + 7 Only with adapter NP-K Order No. 074 578 / page 83	mm

Switching element			
Parameter		Value	Unit
Switching principle		Slow-action switching element	
Switching elements with 1 switching element		618 1 NC \ominus	
Switching elements with 2 switching elements		628 1 NC \ominus + 1 NO	
Switching elements with 3 switching elements		648 2 NC \ominus + 1 NO	
Switching current, min., at 24 V DC		30	mA
Switching voltage, min., at 10 mA		24	V
Contact material		Silver alloy	

Connection, cable entry M20 x 1.5			
Parameter		Value	Unit
Connection		Screw terminal	
Version		M20 x 1.5	
Conductor cross-section		0.34 ... 1.5	mm ²
Degree of protection according to IEC 60529		IP 67	
Rated insulation voltage U _i		250	V AC/DC
Rated impulse withstand voltage U _{imp}		2.5	kV
Conventional thermal current I _{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC-15	I _e 4 A U _e 230 V	
	DC-13	I _e 4 A U _e 24 V	

Connection, plug connector SM 4 (M12)			
Parameter		Value	Unit
Connection		Plug connector	
Version		M12 (4-pin)	
Degree of protection according to IEC 60529		IP 67 ¹⁾	
Rated insulation voltage U _i		250	V AC/DC
Rated impulse withstand voltage U _{imp}		2.3	kV
Conventional thermal current I _{th}		1.5	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC-15	I _e 4 A U _e 230 V	
	DC-13	I _e 4 A U _e 24 V	

1) Screwed tight with the related plug connector (see page 87-88)

Plug connector SR6 connection



Parameter		Value	Unit
Connection		Plug connector	
Version		6-pin + PE	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U_i		250	V AC/DC
Rated impulse withstand voltage U_{imp}		2.5	kV
Conventional thermal current I_{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC-15	I_e 4 A U_e 230 V	
	DC-13	I_e 4 A U_e 24 V	

1) Screwed tight with the related plug connector (see page 87-88)