

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

Selection table for safety switches NM with separate actuator

Connection								
M	Thread M16x1.5 for cable glands							
	SM4	Plug connector M12 4-pin						
Housing								
		Short		Long				
				Switching element				
				One contact	1 NC ⊖			
				Two contacts	1 NC ⊖ + 1 NO,			
					2 NC ⊖			
				Three contacts	2 NC ⊖ + 1 NO,			
					3 NC ⊖			

Connection		Housing		Switching element			Page
M	SM4	Short	Long	One contact	Two contacts	Three contacts	
●		●		●	●		22
	●		●		●	●	23

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

Safety switch NM..VZ

- ▶ Cable entry M16 x 1.5
- ▶ M12 plug connector optional



Approach direction



Horizontal and vertical
Can be adjusted in 90° steps

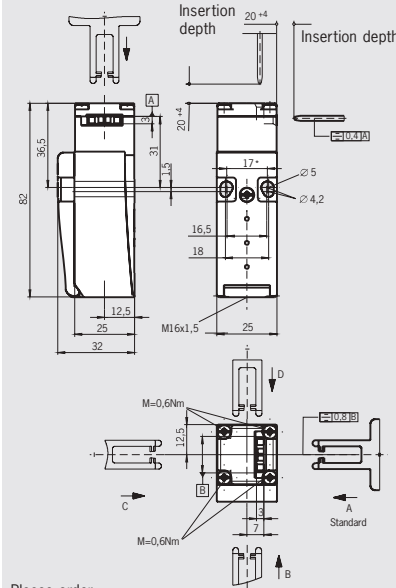
Switching elements

- ▶ **ES01** Slow-action switching element
1 NC \ominus
- ▶ **ES11** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **ES02** Slow-action switching element
2 NC \ominus
- ▶ **ES12** Slow-action switching element
2 NC \ominus + 1 NO
- ▶ **ES03** Slow-action switching element
3 NC \ominus

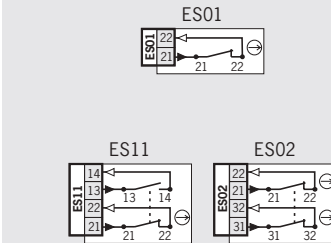


Cable entry M16 x 1.5 Short housing

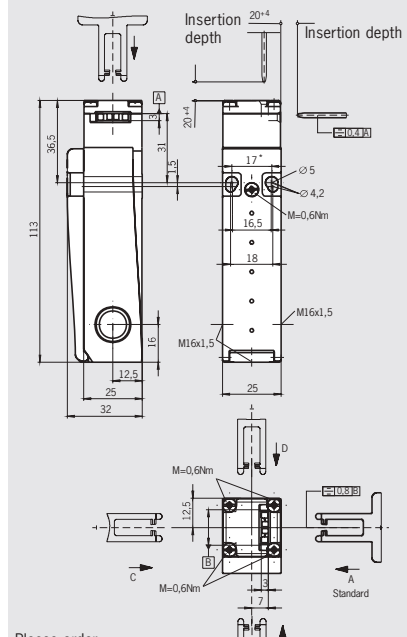
Dimension drawing



Wiring diagrams Actuator inserted



Cable entry M16 x 1.5 Long housing



Ordering table


Series	Actuator	Connection	Housing	Switching element	Order No. / Item
NM	VZ Separate actuator	Cable entry 1 x M16 x 1.5	Short 	01 1 NC \ominus	084 451 NM01VZA-M
				11 1 NC \ominus + 1 NO	094 471 NM11VZA-MC2069
				02 2 NC \ominus	094 470 NM02VZA-MC2069
				11 1 NC \ominus + 1 NO	084 452 NM11VZA-M
		Cable entry 3 x M16 x 1.5	Long 	02 2 NC \ominus	084 453 NM02VZA-M
				12 2 NC \ominus + 1 NO	084 454 NM12VZA-M
				03 3 NC \ominus	084 455 NM03VZA-M







Safety switch NM..VZ




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

Switch			Value	Unit
Parameter				
Housing material			Reinforced thermoplastic	
Mechanical life			10 ⁶ operating cycles	
Weight			approx. 0.1	kg
Max. approach speed			20	m/min
Actuating force			10	N
Extraction force			10	N
Retention force			2	N
Insertion depth	necessary minimum travel		20	mm
	permissible overtravel		4	mm

Switching element					Value	Unit
Parameter						
Switching principle					Slow-action switching element	
Switching elements with 1 switching element					ES01 1 NC \ominus	
Switching elements with 2 switching elements		ES11 1 NC \ominus + 1 NO	ES02 2 NC \ominus	ES12 2 NC \ominus + 1 NO	ES03 2 NC \ominus	
Switching current, min., at 24 V DC					1	mA
Switching voltage, min., at 10 mA					12	V
Contact material					Silver alloy, gold flashed	

Connection, cable entry M16 x 1.5			Value	Unit
Parameter				
Ambient temperature			- 20 ... + 80	°C
Connection			Screw terminal	
Version			M16 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)			Value	Unit
Parameter				
Ambient temperature			- 20 ... + 60	°C
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}			2.5	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)