

## Selection table for safety switches NM with separate actuator

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

Connection		Housing		Switching element		
M	SM4	Short	Long	One contact	Two contacts	Three contacts
				1 NC ⊖	1 NC ⊖ + 1 NO, 2 NC ⊖	2 NC ⊖ + 1 NO, 3 NC ⊖

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



## Safety switch NM..VZ

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



### Approach direction



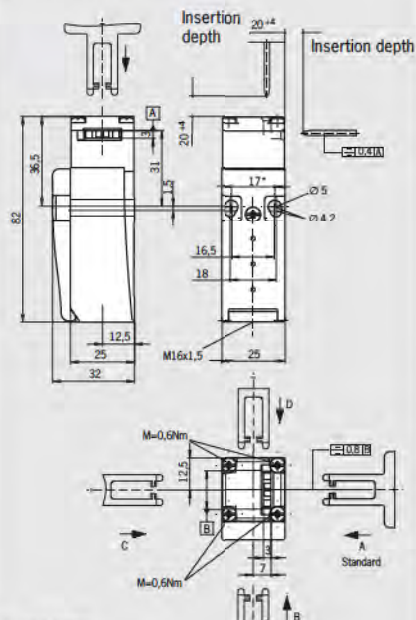
Horizontal and vertical  
Can be adjusted in 90° steps

### Switching elements

- ES01 Slow-action switching element  
1 NC ⊖
- ES11 Slow-action switching element  
1 NC ⊖ + 1 NO
- ES02 Slow-action switching element  
2 NC ⊖
- ES12 Slow-action switching element  
2 NC ⊖ + 1 NO
- ES03 Slow-action switching element  
3 NC ⊖

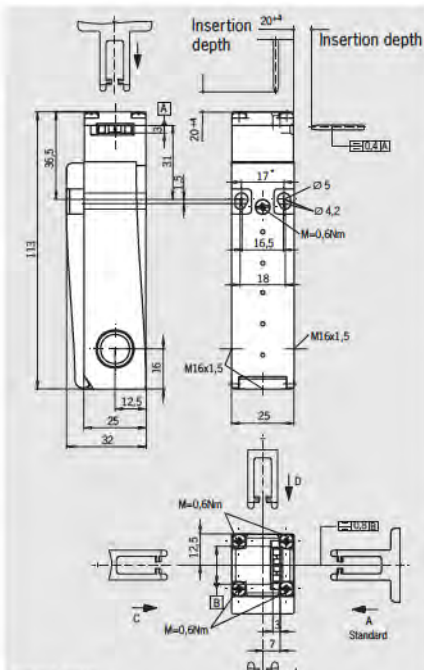
### Cable entry M16 x 1.5 Short housing

#### Dimension drawing



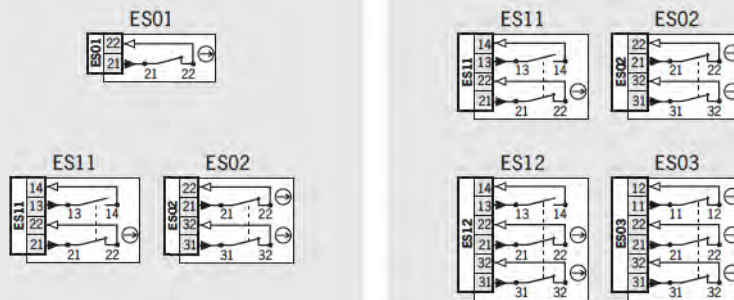
Please order actuator separately (see pages 74-75) For cable glands see page 89

### Cable entry M16 x 1.5 Long housing



Please order actuator separately (see pages 74-75) For cable glands see page 89

### Wiring diagrams Actuator inserted

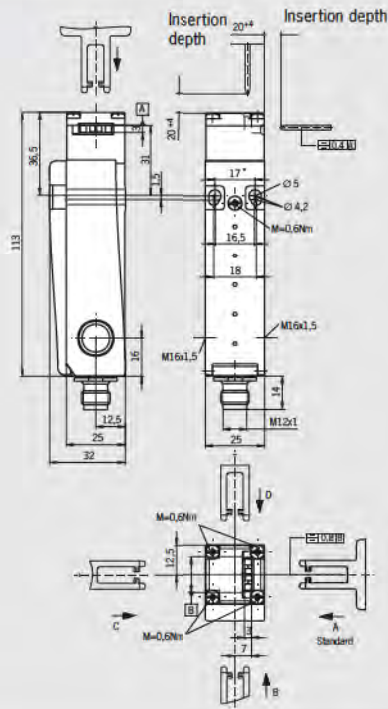


### Ordering table

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 ⊖	084 451 NMO1VZAM
				11 1 NC ⊖ + 1 NO	094 471 NM11VZA-MC2069
				02 2 NC ⊖	094 470 NMO2VZA-MC2069
				11 1 NC ⊖ + 1 NO	084 452 NM11VZAM
		Cable entry 3 x M16 x 1.5	Long	02 2 NC ⊖	084 453 NMO2VZAM
				12 2 NC ⊖ + 1 NO	084 454 NM12VZAM
				03 3 NC ⊖	084 455 NMO3VZAM



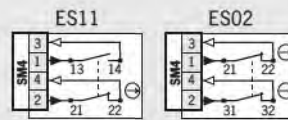
**Plug connector M12**  
4-pin, long housing




Please order actuator separately (see pages 74-75)

For plug connectors see page 85

**Wiring diagrams** Actuator inserted



**Ordering table**

Series	Actuator	Connection	Housing	Switching element	Order No. / Item
NM	VZ Separate actuator	Plug connector <b>M12</b>	Long 	11 1 NC $\ominus$ + 1 NO	<b>085 626</b> NM11VZA-SM4
				02 2 $\bar{O}$ $\ominus$	<b>084 564</b> NM02VZA-SM4


For safety precautions see page 136  
For technical data see page 99







## 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 <sup>6</sup> 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 ⊖	
Switching elements with 2 switching elements		ES11 1 NC ⊖ + 1 NO	ES02 2 NC ⊖	ES12 2 NC ⊖ + 1 NO	ES03 2 NC ⊖	
Switching current, min., at DC 24 V					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 <sup>2</sup>
Degree of protection according to IEC 60529			IP 67	
Rated insulation voltage U <sub>i</sub>			250	V AC/DC
Rated impulse withstand voltage U <sub>imp</sub>			2.5	kV
Conventional thermal current I <sub>th</sub>			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 <sub>e</sub> 4 A U <sub>e</sub> 230 V	
	DC-13		I <sub>e</sub> 4 A U <sub>e</sub> 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 <sup>1)</sup>	
Rated insulation voltage U <sub>i</sub>			250	V AC/DC
Rated impulse withstand voltage U <sub>imp</sub>			2.5	kV
Conventional thermal current I <sub>th</sub>			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 <sub>e</sub> 4 A U <sub>e</sub> 230 V	
	DC-13		I <sub>e</sub> 4 A U <sub>e</sub> 24 V	

1) Screwed tight with the related plug connector (see page 85)