

Safety switch NZ.VZ

- ▶ Housing according to EN 50041
- ▶ Various cable entries
- ▶ Plug connector optional
- ▶ LED optional



Approach direction



Horizontal
Can be adjusted in 90° steps.

LED function display (optional)

A function display is available for the following voltage ranges:

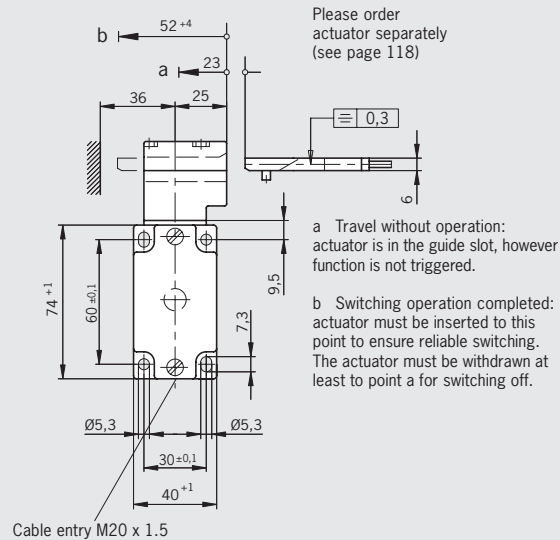
- ▶ AC/DC 12-60 V red
- ▶ AC 110 V ±15% red
- ▶ AC 230 V ±15% red

Switching elements (see also Page 13/14)

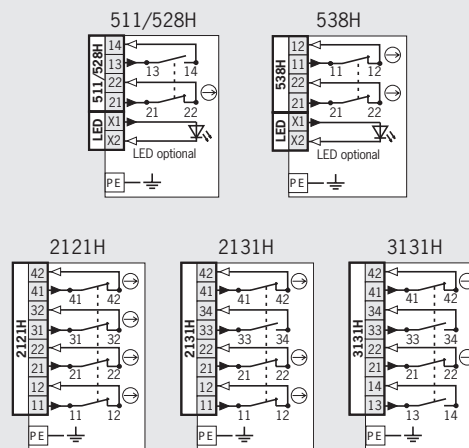
- ▶ **511** Snap-action switching element
1 NC ⊖ + 1 NO
- ▶ **528H** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **538H** Slow-action switching element
2 NC ⊖
- ▶ **2121H** Slow-action switching element
4 NC ⊖
- ▶ **2131H** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

Dimension drawings



Wiring diagrams Actuator inserted



Ordering table

Series	Actuator	Connection	Switching element	Version	Function display			
					Without LED	12-60 V red LED	110 V red LED	230 V red LED
NZ	VZ Separate actuator	1 Cable entry M20 x 1.5	511 ¹⁾ 1 NC ⊖ + 1 NO		089479 ¹⁾ NZ1VZ-511E-M	On request	On request	On request
			528H 1 NC ⊖ + 1 NO		090671 NZ1VZ-528E-M	090566 ³⁾ NZ1VZ-528EL060-M	089480 ³⁾ NZ1VZ-528EL110-M	082121 ³⁾ NZ1VZ-528EL220-M
			538H 2 NC ⊖		085676 NZ1VZ-538E-M	082119 ³⁾ NZ1VZ-538EL060-M	089481 ³⁾ NZ1VZ-538EL110-M	089482 ³⁾ NZ1VZ-538EL220-M
			2121H 4 NC ⊖		089486 NZ1VZ-2121E-M	-	-	-
			2131H 3 NC ⊖ + 1 NO		082123 NZ1VZ-2131E-M	-	-	-
			2131H 3 NC ⊖ + 1 NO	ATEX incl. cable gland	093660 ²⁾ NZ1VZ-2131E-M-EX	-	-	-
			3131H 2 NC ⊖ + 2 NO		082122 NZ1VZ-3131E-M	-	-	-

1) No BG approval for switching element 511

2) II 3 G Ex nC IIB T5 X (reduced resistance to impact acc. to EN 61241-1; max. 4 J) / II 3 D Ex tD A22 T90°C X (reduced resistance to impact acc. to EN 61241-1; max. 4 J)

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

Reliability values acc. to EN ISO 13849-1

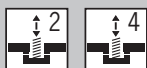
Parameter	Value	Unit
B _{10d}	4.5 x 10 ⁶ operating cycles	

Switch



Parameter	Value	Unit
Housing material	Anodized die-cast alloy	
Mechanical life	2 x 10 ⁶ operating cycles	
Ambient temperature	- 25 ... + 80	°C
Weight	Approx. 0.3	kg
Max. approach speed	20	m/min
Approach speed, min.	0.02 (for switching element ES511)	m/min
Actuating force	35	N
Extraction force	35	N
Retention force	8	N

Switching element



Parameter	Value	Unit
Switching principle	Snap-action switching element Slow-action switching element	
Switching elements with 2 switching elements	511 1 NC + 1 NO	
Switching elements with 4 switching elements	528H 1 NC + 1 NO 2121H 4 NC 2131H 3 NC + 1 NO 538H 2 NC 3131H 2 NC + 2 NO	
Min. switching current at 24 V DC	10	mA
Switching current max.	6	A
Contact closing time	< 4	ms
Contact bounce time	< 3	ms
Rated impulse withstand voltage U _{imp}	2.5	kV
Contact material	Silver alloy, gold flashed	

Connection, cable entry M20 x 1.5



Parameter	Value	Unit
Connection	Screw terminal	
Version	M20 x 1.5	
Conductor cross-section max.	Per wire 1.5 mm ²	
Degree of protection according to IEC 60529	IP 67	
Rated insulation voltage U _i	250	V AC/DC
Switching element	Snap-action switching element 511 Slow-action switching element 528H, 538H, 2121H, 2131H, 3131H	
Conventional thermal current I _{th}	6	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)	6	A gG
Utilization category to IEC 60947-5-1	AC-12 AC-15 DC-13	I _e 10 A U _e 230 V I _e 6 A U _e 230 V I _e 6 A U _e 24 V
		I _e 4 A U _e 230 V I _e 4 A U _e 24 V