

Devices raised mounting

Illuminated pushbutton actuator



	Front protection	Switching system	Contacts	Switching action	Terminals	□ 24 x 36 Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing		
Illuminated pushbutton actuator	IP 65	SA	1 NC	MA	PT 6.3	22-222.014	1	6	3	0.032	
					ST	22-222.011	1	3	3	0.037	
				M	PT 6.3	22-212.014	1	3	8	0.032	
					ST	22-212.011	1	3	8	0.037	
				1 NC + 1 NO	MA	PT 6.3	22-225.014	1	3	5	0.034
						ST	22-225.011	1	3	5	0.044
			M		PT 6.3	22-215.014	1	3	10	0.034	
					ST	22-215.011	1	3	10	0.044	
			1 NO	MA	PT 6.3	22-221.014	1	3	4	0.032	
					ST	22-221.011	1	3	4	0.037	
				M	PT 6.3	22-211.014	1	3	9	0.032	
					ST	22-211.011	1	3	9	0.037	
			2 NC	MA	PT 6.3	22-224.014	1	3	2	0.034	
					ST	22-224.011	1	3	2	0.044	
				M	PT 6.3	22-214.014	1	3	7	0.034	
					ST	22-214.011	1	3	7	0.044	
			2 NO	MA	PT 6.3	22-223.014	1	3	6	0.044	
					ST	22-223.011	1	3	6	0.044	
				M	PT 6.3	22-213.014	1	3	11	0.034	
					ST	22-213.011	1	3	11	0.044	

Switching system: SA = Snap-action switching element

Contacts: NC = Normally closed, NO = Normally open

Switching action: MA = Maintained action, M = Momentary action

Terminals: PT 6.3 = Plug-in terminal 6.3 mm, ST = Screw terminal

Mounting dimensions from page 18, Technical drawing from page 18, Circuit drawing from page 19

Devices raised mounting

Mushroom-head pushbutton actuator



	Switching system	Contacts	Switching action	Terminals	□ 24 x 36 Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	
Mushroom-head pushbutton actuator	SA	1 NC	MA	PT 6.3	22-222.014	1 4 3	0.032		
				ST	22-222.011	1 4 3	0.037		
			M	PT 6.3	22-212.014	1 4 8	0.032		
				ST	22-212.011	1 4 8	0.037		
		1 NC + 1 NO	MA	PT 6.3	22-225.014	1 4 5	0.034		
				ST	22-225.011	1 4 5	0.044		
			M	PT 6.3	22-215.014	1 4 10	0.034		
				ST	22-215.011	1 4 10	0.044		
		1 NO	MA	PT 6.3	22-221.014	1 4 4	0.032		
				ST	22-221.011	1 4 4	0.037		
			M	PT 6.3	22-211.014	1 4 9	0.032		
				ST	22-211.011	1 4 9	0.037		
		2 NC	MA	PT 6.3	22-224.014	1 4 2	0.034		
				ST	22-224.011	1 4 2	0.044		
			M	PT 6.3	22-214.014	1 4 7	0.034		
				ST	22-214.011	1 4 7	0.044		
		2 NO	MA	PT 6.3	22-223.014	1 4 6	0.044		
				ST	22-223.011	1 4 6	0.044		
			M	PT 6.3	22-213.014	1 4 11	0.034		
				ST	22-213.011	1 4 11	0.044		

Switching system: SA = Snap-action switching element

Contacts: NC = Normally closed, NO = Normally open

Switching action: MA = Maintained action, M = Momentary action

Terminals: PT 6.3 = Plug-in terminal 6.3 mm, ST = Screw terminal

Mounting dimensions from page 18, Technical drawing from page 18, Circuit drawing from page 19

Technical Data

Actuator with snap-action switching element

Switching system

Self-cleaning, double-break, snap-action switching system (with contact gap 2 x 1.5 mm).
Max. 2 normally closed or 2 normally open contacts, or one of each.

Material

Lens

Polymethylmethacrylate PMMA, as per UL 94 HB, Polycarbonate (PC), as per UL 94 V0

Front bezel

Polyphenylenoxide (PPO)

Material of contact

Hard silver

Actuator housing

Polyamide (PA), Polytherimide (PEI)

Mechanical characteristics

Terminals

Screw terminal (with self-lifting clip):
Max. wire cross-section 2 x 2.5 mm²
Max. wire cross-section of stranded cable 2 x 1.5 mm²

Plug-in terminal 6.3 x 0.8 mm

Actuating force

with 1 switching element 3.6 N ±0.3 N
with 2 switching elements 6.8 N ±0.3 N

Actuating travel

5.5 mm ±0.2 mm

Travel

3 mm

Rebound time

≤3 ms

Mechanical lifetime

Illuminated pushbutton 1 million operations
Keylock switch 40 000 operations

Electrical characteristics

Contact resistance

Starting value ≤50 mΩ, as per IEC 60512-2-4

Isolation resistance

≥100M Ω between all contacts at 100 VDC, as per IEC 60512-2-10

Switch rating

Power rating
min. 12 VAC, 50 mA
max. 400 VAC, 10 A

Switch rating AC (cosφ 0,7), service category AC-11

Voltage	125 VAC	250 VAC	380 VAC
Current	8 A	5 A	3 A
Operations	≥100 000		

Switch rating DC (inductive) L:R = 30 ms, service categorie DC-11

Voltage	24 V	60 V	110 V	220 V
Current	6 A	1.5 A	0.4 A	0.2 A
Operations	≥100 000			

Electric strength

2500 VAC, 50 Hz, 1 min. between all terminals and earth, as per IEC 60512-2-11.

Environmental conditions

Storage temperature

-40 °C ... +95 °C

Service temperature

-25 °C ... +85 °C

Protection degree

Terminal/case IP 20
Front IP 65 as per IEC 60529

Shock resistance

50 g for 11 ms, as per IEC 60512-4-3

Vibration resistance

(sinusoidal)
10 g at 10 Hz ... 2000 Hz, amplitude 0.75 mm, as per IEC 60512-4-4

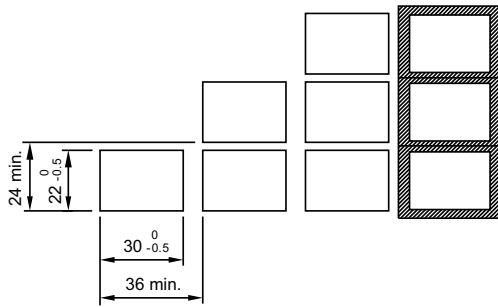
Approvals

CE
CB (IEC 61058)
CSA
ENEC (EN 61058)
UL
VDE
RoHS compliant

Drawings

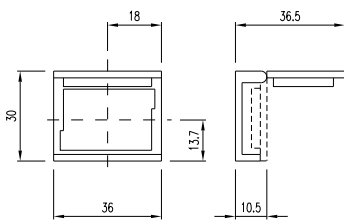
Mounting dimensions

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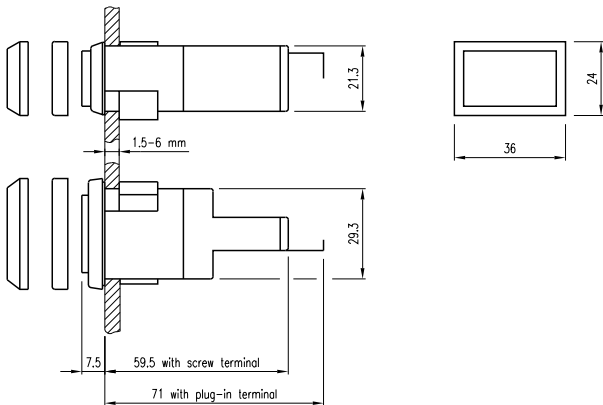


Technical drawing

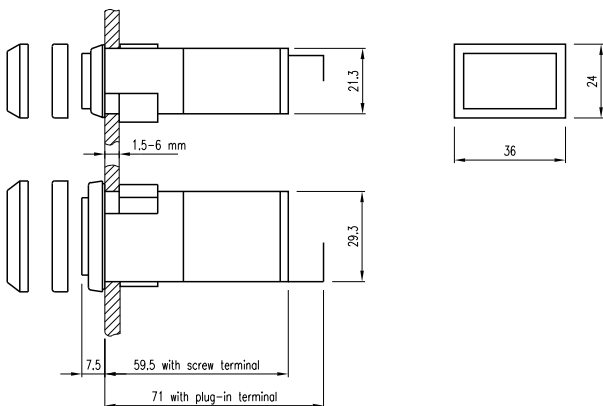
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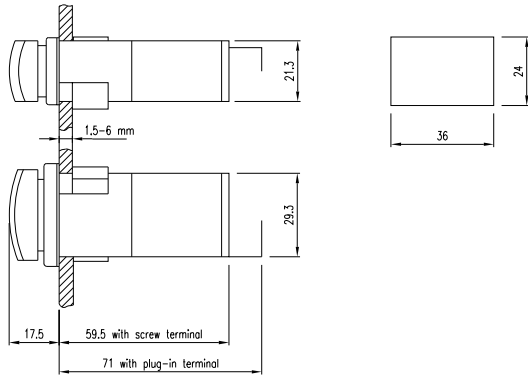


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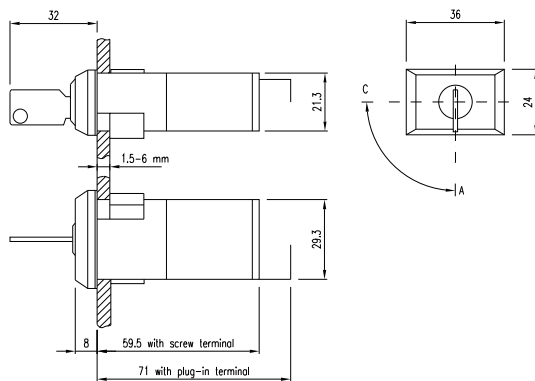


Drawings

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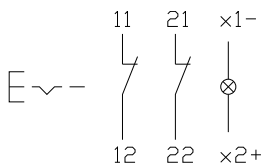
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Circuit drawing

1 Indicator actuator page 7



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