



## Position switch with safety function

### ES 51 WHL 1Ö/1S

Material number: 1047029 (Material number old: 51016001)

#### Features/Options:

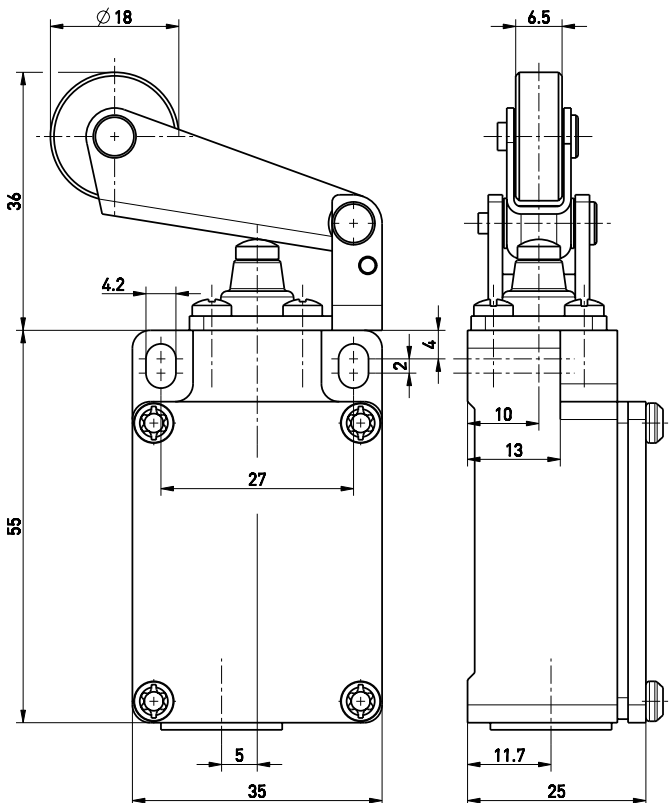
- Metal enclosure
- Slow action  $\ominus$ , change-over contact with double break
- 1 cable entry M16 x 1.5
- Actuator: Long roller lever with collar WHL
- Actuating speed max. 0.5 m/s with a vertical actuating angle of  $\alpha = 40^\circ$  and  $\beta = 30^\circ$

- Wear-resistant plastic roller
- Actuator can be repositioned by 4 x 90°
- Watertight collar for protection against penetration of dirt

#### Notes

- Actuation from the left should be avoided since this reduces the mechanical life of the position switch.
- With metal roller available on request
- When used as safety switch, secure the enclosure against slipping with appropriate means, e.g. pinning.

#### Dimensions



#### Technical data

Applied standards	EN ISO 13849-1, EN 60947-5-1, EN ISO 14119
Enclosure	aluminium die-cast, powder-coated
Switch type	type 1
Coding level	no coding
Degree of protection	IP 65 to IEC/EN 60529
$B_{10d}$ (10 % load)	2 million
$T_M$	max. 20 years
Contact material	silver
Switching system	slow action, positive break NC contacts $\ominus$
Switching elements	1 NC/1 NO contact, type Zb
Connection	screw connection terminals
Cable cross-section	max. 1.5 mm <sup>2</sup> (incl. conductor ferrules)
Cable entry	1 x M16 x 1.5
Rated impulse withstand voltage $U_{imp}$	4 kV
Rated insulation voltage $U_i$	400 V
Conventional thermal current $I_{the}$	4 A
Utilisation category	AC-15

Errors and omissions excepted.



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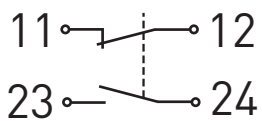
Rated operating current/ voltage $I_e/U_e$	4 A/400 VAC
Short-circuit protection	4 A gG/gN fuse
Mechanical life	> 1 million operations
Operation cycles	max. 3600/h
Ambient temperature	-20 °C ... +80 °C
Repeat accuracy of switching points	± 0.1 mm

Approvals

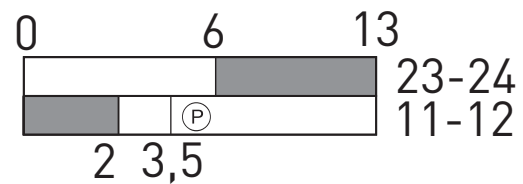


Weight 140 g

### Contact diagram

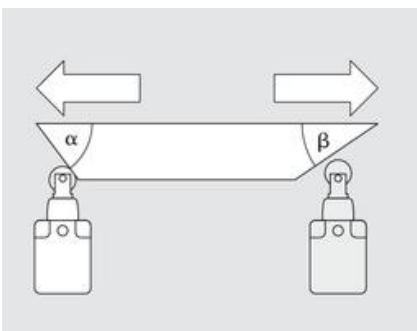


### Switching diagram



Ⓟ Positive break travel/angle

### Actuating angles



α - Actuating angle from right of switch axis  
 β - Actuating angle from left of switch axis as shown in picture