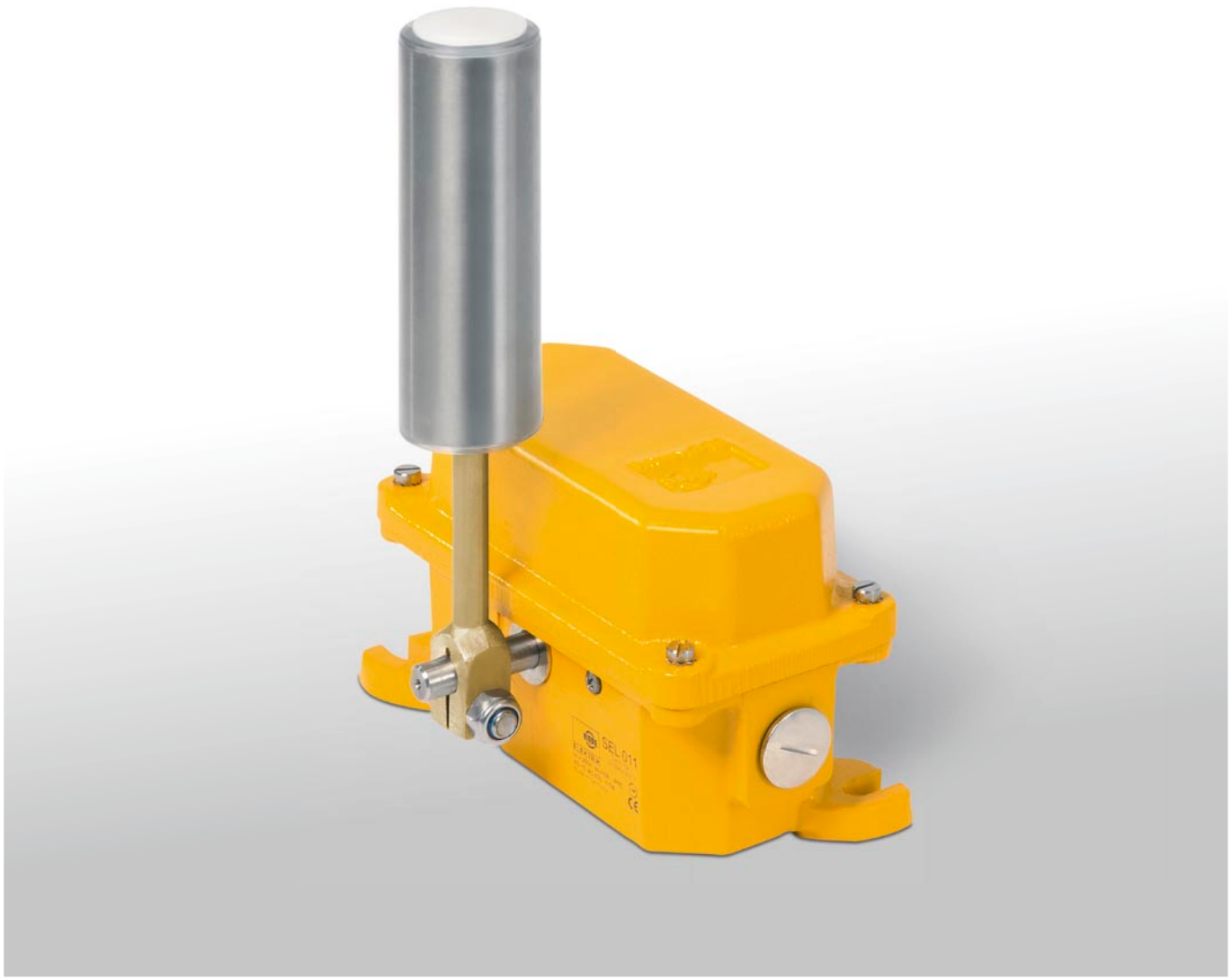
KIEPE ELEKTRIK

Conveyor Belt-Misalignment Switch

SEL

Leaflet No. **Kiepe 555**



APPLICATION

KIEPE belt misalignment switches of the SEL type are designed for heavy duty application and used at fixed belt conveyors according to DIN EN 620 requirements in order to keep the risk of unintentional operation as low as possible. The lateral movement of the conveyor belt is monitored and by switching off the conveyor in the case of unacceptable belt drift, the belt monitoring prevents damage and destruction of the belt and the machine.

Misalignment Switches are allocated in pairs on both sides at the carrying belt and return belt. The total number of pairs to be used and their installation points are dependent on design characteristics such as e.g. horizontal or vertical tensioning stations, single-ended or reversible operation and the length of the belt conveyor. Usually (horizontal tensioning station, single-ended operation, length of up to 30 m) one pair of switches is installed in front of the discharge station at the carrying belt.

OPERATION

Inadmissible belt drift occurs when the belt edge approaches the end of the supporting rollers through lateral movement and surpasses it. Then the actuator of the misalignment switch is operated and displaced. In the case of a displacement of the actuator, the first adjustable switching point is between 5° and 15°, the second between 15° and 35°. The shut-off of the conveyor is carried out optionally with the first or second switching point.

Alternatively, a misalignment warning can be created with the first switching point or a safety switch-off with the second switching point. The actuating roller is equipped with ball-bearings and made of alloyed steel. With its large roll diameter of 48 mm it is resistant to wear and used for belt speeds of up to 3 m/s and higher.

TECHNICAL DATA

Complies with	EN 60947-5-1
Suited for	controls and facilities according to EN 60204
Enclosure	Cast iron, EN-GJL-200
Finish	2 component DD-tile enamel, yellow RAL 1004
Mounting	2 oblong holes for M10 screws
Admissible ambient temperature	–25°C ... +70°C
Protection	IP 67 according to EN 60529
Switching system	2 cam operated snap action change over contacts SPDT, positive making
Actuator	SEL 011: Roller lever, Ø48 mm, stainless steel SEL 311: Roller lever, Ø108 mm, stainless steel
Switching points	Adjustable between 5° ... 15° or 15° ... 35° (standard setting is 2 x 10°)
Displacement of actuator	max. 75°
Rated operating voltage U_e	AC 230 V, DC 230 V
Conventional thermal current I_{th}	6 A
Breaking capacity AC-15 DC-24	 U_e = AC 240V, I_e = 1.5A T = 2 .. 3 ms, max. 3 A
Cable entry	Threaded hole 2 x M 25 x 1.5 1x screwed cable gland M 25 x 1.5; sealing area Ø11 mm to Ø16mm 1x dummy plug M 25 x 1.5
Connection cross section	max. 1.5 mm^2
Protective conductor connection	Inside enclosure, M 4, max. 2.5 mm^2
Contact life	0.5 x 10^6 switching cycles at 100 % I_e
Mechanical life	10^4 switching cycles
Optional	Ventilation duct to avoid condensation

Please note: The switches may be used in control circuits only!

SELECTION TABLE

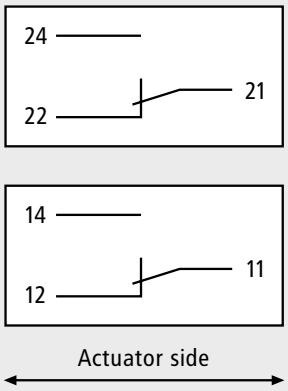
Type	Contact configuration Change over contacts (SPDT)	Order number
SEL 011	2	92.056 979.011
SEL 311	2	91.056 979.311

Spares and options

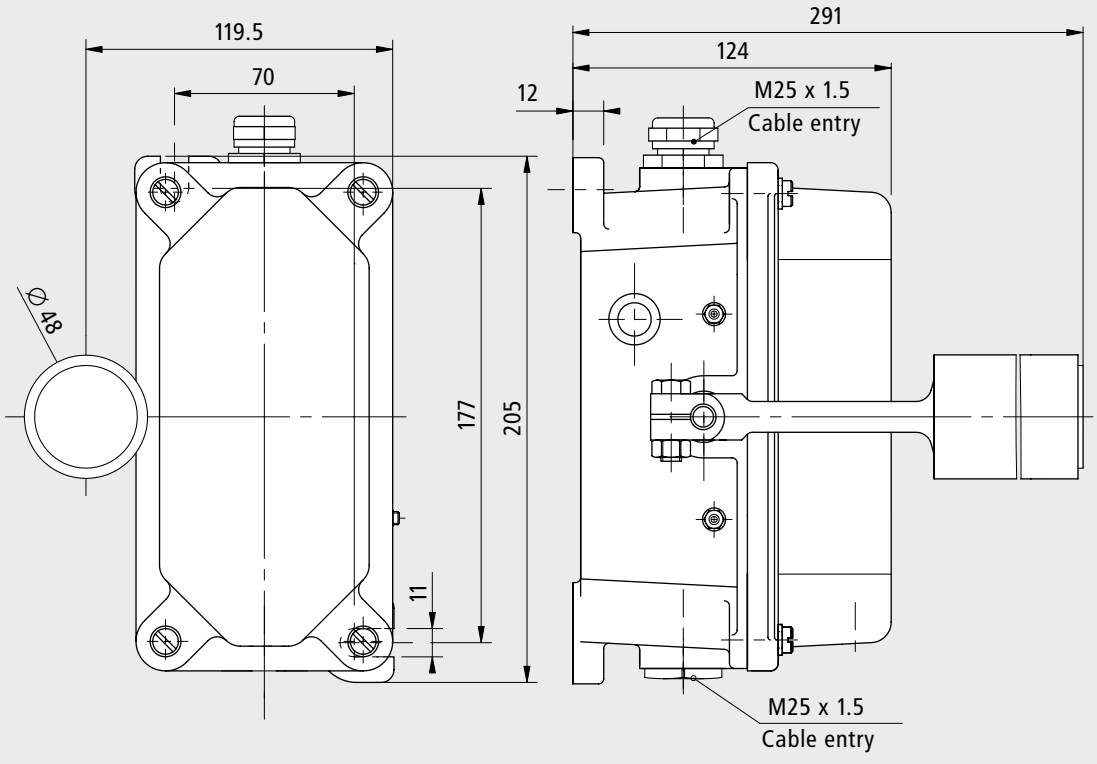
Actuating roller, stainless steel, ∅ 48 mm	93.058 650.001
Actuating roller, stainless steel, ∅ 108 mm	92.043 542.001
Switch element	220.06.04.01.05
Ventilation duct	580.00.16.01.01

CONNECTION DIAGRAM

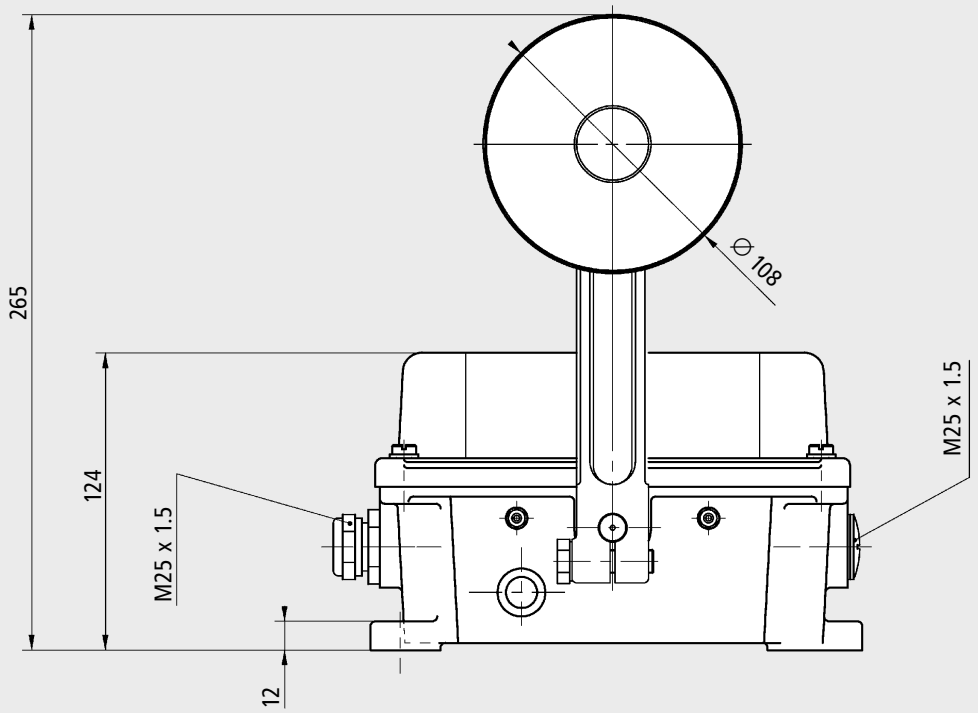
Switching elements according to DIN EN 50013

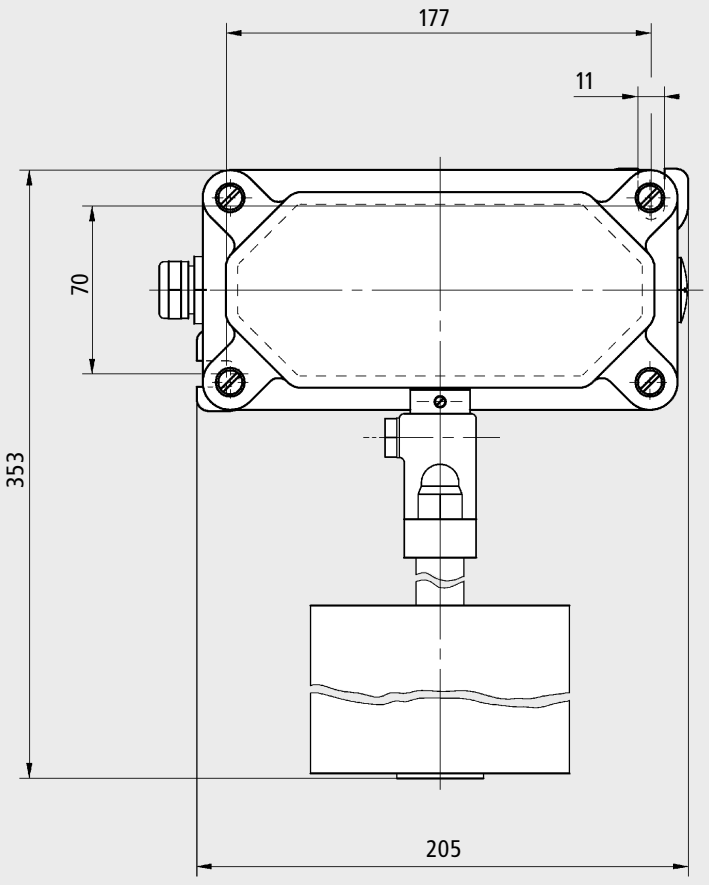


DIMENSIONS SEL 011



DIMENSIONS SEL 311





Subject to change without notice.

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