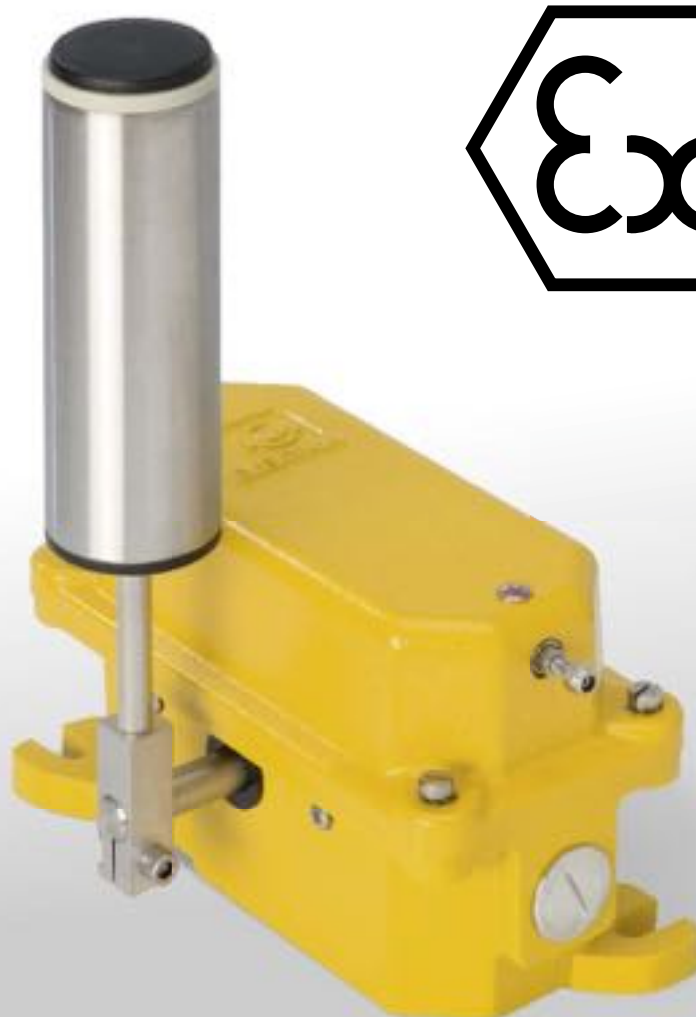
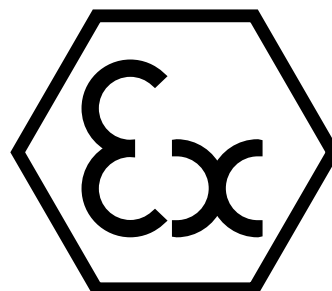


Conveyor Belt-Misalignment Switch

SEL EX II 2D

SEL EX II 3D



APPLICATION

KIEPE misalignment switches of type SEL EX 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.

The KIEPE Misalignment switches Type SEL EX are suited for use in explosive atmosphere with conductive dust, Group II, category 2, in zone 21 and 22 (Type SEL EX II 2D) or categorie 3, only in zone 22 (Type SEL EX II 3D).

The Kiepe misalignment switch type SEL EX complies with the ATEX Directive 94/9/EG and meets the safety objectives of the Low Voltage Directive 2006/95/EC. KIEPE Misalignmant switch Type SEL EX features a robust cast iron housing and is equipped with 2 force-actuated changeover contacts with snap-action function with two settable switching points.

Note:

The misalignment switch must only be used in electrical control circuits.

FUNCTION

The misalignment switch Type SEL EX operates, when the roller lever is deflected. The operating angle can be adjusted by an adjustable cam for each switching element.

In addition to the safety shutdown is thereby also a pre-warning feasible. The roller lever is spring-assisted and turns back automatically after deflection.

TECHNICAL DATA

Designation		Misalignment switch Type SEL EX ATEX-Version
Type of actuation		Bidirektional, by roller lever
Complies with		DIN EN 60204-1; DIN EN 60947-5-1; EN 620
ATEX		
Complies with ATEX Standard		DIN EN 60079-0; DIN EN 60079-31 Protection by enclosure „t“
Device group / category		II / 2D, 3D; flammable, conductive dust
ATEX-Identification		
for Zone 21, 22	SEL EX II 2D	⊕ II 2D Ex t IIIC T85°C Db IP 67
for Zone 22	SEL EX II 3D	⊕ II 3D Ex t IIIC T85°C Dc IP 67
ATEX-Certifikat		EPS 12 ATEX 1 479 X
Mechanics		
Enclosure		Cast iron DD-paint yellow, RAL 1004
Roller lever		Stainless steel, Ø 50 mm, Ball-beared roller
Mounting		2 slotted holes for M10-Screws
Installation position		Horizontal, tilt angle up to about 30°
Deflection of roller lever		Maximum +/- 75°
Mechanical reliability		> 10,000 actuations
Weight		4.5 kg
Electrical system		
Switching System		2 changeover contacts (SPDT with snap action), cam operated positive-making switches; gold plated
Switching range		5°...15° and 15°...35°, adjustable (factory setting: 10° each)
Cable entry		2 Threaded holes M25x1.5 with 2x screw plug, 1x cable gland (added)
Utilization category		AC-15: 230 V; 1.5 A DC-13: 60 V; 0,5 A DC-13: 24 V; 2 A
Connection cross section		0.75 mm ² to 1.5 mm ²
Protective conductor connection		M4, Protection class I: Protective earthing
Rated insulation voltage U _i		250 V
Rated impulse withstand voltage U _{imp}		2.5 kV, overvoltage category II, degree of pollution III
Conventional thermal current I _{th}		6 A
Contact reliability		30,000 operations with 100% I _e
Ambient conditions		
Permissible ambient temperature		−25°C ... +60°C
Protection rating		IP65 and IP67 in accordance with EN 60529

SELECTION CHART

Type	Explosive dust atmosphere	Contact configuration SPDT	Order number
SEL EX 011 II 2D	occurs in normal operation occasionally	2	92.096 215.011
SEL EX 011 II 3D	not occurs in normal operation or infrequently ad for a short time	2	92.096 389.011

Spare parts and accessories:

EX-Cable gland M25 x 1.5; sealing area \varnothing 11mm to \varnothing 16 mm	113.52.01.20.01
EX-Screw plug M25 x 1.5	113.52.87.20.01
EX-Roller lever, stainless steel, \varnothing 50 mm	93.055 201.101

Important advice !

The cable gland and screw plugs are carried out according to EC-Type Examination Certificate.
The use of other cable glands or screw plugs may void the device operation approval!

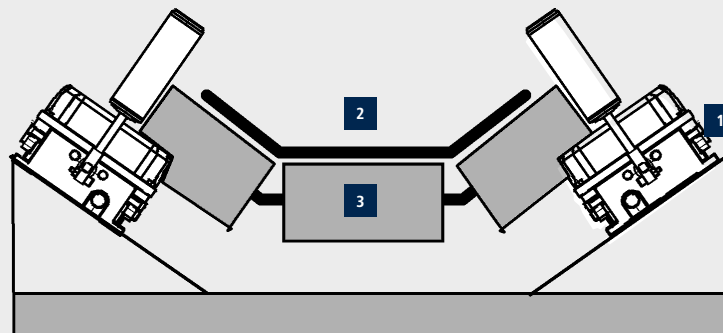
MOUNTING

The misalignment switch of Type SEL EX **1** is fastened with two (2) M10 screws each in installation position on the substructure. The case of belt misalignment, the belt **2** must not leave the lateral guide rollers **3** and should contact the roller of the misalignment switch perpendicularly. The actuation roller of the switch has no contact with the belt during normal operation of the belt. The roller lever is a wear part and therefore exchangeable. It can be affixed freely on the switch axis.

Important advice!

For protection against electrostatic discharge SEL EX is provided with conductive compounds and an external potential equalization connection, to which a minimum of 4 mm² potential equalization cable must be connected directly to the system. All connections must be checked regularly in accordance with the operation instructions.

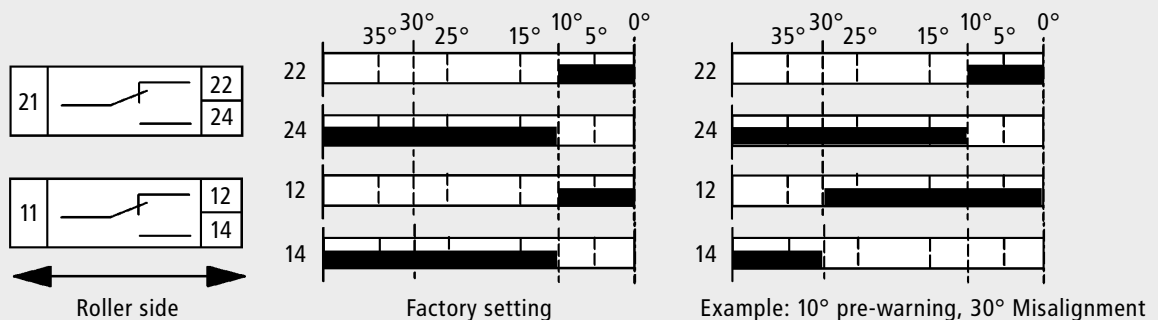
MOUNTING DIAGRAM



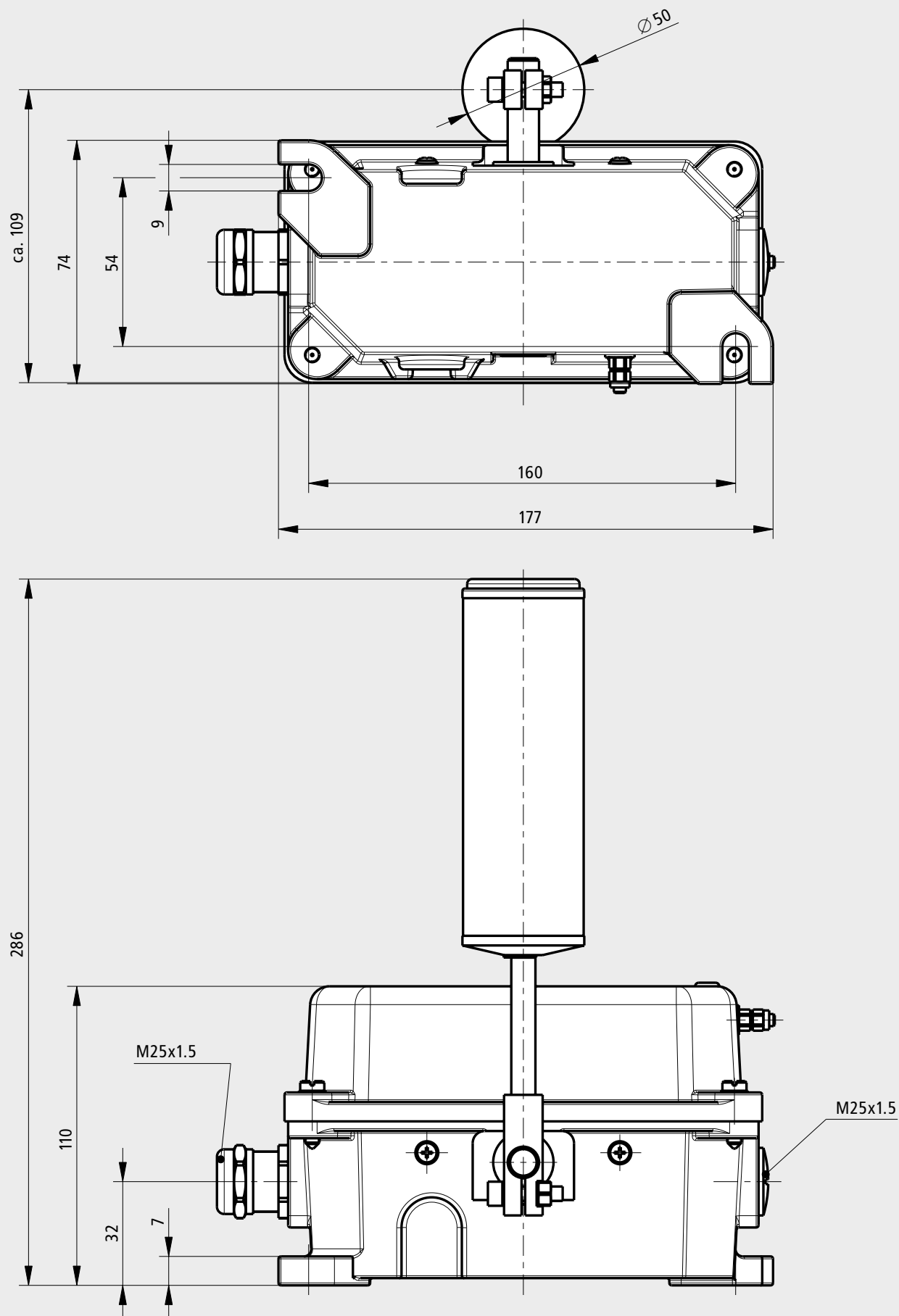
Sketch of conveyor with support rollers and belt

- 1** Misalignment switch
- 2** Belt
- 3** Support roller

CONNECTION DRAWING



DIMENSIONS



Subject to change without notice

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