kiepe.INDUSTRY

BELT MISALIGNMENT SWITCHES

HES

 # 92.057 020.xxx

APPLICATION

Kiepe belt misalignment switches type HES are used to monitor the misalignment of conveyor belt systems in accordance with the requirements of EN 620. They are used to protect the system from damage or destruction in the event of belt misalignment and are installed in pairs on both sides of the upper or lower run in areas at risk. The ball-bearing actuating roller made of alloy steel and with a large roller diameter is resistant to wear that occurs when the moving belt touches the roller.

The Kiepe belt misalignment switch type HES conforms to the Low Voltage Directive 2014/35/EU and is UKCA compliant. It has a robust aluminum housing and can be equipped with up to 4 positively actuated changeover contacts with snap-action function. It has two adjustable switching points.

The misalignment switch may only be used in control circuits.

FUNCTION

The misalignment switch type HES switches when the actuating roller is approached and deflected by the misaligned conveyor belt in the direction of rotation of the roller lever. The stainless steel roller lever is mounted on ball bearings, making it better able to absorb lateral forces and impacts.

The switching angle can be set for each switching contact using an adjustable roller. In addition to the safety cut-out, this also enables an advance warning to be realized. When the belt is running correctly, the roller lever resets itself automatically.

TECHNICAL DATA

Designation	Misalignment Switch Type HES
Type of actuation	Bidirectional
Complies with	DIN EN 60947-5-1
Suited for	Control units in accordance with DIN EN 60204-1
Mechanics	
Enclosure	Aluminum
Coating	PU 2K-paint yellow, RAL 1004
Actuating lever	Stainless steel; Ø 50 mm, ball-beared roller
Mounting	2 x M8
Deflection of roller lever (max.)	+/-75°
Weight	2.2 kg
Electrical system	
Switching system (max.)	4 SPDT (snap action) positive-opening switches, self-cleaning
Switching range	2 x 12,5°, adjustable +/-10° 2 x 18° fix
Cable entry (included in scope of delivery)	Threaded holes 2x M25x1,5 with each 1x screwed cable gland: sealing area Ø 11 mm to Ø 16 mm; 1x dummy screw
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 (max.)	2,5 mm^2
Protective conductor connection	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 polution 3
Conventional thermal current I_{th}	6 A
Ambient conditions according to DIN EN 60947-5-5	
Permissible ambient temperature	– 25°C... +70°C
Extended ambient temperature	– 40°C... +70°C (type HES 7xx)
Protection rating (according to EN 60529)	IP65 / IP67
Reliability	
Contact reliability	>30.000 operations bei 100% I_e

SELECTION TABLE

Type	Contact configuration SPDT	Extended temperature range –40 °C ...+70 °C	Ventilation membran	Order number
HES 011	2			92.057 020.011
HES 017	2		x	92.057 020.017
HES 711	2	x		92.057 020.711
Equipment options:				
Devices for two-wire bus-system, gold contacts, LED lamp				
Spare parts and accessories:				
Cable gland M25x1,5; sealing area Ø11mm to Ø16 mm				113.52.02.20.01
Screw plug; M25 x 1,5				113.52.87.20.02
Cover HES				93.066 839.004
Roller lever, stainless steel, Ø50 mm				93.055 201.101

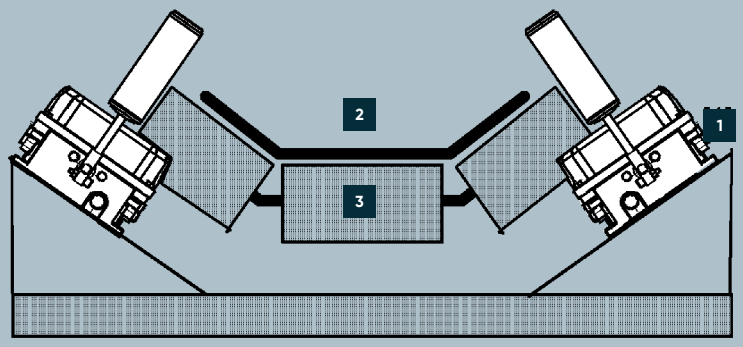
MOUNTING

Misalignment switches of type HES 1 are fastened to a substructure with 2 M8 screws each. In the event of misalignment, the belt 2 must not leave the lateral guide rollers 3. The position of the belt misalignment switches must be selected so that the actuating roller of the belt misalignment switch is preferably approached vertically by the belt 2. During normal operation, the actuating roller of the belt misalignment switch is not touched.

The roller lever is interchangeable and can be freely fixed in the direction of rotation on the switch axis.

The electrical connection is made when the device is open via the cable gland included in the scope of delivery directly to the connection glands of the switching elements.

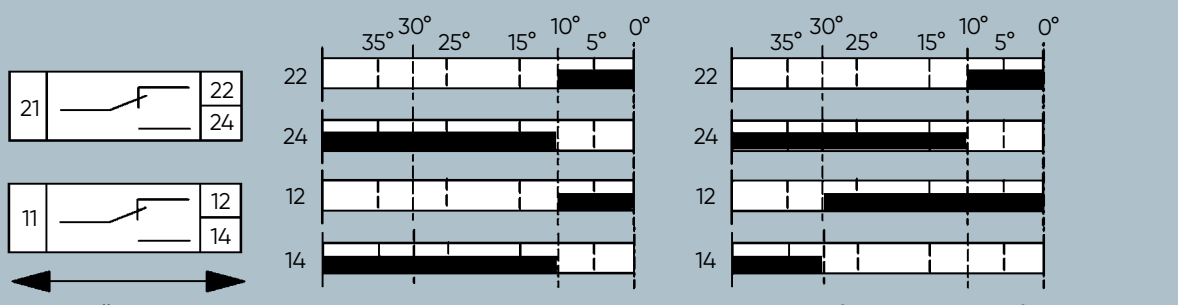
MOUNTING DIAGRAM



1 Misalignment Switch
2 Belt
3 Support roller

Sketch of conveyor with support rollers and belt
Note: Installation positions may vary

CONNECTION DRAWING

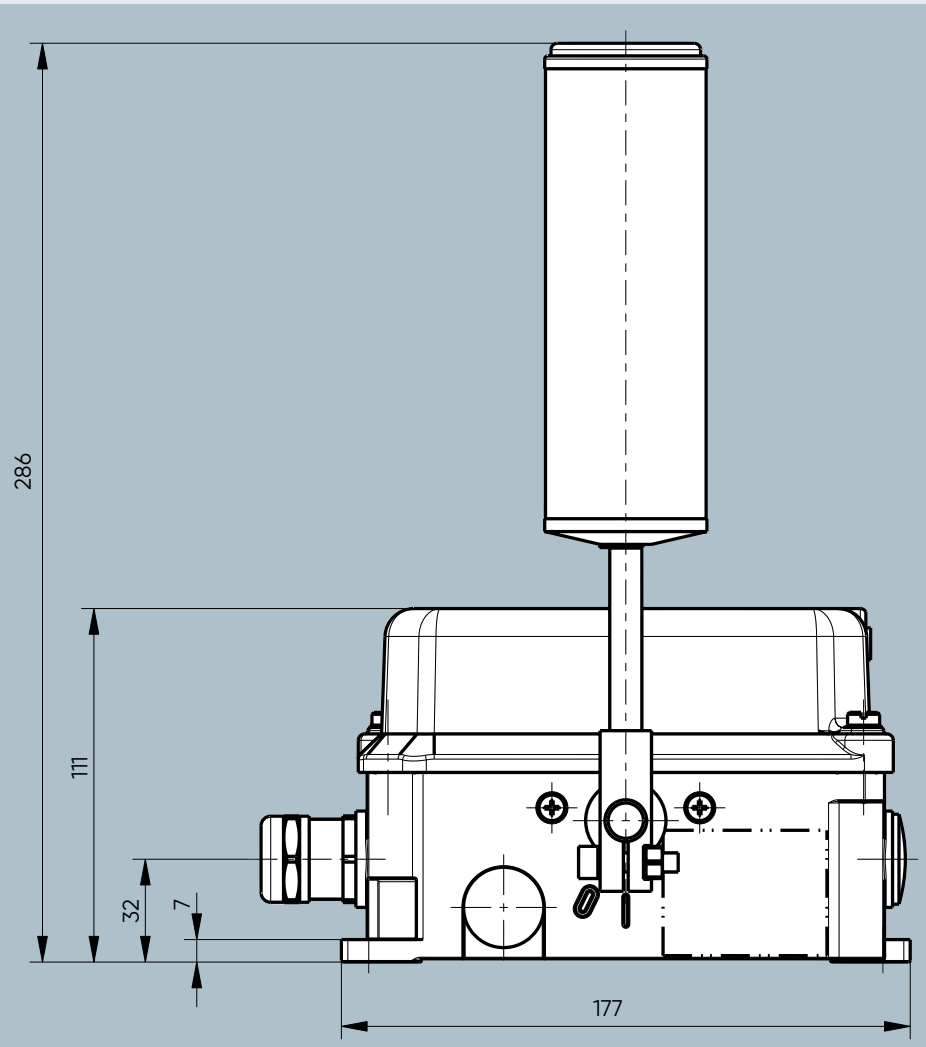


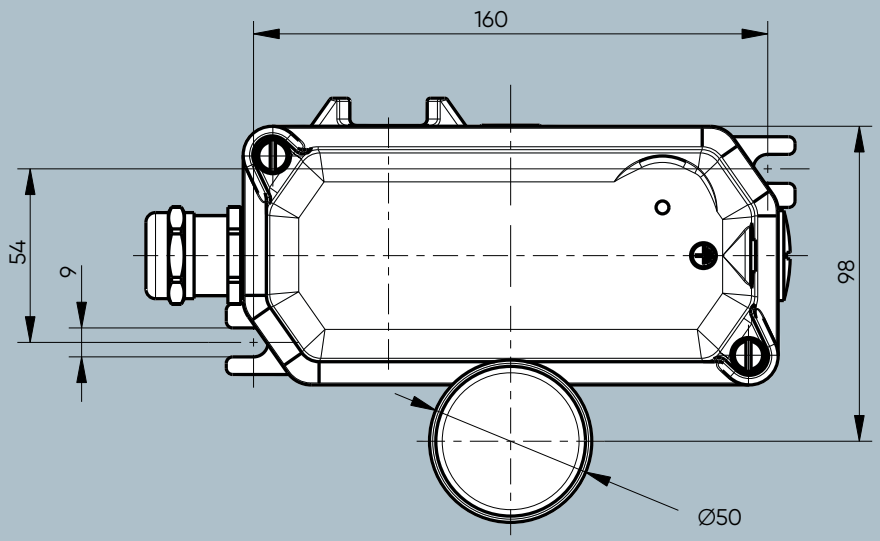
Roller side

Factory setting

Example 10° pre-warning, 30° misalignment

DIMENSIONS





Doc-No.: DB057020191 AA 01_10/24

Kiepe Electric GmbH - Industry
Kiepe-Platz 1
40599 Düsseldorf, Germany
Tel.: +49 211 74 97 -0
E-Mail: info@kiepe-elektrik.com
Web: www. kiepe-elektrik.com