

Belt Conveyor – Misalignment Switch

HES 5xx



c **UL** **US**
LISTED

APPLICATION

KIEPE belt misalignment switches of type HES 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 type HES misalignment switch complies with the Low Voltage Directive 2006/95/EC. It features a robust aluminum housing and is equipped with 2 force-actuated changeover contacts with snap-action function with two adjustable switching points. The variants of HES 5xx are certified by UL.

Note: The misalignment switch may only be used in control circuits.

FUNCTION

Inadmissible belt drift occurs when the belt edge approaches the end of the supporting rollers through lateral movement and surpasses it. Then the actuator (roller lever) is operated and displaced. In the case of displacement of the actuator, the cam operating switches are activated.

The switching angle can be set via an adjustable camshaft. In this way, a pre-warning can be implemented in addition to the safety shutdown. As soon as the belt moves correctly, the roller lever will automatically return to its home position.

TECHNICAL DATA

Designation	Misalignment switch HES 5xx, UL-Type
Type of actuation	Bidirectional
Complies with	DIN EN 60204-1 DIN EN 60947-5-1 EN 620, UL 508
Suited for	Control units and systems in accordance with DIN EN 60204
Mechanics	
Enclosure	Aluminum GK-AISI 12
Finish	DD-paint yellow, RAL 1004
Actuating lever	Stainless steel; \varnothing 50 mm, ball-bearing roller
Mounting	2 slotted holes for M8-screws
Installation position	Horizontal, tilt angle up to about 30°
Deflection of roller lever	Maximum +/-75°
Mechanical reliability	> 10,000 actuations
Weight	2.2 kg
Electrical system	
Switching system	2 changeover contacts (SPDT with snap action); cam operated positive-making switches
Switching range	5°...15° and 15°...35°, adjustable, factory set at 10 degrees each
Cable entry	2 Threaded holes M25x1.5 with 2 x dummy screw
Utilization category	AC-15: AC 240 V; 1.5 A DC-13: DC 60 V; 0.5 A DC-13: DC 24 V; 2 A
Connection cross section	1 mm ² to 2.5 mm ²
Protective conductor connection	M4; Class I: protective earthing
Rated insulation voltage U_i	240 V
Rated impulse withstand voltage U_{imp}	2.5 kV; Overvoltage Category II, degree of pollution 3, 2000 m NN
Conventional thermal current I_{th}	10 A
Mechanical reliability	> 30,000 operations with 100% I_e
Ambient conditions	
Ambient temperature	-25°C... +70°C
Protection Rating UL	4; 4x (NEMA)
Protection rating	IP65 and IP67 in accordance with EN 60529

SELECTION TABLE

Type	Contact configuration SPDT	Order number
HES 501	2	92.057 020.501
Spare parts and accessories:		
Cable gland M25x1.5; sealing area \varnothing 11mm to \varnothing 16 mm (1 piece included in the delivery)		113.52.02.20.01
Screw plug; M25x1.5		113.52.87.20.02
Roller lever, stainless steel, \varnothing 50 mm		93.055 201.101

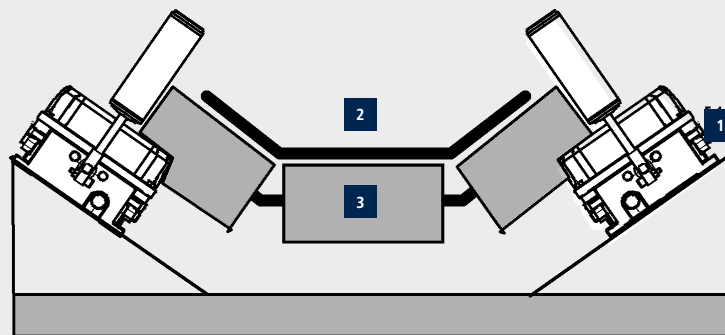
MOUNTING

Type HES **1** misalignment switches are fastened in installation position on a substructure with 2 M8 screws each. In the case of misalignment, the belt **2** must not leave the lateral guide rollers. The position of the misalignment switches shall be chosen such that the belt **2** makes contact with the actuation roller of the misalignment switch preferably perpendicularly. The actuation roller of the misalignment switch is not touched during normal operation.

The roller lever can be replaced and can be affixed freely in the directions of rotation on the switch axis.

The electrical connection is made at the screw joints of the contact block in the housing via the cable gland, included in the delivery. A second cable gland is possible when replacing the screw plug on the opposite site.

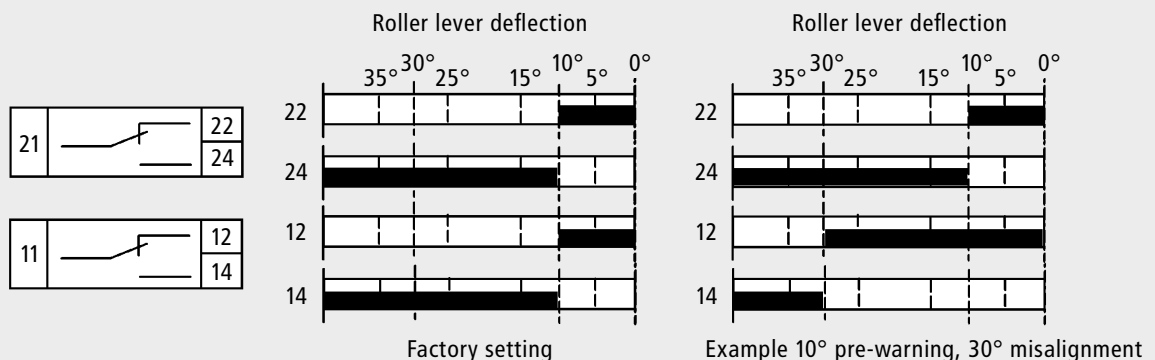
MOUNTING DIAGRAM



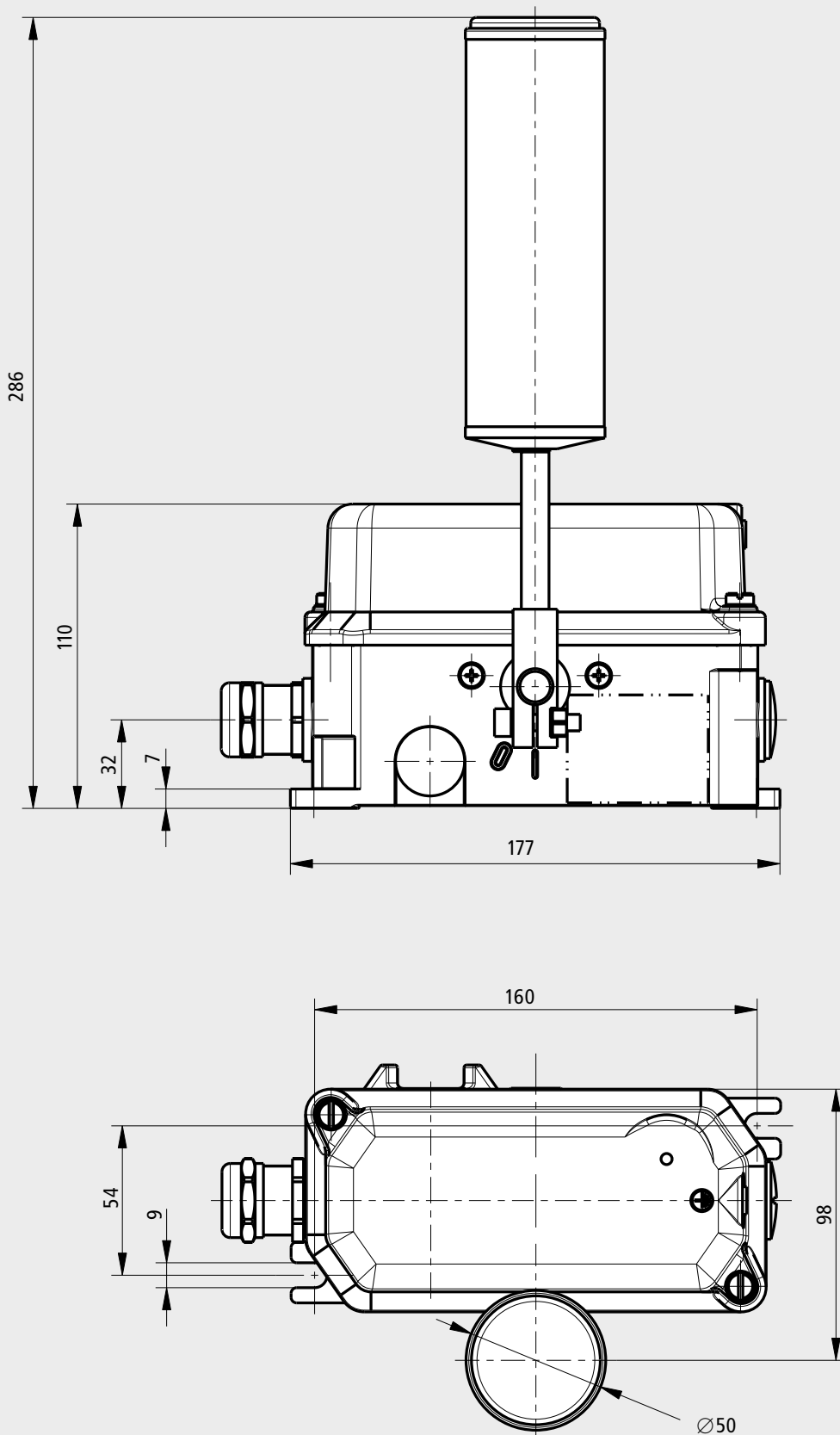
Sketch of conveyor with support rollers and belt

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

CONNECTION DRAWING



DIMENSIONS



Subject to change without notice.

Kiepe Electric GmbH

40599 Düsseldorf (Germany) · Kiepe-Platz 1
Telephone +49(0)211 74 97-0 · Fax +49(0)211 74 97-420
info@kiepe-elektrik.com · www.kiepe-elektrik.com

792/03-05/18