

# Conveyor Belt Misalignment (off-track) Switch

**DUK**  
DITTELBACH UND KERZLER

LHP<sub>xx-xx/x</sub>-L50

LHM<sub>xx-xx/x</sub>-L50

**50mm ROLLER  
FIXED  
TRIP POINTS**



The design of these misalignment switches considers heavy duty service. Enclosures made of most stable, impact resistant, thick-walled and strong corrosion resistant fibre-glass-reinforced polyester (BMC) or made of cast iron in junction with their high degree of protection of at least IP67 as well as at least IK08 are best guarantors. The 50mm diameter ball-bearing roller on the actuation arm facilitates a long lasting reliable service along fast belt conveyors.

Misalignment switches are for pair-wise installation, left and right of the belt.

If the belt gets off-track, 1 of these 2 rollers will be touched by the edge of the belt and shifted against a resetting

force. If the shifting angle oversteps an individually adjustable threshold the contacts get snap action operated. Optional is the version for 2-stage-switching, first stage for pre-warning and the second for shutting down. If the value of misalignment should be reduced, the resetting of the contacts effects automatically. Optional is the latching mechanism (resting in actuated position, with manual reset).

The contacts are made of silver, optionally they are gold coated. For reduction of the electrical transition resistance, the contact surfaces perform with each operation a wiping action. The NC-contacts are direct opening (positive drive). Each micro switch is certified by VDE and CCC and bears their signs


- **50mm diameter roller**
- optional **latching**
- **Up to 4 contacts NC + 4 NO**
- **Snap-action, direct opening** (→)
- **Silver or Gold contacts**
- **Stepless adjustable gap between lever and belt**
- **Enclosure of BMC (FRP)**  
optional **Cast Iron**
- **IP67**



For the Eurasian market these switches bear the EAC sign.

For adjustment of the gap between edge of the belt and the roller the roller arm can be adjusted and clamped in any angle on its shaft. The smooth running roller made of stainless steel is twin ball beared. With its diameter of 50mm this roller is best seasoned for fast conveyors.

## Options

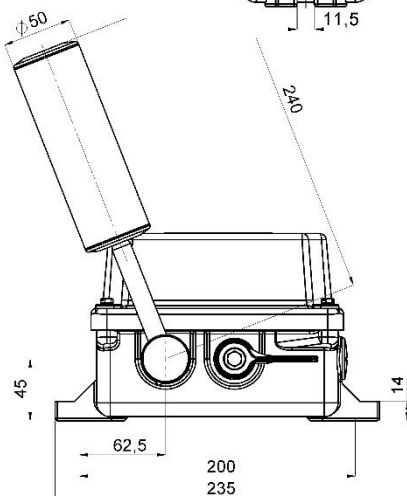
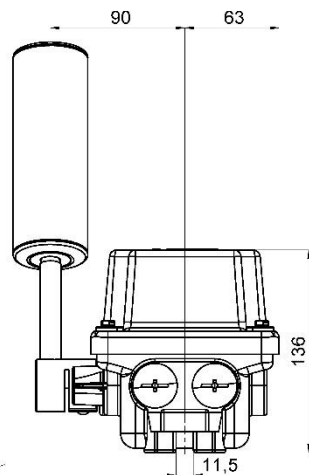
-  - protection (ATEX)
- Dupline Bus by Carlo Gavazzi
- LED Signalling light

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## Technical Data

Conforms to standard

EN60947-5-1, EN 60529, EN 60204, with latching EN 60947-5-5

Approval  
Switch point  
Roller lever

Eurasian Conformity **ERC**  
fix adjusted, see selection table below (travel)  
roller body 50mm diameter  
angle on the switch shaft stepless adjustable  
roller body and axis and twin ball bearing of stainless steel  
hub: Alloy of Nickel Aluminium Bronze

Max. shifting  
Micro switches  
I<sub>th</sub> (thermal current)  
Rating  
Minimum Current  
Utilization Category

Direct opening of the NC's, snap action, wiping  
10A  
Silver: 400VAC 6A / 230VAC 8A / 24VDC 10A / 80VDC 3A  
Gold: 1mA @ 6VDC

Ui Rated Insul. Voltage  
Uimp Rated Impulse

Silver: AC-15 230V 1A DC-13 110V 0,5A  
Gold: AC-12 230V 250mA DC-12 110V 250mA  
400V  
4kV

Approval of microswitches



Screw, each terminal clamp 1 or 2 cables, each max 2,5mm<sup>2</sup>  
enclosure at least IP67 / EN 60529, at least IK08 / EN 62262

Terminals  
Protection

Cable Entries

Enclosure Material

Colours

Weight / Mass

Mounting direction

Ambient temperature

2 x M25, closed by IP67-protecting plugs  
BMC (Fibreglass Reinforced Polyester) / Cast Iron  
standard: yellow RAL 1003, optional: red RAL 3000  
approx. 2.9 kg (BMC), 6.5 kg (cast iron)  
enclosure: free / lever: roller above hub  
for operation: - 40°C up to +85°C (-55°C on request)

Safety values acc. EN ISO 13849-1

Without consideration of the wear of the roller (this wear can be detected very easily, thus this wear can be covered by the DC by nearly 100%)



with latching 80000 cycles, without latching 500000 cycles  
with latching 20 years, without latching max 25 years

## Selection table

### Enclosure of BMC, FRP fibreglass reinforced polyester, Silver contacts

Type	Prewarning contacts			Stop contacts			Latching
	NC	NO	angle	NC	NO	angle	
LHPE-10/1-L50	0	0		1	1	15°	
LHPEw-10/1-L50	0	0		1	1	15°	yes
LHPE-10/2-L50V	1	1	8°	1	1	15°	
LHPEw-10/2-L50V	1	1	8°	1	1	15°	yes
LHPE-18/1-L50	0	0		2	0	15°	
LHPEw-18/1-L50	0	0		2	0	15°	yes
LHPE-18/2-L50V	2	0	8°	2	0	15°	
LHPEw-18/2-L50V	2	0	8°	2	0	15°	yes
LHP-10/2-L50	0	0		2	2	25°	
LHPw-10/2-L50	0	0		2	2	25°	yes
LHP-10/3-L50V	1	1	15°	2	2	25°	
LHPw-10/3-L50V	1	1	15°	2	2	25°	yes
LHP-10/3-L50	0	0		3	3	25°	
LHPw-10/3-L50	0	0		3	3	25°	yes
LHP-10/4-L50V	1	1	15°	3	3	25°	
LHPw-10/4-L50V	1	1	15°	3	3	25°	yes
LHP-10/4-L50	0	0		4	4	25°	
LHPw-10/4-L50	0	0		4	4	25°	yes

### Enclosure of BMC, FRP, Gold contacts

All types as with silver contacts available, but the type designation as follows:

Instead of the figure „10“ the figure „13“, e.g. LHPE-13/1-L50 (1 NC plus 1 NO gold contacts, FRP enclosure)

instead of the figure „18“ the figure „19“, e.g. LHPEw-19/1-L50 (2 NC gold contacts, with latching, FRP enclosure)

### Enclosure of Cast Iron

Available are all versions as stated above, equipped with silver as well as gold contacts, but the type designation has to be changed to LHM.... (instead of LHP....) e.g. LHME-10/2-L50V (1NC+1NO prewarning, plus 1NC + 1NO stop, cast iron enclosure).