

# Conveyor Belt **Misalignment Switch** with -protected contacts

**DUK**  
DITTELBACH UND KERZLER

## LHPw-EX..-L50

According to the  
ATEX-guideline  
For use in zone 21 and 1



- **Up to 4 contacts with ATEX-approval**
- **EEx d II C T6**
- **Snap action contacts**
- **Fibre glass reinforced polyester enclosure or cast iron enclosure**
- **IP 67**



Stepless adjustable space between roller and edge of the belt

Conveyor belt misalignment (off-track) switches are used pairwise, left and right of belt conveyors to reduce the danger of damage or destruction by misalignment of the belt.

The design of DUK-misalignment switches considers heavy duty service. The quality engineered construction and the most impact resistant housings withstand most inhospitable conditions. Industrial sealing rings and an extra hard solid rubber gasket are guarantors for the reliable protection of at least IP67.

EX-protected microswitches, EEx d II C T6 marked, ATEX examined and approved, qualifies them for use in zone 21 as well as in zone 1.

In case that a misaligning belt touches and displaces the roller lever approx. 4,5cm out of its rest position, all contacts switch over in snap-action. The maximum displacement of the lever is 75°.

Optional is a 2-stage switching, first stage for signalling at approx. 2cm displacement and the second stage for shutting down at 7cm. In case that

The value of misalignment is reduced reset happens automatically. A further version provides latching in the stop position.

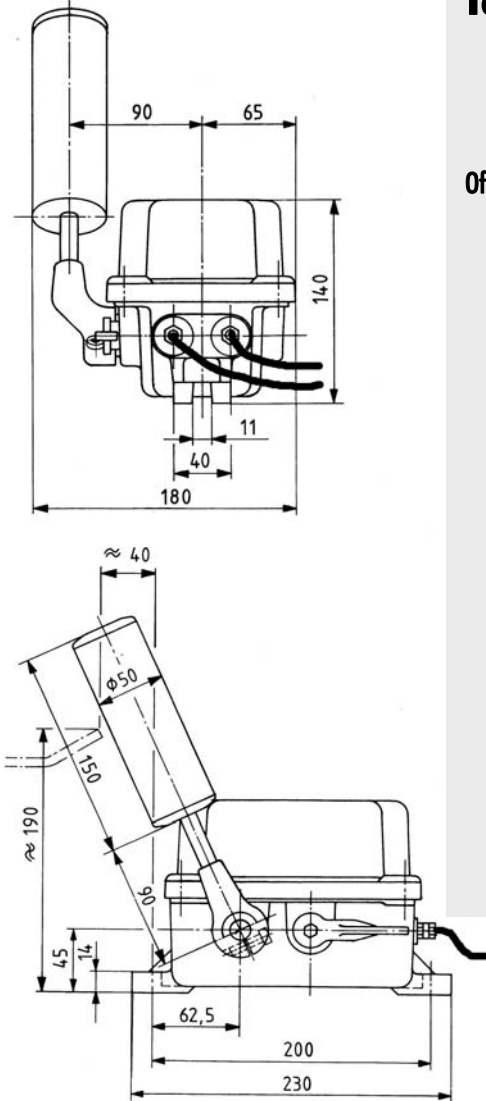
Stepless adjustable space between the roller lever and the edge of the belt by stepless adjusting of the lever on the switch shaft facilitates the installation. The roller body made of stainless steel is beared by 2 stainless steel ball bearings. The large diameter of 50mm of the roller body effects low rotation speeds increasing the life time and seasoning for service along rapid conveyors.

Each switch will be equipped individual with up to 4 contacts. The contact surfaces are made of silver or are gold plated for lowest tensions and currents. 1 or 2 cables, standard 5 meter long each, fix casted into the contacts, are for electrical connection either in EX-free areas or in separate ATEX-terminal boxes.



Two different materials for the switch housings (with same dimensions) make further selection necessary: On one hand the housing made of cast iron: Most stable, much better resistant against corrosion, costly in production, double 2-component coated. On the other hand the economic housing of thick walled, special for use in EX-areas permissible fibre glass reinforced polyester with reduced electrical surface resistivity: Same stability as cast iron, flameproof and discussionless corrosion-resistant.

# Misalignment Switch with -protected contacts

## LHPw-EX..-L50



### Technical Data

<b>Conformity</b>	ATEX / EN 60 947 / VDE 0168 / EN 60204		
<b>Certification of contacts approved for zone</b>	EEx d II C T6,  , 		
<b>Off-track for main contacts</b>	4,5cm		
<b>Off-track for warning contacts</b>	2cm		
<b>Max. displacement</b>	75°		
<b>Roller lever</b>	stainless steel, stepless adjustable, stainless-steel ball-bearing, 50mm diameter for low rotation speed and high lifetime		
<b>Switching capacity</b>	silver contacts: ohmic 230 VAC 5 A / 30 VAC 7 A cos phi 0,6 250VAC 3A / 30 VAC 5 A gold plated: min 5V / max 30V min 4 mA / max 400 mA max 0,12 VA		
<b>Utilisation category</b>	AC-15 2A 400V, DC-13 0,15A 250V		
<b>Connection cable</b>	1 or 2 cables, each 5m, 6,4mm Ø or 7,4mm Ø, fix welded to the contacts		
<b>Housing material</b>	Fibre glass reinforced polyester (LHP...) grey cast iron (LHM...)		
<b>Housing colour</b>	yellow or red (LHM...), black (LHP...)		
<b>Protection</b>	IP 67		
<b>Weight</b>	2.9 kg (LHP...), 6,5 kg (LHM...)		
<b>Fixing</b>	2 slotted feet for M10-screws (max. 11mm)		
<b>Ambient temperature</b>	Zone 1: -20°C up to +40°C (Gas) Zone 21: -20°C up to +75°C (Dust) below -20°C on request (minimum -40°C) -		

### Selection table

Type	Main Contacts		Warning Contacts		Latching	Contacts Surface
	NC	NO	NC	NO		
LHP-EX10-L50	1					silver
LHPw-EX10-L50	1				X	silver
LHP-EX11-L50	1	1				silver
LHPw-EX11-L50	1	1			X	silver
LHP-EX20-L50	2					silver
LHPw-EX20-L50	2				X	silver
LHP-EX21-L50	2	1				silver
LHPw-EX21-L50	2	1			X	silver
LHP-EX1010-L50	1		1			silver
LHP-EX1001-L50	1			1		silver
LHP-EX1110-L50	1	1	1			silver
LHP-EX1111-L50	1	1	1	1		silver
LHP-EX2010-L50	2		1			silver
LHP-EX2001-L50	2			1		silver
LHP-EX2020-L50	2		2			silver
LHP-EX2002-L50	2			2		silver

### Grey Cast Iron Housing

Types same as above, but LHM.... Instead of LHP.... For example LHM-EX10-L50.

For **gold plated contacts** please contact us

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