

# Conveyor Belt Misalignment (off-track) Switch

with  $\text{Ex}$ -protected contacts

LHP-EX..-L50 LHM-EX..-L50  
LHPw-EX..-L50 LHMw-EX..-L50

**DUK**  
DITTELBACH UND KERZLER

## Installation and operating instructions

**Principle:** Before any work shall be carried out it has to be checked that the circuits are isolated and any specific and general security instruction has been fulfilled.

Conveyor belt deviation switches of this type are provided to be installed pair-wise left and right of the belt. In case that the belt should misalign from the given track, the roller lever of one of these switches will be touched by the edge of the belt and displaced against the resetting force of switches internal spring. Actuation of the contacts and latching (latching only versions with „w“) is being effected in snap-action characteristic at an displacement angle of  $25^\circ$ . The maximum displacement angle of the roller lever is  $75^\circ$ . In case the amount of offtrack is reduced, release of the latching is possible by elevating the blue release lever (only versions with type figures "w") or reset happens automatically (only versions without type figure "w"). In addition to the indicated functions, different versions are equipped with leading contacts commutating at a displacement angle of  $15^\circ$  allowing earlier warning of belt deviation.

**Pre-mounting -L:** Erect the switch onto its feet that way that the identification plate is at the left side. Screw out the screw of the shaft showing to you together with the washer by aid of a 10 mm wrench. Take the enclosed roller lever that way that the decreased bore is at your side. Pin this lever with roller upwards left onto the free shaft end and tighten with the previously screwed out screw and washer with a torque of 8 Nm.

**Pre-mounting -L50:** Erect the switch onto its feet that way that the identification plate is at the left side. Take the enclosed roller and pin it with roller upwards left (approx 11 o'clock) onto the free shaft end and tighten the inbus-screw (5mm) of the hub.

**Mounting:** To install the switch a plane and stable console is necessary at the belt frame. Adjust the switch that way the lever shows into direction of the belt area. Taking into consideration that the conveying belt is in its normal position, middle of the roller lever has to be at the same height as the flank of the conveying belt. There should be as much air inbetween the roller and the flank of the belt as a deviation of the conveying belt could be tolerated. Fixing of the switch is to be effected with two suitable screws M10 at the wholes of the foot.

**Electrical installation:** The free cable ends are to be connected within an Ex-free or Ex-protected atmosphere. NC-contacts are numbered with 1 and 2 (or 11 and 12 as well as 21 and 22), the NO according with 3 and 4.

**Check:** Please check any electrical and mechanical function after completion of installation and thereafter in regular intervals.

All applicable standards are integral parts of this manual.

### Technical Data

Certification of contacts	EEx d IIC T6, $\text{Ex}$ II 2 G, $\text{Ex}$ II 2 D T80°C
Conforms to standards	ATEX, EN60947, EN 60529
Switching capacity	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
Utilization category	AC-15 4A 250V / AC-15 2A 400V / DC-13 0,15A 250V
Switch angle	$25^\circ$ , leading contact („V“) $15^\circ$
Max. displacement	$75^\circ$
Roller lever	“-L50“ stainless steel $\varnothing 50\text{mm}$ , stepless adjustable, double stainless steel ball bearing “-L“ stainless steel $\varnothing 40\text{mm}$ , fix on the switch shaft, double stainless steel ball bearing
Protection	IP 66
Housing material	Fibre glass reinforced polyester (LHP-EX..-L50) cast iron (LHM-EX..-L50)
Fixing	2 slotted holes 11mm width
Operating temperature	-40°C up to +85°C

