

Position Switch, Limit Switch  
**Lever Limit Switch**

**DUK**  
DITTELBACH UND KERZLER


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

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



Lever limit switches are for stopping drives at reached limit positions or for signaling at intermediate.

The actuation lever of this switch is shiftable LH as well as RH out of the middle, neutral position. Operation of the contacts can either be independent on the direction of this shifting (LH as well as RH operates the same contacts) or dependent (LH operates other contacts than RH). The actuation lever turns back to its middle neutral position automatically, hereby the reset of the contacts happens automatically. Optional is a latching version for manual reset.

- **Snap action**
- **Direct opening** 
- **Latching** optional
- **Direction sensing LH vs RH** optional
- **Up to 8 Silver or Gold contacts**
- **Enclosure of BMC (FRP)**  
optional **Cast Iron**
- **IP 67**

These switches will be equipped with up to 4 snap-action micro switches with direct (forced) opening of the NC-contacts. The contacts are made of silver, optional are gold surfaces. The contacts perform a wiping action. This wiping reduces the electrical transition resistance, essential for use at lowest tensions and currents. The micro switches are certified by the VDE and CCC.




**EAC**

The EAC approval of the switches qualifies them for the Eurasian market.

The mounting orientation is any and the actuation lever can be mounted in 4 positions (4 x 90°) on the shaft.


The design of these switches considers heavy duty service. Enclosures made of most stable, impact resistant, thick-walled and strongly corrosion resistant fibre-glass-reinforced polyester (BMC) or made of cast iron as well as all shafts and screws made of stainless steel, seasons them for an extended working life.

## Options

- Dupline Safety Bus or Fieldbus by Carlo Gavazzi
- Signalling light
- Pre-contacts for prewarning (2-stage-switching)
- Explosion protection (ATEX) separate leaflet 

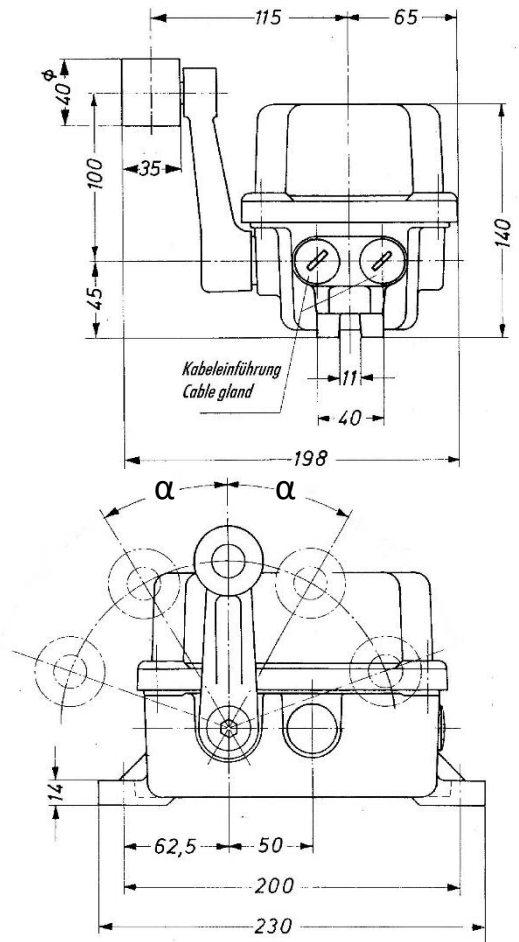
# Lever Limit Switch LHP<sub>xx-xx/x-R</sub>

## Technical Data

<b>Conforms to standards</b>	EN 60947-5-1 / EN 60204 / EN 60529 / DIN VDE 0168 with latching „w“ : EN 60947-5-5
<b>Certification of contacts</b>	 RegNr. 6671 or 6827 or 40026213 
<b>Approval Contacts</b>	Eurasian conformity <b>ERL</b> snap action, self-cleaning surfaces, NC contacts: direct opening for safety applications
<b>I<sub>th</sub> (thermal current)</b>	10A
<b>Rating</b>	Silver: 400VAC 6A / 230VAC 8A / 24VDC 10A / 80VDC 3 A
<b>Minimum Current</b>	Gold: 1mA @ 6VDC
<b>Utilization Category</b>	Silber: AC-15 230V 1A DC-13 110V 0,5A Gold: AC-12 230V 250mA DC-12 110V 250mA
<b>U<sub>i</sub> Rated Insul. Voltage</b>	400V
<b>U<sub>imp</sub> Rated Impulse</b>	4kV
<b>Terminals</b>	Screw clamps, each clamp 1 or 2 cables, each max 2,5mm <sup>2</sup> at least IP67 (EN 60529), at least IK08 (EN 62262)
<b>Protection</b>	2 x M25, factory closed by IP67-protecting plugs
<b>Cable Entries</b>	BMC (Fibreglass Reinforced Polyester) / Cast Iron standard: yellow RAL 1003, optional: red RAL 3000
<b>Enclosure Material</b>	approx. polyester 2.3 kg, cast iron 6 kg
<b>Colours</b>	free
<b>Weight / Mass</b>	for operation: - 40°C up to + 85°C (-55°C on request)
<b>Mounting position</b>	
<b>Ambient temperature</b>	

Values for calculation of SIL or PL according EN 13849 and IEC 61508:

<b>B10d</b>	with latching 80.000 cycles without latching depending on the actuation speed: = 1.5m/s 200.000 cycles < 1.5m/s up to 500.000 cycles
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## Selection table

### Housing of BMC (FRP), Silver contacts, without latching

Type	Number of contacts actuated ... independent on direction LH only RH only		Latching manual reset	Switching angle $\alpha$	Max. lever deflection
<b>LHPE-10/1-R</b>	1NC+1NO		non	15°	75°
<b>LHPE-18/1-1</b>	2NC		non	15°	75°
<b>LHPE-10/2-R</b>	2NC+2NO		non	15°	75°
<b>LHPE-18/2-R</b>	4NC		non	15°	75°
<b>LHP-10/3-R</b>	3NC+3NO		non	30°	75°
<b>LHP-10/4-R</b>	4NC+4NO		non	30°	75°
<b>LHPE-10/2-R2</b>	1NC+1NO	1NC+1NO	non	15°	75°
<b>LHPE-18/2-R2</b>	2NC	2NC	non	15°	75°
<b>LHP-10/4-R2</b>	2NC+2NO	2NC+2NO	not possible	30°	75°

### Housing of BMC (FRP), Gold contacts, without latching

All types (same as above) are available with gold contacts, but the type designation changes to:

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

instead of the figure „18“ the figure „19“, e.g. LHPE-19/2-R (4 NC gold contacts, with latching, FRP enclosure)

### Enclosure of Cast Iron

All versions available, as 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).

### Latching

Available for all types marked in the table with „non“, for designation insert the letter „w“ in front of „-10“ or in front of „-13“ or „-18“ or „-19“ e.g. LHPEw-10/1-R or LHMEw-19/2-R“