



# -proof Pullcord Switch

LHPEW-xx/xEX-B



DITTELBACH UND KERZLER

For use in zone 21  
ATEX approval



Image shows LHP version  
(polyester enclosure)

- **Unrivalled long pullcord travel for actuation**
- **Up to 4 contacts NC + 4 NO**
- **Snap action contacts, direct opening**
- **Corrosion resistant Polyester enclosure (BMC) or Cast iron enclosure**
- **IP 67**

The design of these pullcord switches considers heavy duty service. The housings made of most stable, impact resistant, thick-walled fibreglass-reinforced polyester are the best guarantors for long years of reliable service. Both types are IP67 protected (water- and dust proof).

They comply with the demands of the European standard EN 60079-31. By their certification and marking with 2D Ex tb IIIC T80°C Db they are approved for use in areas under conductive dust. They comply also to all other applicable European standards and are marked with the CE-mark.

Pullcord switches of this type are for double-sided rope mounting (left and right) with a rope length of max 2 x 50 metres. Pulling on one of these ropes operates all contacts by snap action independent on the direction of actuation. Simultaneously with the operation the latching is effected automatically for manual reset. When tripped, the actuation lever remains in the actuated position, displaying that the switch is tripped and indicating the direction from where the emergency stop demand was executed .

Secure opening of each NC-contact is guaranteed by the direct opening system (positive drive of each NC-contact). For decreasing the electrical contact resistance all contacts perform a self-cleaning action with every operation. The contacts are made of silver and get optionally a gold surface. For best contact safety at lowest tensions and low currents (cross resistance) the gold contacts are recommended.

The unrivalled long pullcord travel necessary for actuation and the large force necessary for pulling prevent unwanted stops caused by solids falling onto the pullcord.

The guarantors for an extended, reliable working life are most important details like double lipped sealing rings tightening the shafts, the lid gasket made of extra hard rubber, shafts made of stainless steel, screws made of stainless steel, loss-protected housing cover screws.....



# -proof Pullcord Switch LHPEw-xx/xEX-B

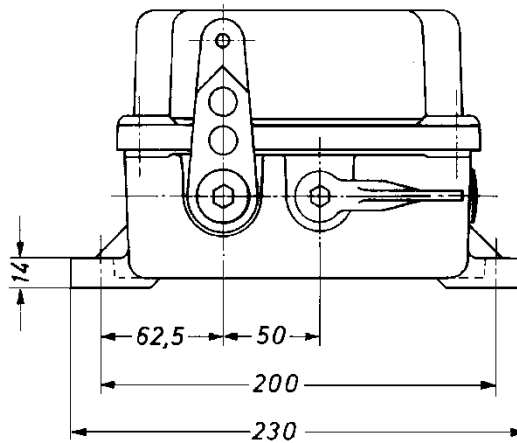
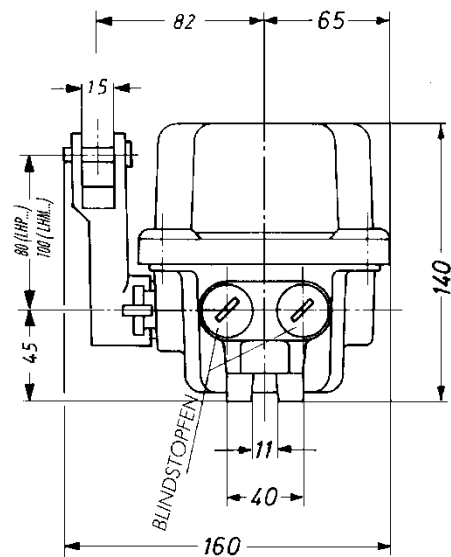



Image shows LHM  
(cast iron enclosure)

## Selection table

Type	Contacts		
	NC	NO	
<b>Polyester enclosure</b>			
LHPEw-10/1EX-B	1	1	silver
LHPEw-18/1EX-B	2	-	silver
LHPEw-10/2EX-B	2	2	silver
LHPEw-18/2EX-B	4	-	silver
LHPw-10/3EX-B	3	3	silver
LHPw-10/4EX-B	4	4	silver
LHPEw-13/1EX-B	1	1	gold
LHPEw-19/1EX-B	2	-	gold
LHPEw-13/2EX-B	2	2	gold
LHPEw-19/2EX-B	4	-	gold
LHPw-13/3EX-B	3	3	gold
LHPw-13/4EX-B	4	4	gold
<b>Cast iron enclosure</b>			
LHMEw-10/1EX-B	1	1	silver
LHMEw-18/1EX-B	2	-	silver
LHMEw-10/2EX-B	2	2	silver
LHMEw-18/2EX-B	4	-	silver
LHMw-10/3EX-B	3	3	silver
LHMw-10/4EX-B	4	4	silver
LHMEw-13/1EX-B	1	1	gold
LHMEw-19/1EX-B	2	-	gold
LHMEw-13/2EX-B	2	2	gold
LHMEw-19/2EX-B	4	-	gold
LHMw-13/3EX-B	3	3	gold
LHMw-13/4EX-B	4	4	gold

## Technical Data

Conforms to standards	EN 60079-0 / EN 60079-31 / EN 60 947-5-5 EN 60204 / EN 60529
Switches are marked	 II 2D Ex tb IIIC T80°C Db
Contacts	Up to 4 NC plus 4 NO, independent on the direction of actuation
Contact rating	Silver: max 230 VAC 4 A / 24 VDC 4 A Gold: minimum 1mA @ 6VDC
Utilization category	Silver: AC-15 230V 1A, DC-13 110V 0,5A Gold: AC-12 230V 250mA, DC-12 110V 250mA
Ambient temperature $T_{amb}$	-50°C up to +70°C (with signalling lamp "S" -35°C up to 50°C)
Max. temperature on surface of housing	80°C
Rope force for actuation	> 35 N
Cable entry	2 x M25, ex works closed by IP67-plugs
Cable cross section	min 1,5mm <sup>2</sup>
Enclosure	LHP... Fibre glass reinforced polyester (BMC) LHM... Cast iron
Protection	IP 67
Colour of enclosure	LHP... black, LHM... yellow, optional other
Weight	2.0 kg (LHP...), 6 kg (LHM...)
Mounting	position free, 2 slotted holes for M10-screws

Basic values for the calculation of SIL or PL according EN13849 and IEC61508:

B10 80000 switching cycles

Share of dangerous faults 0,2