LIMIT SWITCHES LK-10, LK-20

DATA SHEET

no: KK-ŁK_LK-10_LK-20

Limit switches are controlled with an appropriate drive element. The position and speed of movement corresponding to mobile contacts, and the time needed to switch them over, depend on the position and speed of travel corresponding to the drive element that acts on the pusher with an appropriate force. This way, appropriate contacts of the switch are either closed or opened. The arrangement of mobile contacts is not stable, which means that they automatically return to their home position, once the force acting on the pusher disappears. Limit switches are intended to be used in automated drive systems and control, monitoring, and measuring circuits that operate under alternating and direct currents. Switches of the LK-10 and LK-20 series have a metal enclosure that contains NO and NC mobile contacts and the body of the switch – the enclosure provides IP 56 protection class for contacts.

TECHNICAL DATA:

Parameter	Value
Rated insulation voltage U_i	500V
Rated switching voltage U_e	500V AC 220V DC
Rated continuous current I_U	16A
Rated switched currents I_e	AC15 – 4A DC13 – 0,5A
Rated impulse withstand voltage U_{imp}	6 kV
Type and the highest rating of a safety device that protects against the effects of short-circuit current impact	fuse-element gG16A
Mechanical life (in cycles)	$3x10^6$
Electrical endurance (switching)	AC15 U_e=500V I_e=4A $7x10^5$ DC13 U_e=220V I_e=0,5A $1x10^5$
Limited withstand current	1000 A
Force required to switch over [N]	max 23±5N
Rated frequency of switching per hour	300 switches/h
Cross-sections of conductors	Single-wire 1,5 ...4 mm^2 Multi-wire 1,0 ...2,5 mm^2
Speed of the drive element	0,1 to 5 m/s
Ambient temperature	-25 to +40 °C
Protection class	IP 56
Operation of contacts	effective action

The product conforms to the following standard PN-EN 60947-5-1.

Working conditions

Design	Relative humidity of air	
	[%]	Temperature [K]
Moderate climate (standard)	50	+313
	90	+293
Tropical climate (special W3)	50-70	+313
	100	+303

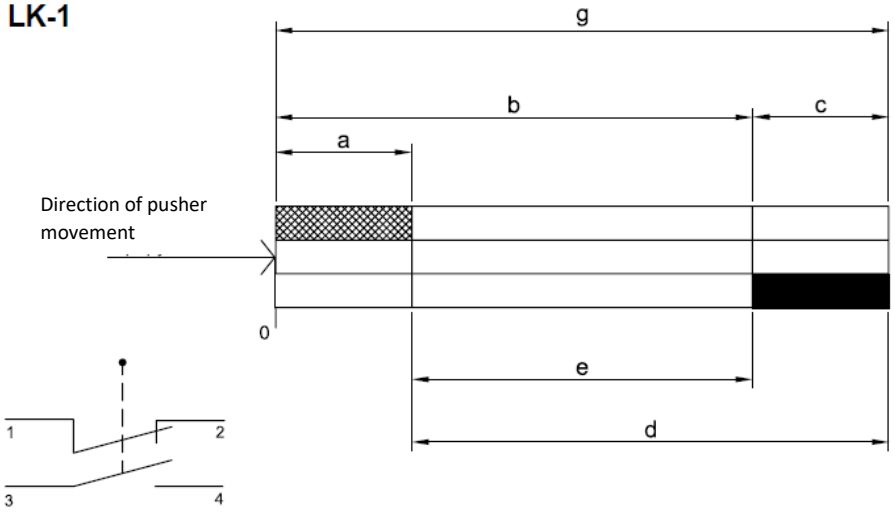
TYPES OF LIMIT SWITCHES LK-10, LK-20

Type of switch	Description	Climatic designs	Catalogue no.	Weight (g)
NC/NO LIMIT SWITCH[1] WITH A PUSHER IN A METAL ENCLOSURE				
	LK-10	standard	59-351012	210
		special	59-351016	
NC/NO LIMIT SWITCH[1] WITH A PUSHER AND A ROLL IN A METAL ENCLOSURE				
	LK-10R	standard	59-351032	210
		special	59-351036	
NO/NC LIMIT SWITCH[1] WITH A PUSHER IN A METAL ENCLOSURE				
	LK-20	standard	59-351022	210
		special	59-351026	
NO/NC LIMIT SWITCH[1] WITH A PUSHER AND A ROLL IN A METAL ENCLOSURE				
	LK-20R	standard	59-351042	210
		special	59-351046	

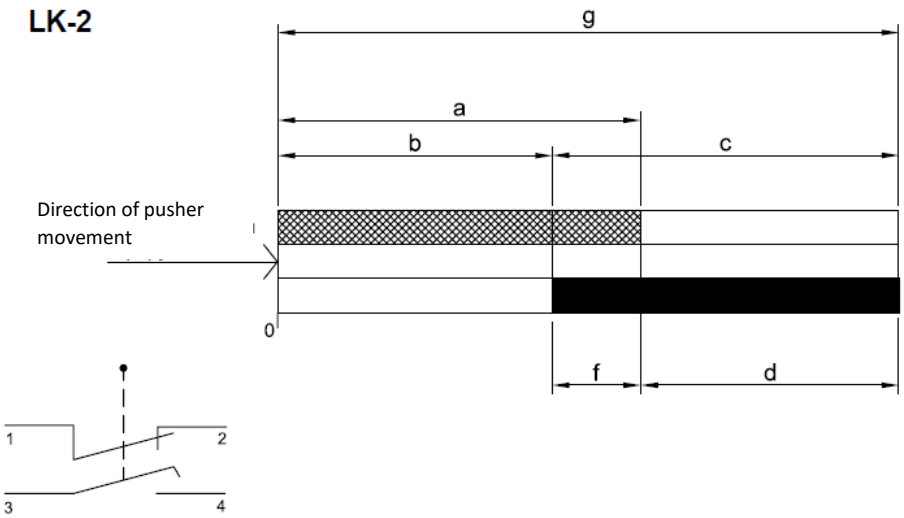
[1] There are contacts that feature a close relationship between the sequences of their switching over, in the function of travel of the drive element. In the case of the NC/NO contact (non-overlay), the NC contact is the first to be opened, when the drive element is in travel. There is an area in which both contacts are open. The NO/NC contact (overlay) operates according to the principle that the first to close is the NO contact, when the drive element is in travel. Both contacts are closed along a certain section of travel of the drive element.

SWITCHING DIAGRAMS

LK-1



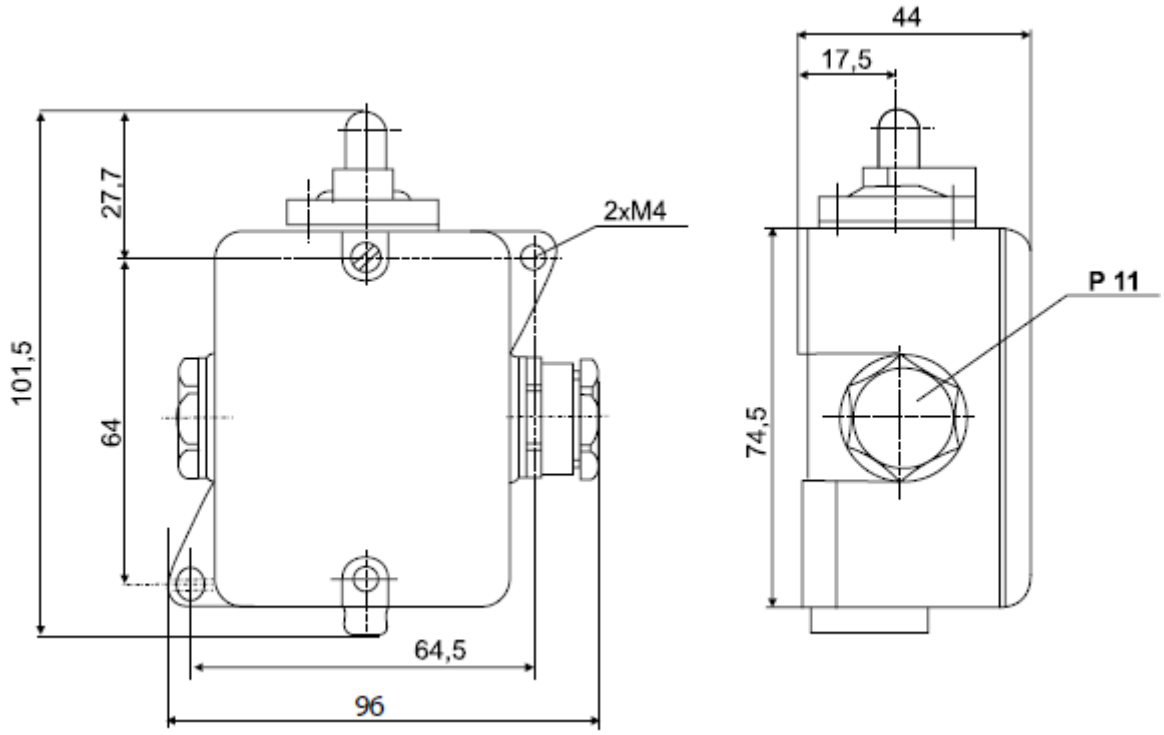
LK-2



a Pre-way of NC contacts
b Travel of pusher till the position of contact of NO contacts
c Pre-way of NO contacts
d Travel of pusher from the position of disconnecting NC contacts till the position of pusher reaching operational level
e Travel of pusher when the NO and NC contacts are in open position
f Travel of pusher when the NO and NC contacts are in close position
g Operational level of the pusher

DIMENSIONS

LK-10, LK-20



LK-10R, LK-20R