

MINIATURE LIMIT SWITCHES 83 135, 83 140

DATA SHEET

no: KK- ŁK_83135



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.

Single-module switches of the 83 135 series have no enclosures, but there are NO and NC mobile contacts installed inside their plastic bodies. Switches of the 83 135 series have M4 screw connection clamps with serrated lock washers (WW4).






TECHNICAL DATA:



Parameter	Value	
	Without enclosure (83 135)	In enclosure (83 758 02)
Rated insulation voltage U_i	400V	
Rated switching voltage U_e/I_e AC15 [V/A] DC13 [V/A]	400V/6A (50 Hz) 220V/0,25A For 83 140 AC1-10A 0,6A	
Rated continuous current I_u	16A	
Type of fuse-element	Bi-Wts 16 A	
Rated limited withstand current	1000 A	
Mechanical life: Switches without an additional drive Switches with a telescopic pusher Switches with a lever-based drive Switches with an installed driving head, controlled with a telescopic pusher Switches with an installed revolving-driving head	5x10 ⁶ 3x10 ⁶ 4x10 ⁶	3x10 ⁶ 2x10 ⁶
Electrical endurance: AC15 DC13	0,25 x 10 ⁶ 0,2 x 10 ⁶ For 83 140 AC1-3,0x10 ⁵ 0,3x10 ⁵	0,1 x 10 ⁶
Rated frequency of switching [switches/h]	3600 60 t/h for 83 140	1200
Speed of the drive element [m/s]	17x10 ⁻⁶ ...1	10 ⁻⁴ ...1 pusher 10 ⁻³ ...1 revolving lever

Cross-section of single-wire terminals [mm]	1,0...2,5	1,0...2,5
Ambient temperature	-25...+40 °C	
Protection class - of the body - of terminals	IP40 IP00	IP65 IP65
Max force required to switch over	4,5 1,3 for 83 140	20 or 0,2Nm for revolving heads
Type of gland		Dp 13,5
Operation of contacts	snap action	


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

TYPES OF MINIATURE LIMIT SWITCHES 83 135



	Designation	Description	Catalogue no.	Weight (g)
	83 140	Basic miniature switch with two current circuits and a double-break change-over contact of the same polarity; with four connection clamps controlled with a plastic pusher (it has two stable positions).	59-794012	29
	83 135	Basic miniature switch with two current circuits and a double-break change-over contact of the same polarity, with four connection clamps controlled with a plastic pusher.	59-791012	28
	83 135 1	Miniature switch with an additional drive (telescopic pusher), with two current circuits and a double-break change-over contact of the same polarity, with four connection clamps.	59-782022	64
	83 135 58A	Miniature switch with an additional drive (an angled lever), with two current circuits and a double-break change-over contact of the same polarity, with four connection clamps.	59-781012	33
	83 135 58E	Miniature switch with an additional drive (an angled lever and a roll in the axis of the lever), with two current circuits and a double-break change-over contact of the same polarity, with four connection clamps.	59-781032	35

	83 135 58F	Miniature switch with an additional drive (a straight lever and a roll in the axis of the lever), with two current circuits and a doublebreak change-over contact of the same polarity, with four connection clamps.	59-781052	31
	83 135 58G	Miniature switch with an additional drive (an angled lever and a roll in the axis of the lever), with two current circuits and a double-break change-over contact of the same polarity, with four connection clamps.	59-781072	35

TYPES OF LIMIT SWITCHES 83 758 02


	Designation	Description	Catalogue no.	Weight (g)
	83 758 02	Body of a limit switch, equipped with 83 135 miniature switch	56-503012	330

TYPES OF HEADS FOR LIMIT SWITCHES 83 758 02

	Designation	Description	Catalogue no.	Weight (g)
	81050 02	Driving head with a return force, controlled with a vertical pusher	56-519032	170
	81050 12	Driving head with a return force, controlled with a vertical pusher with a roll	56-519042	180

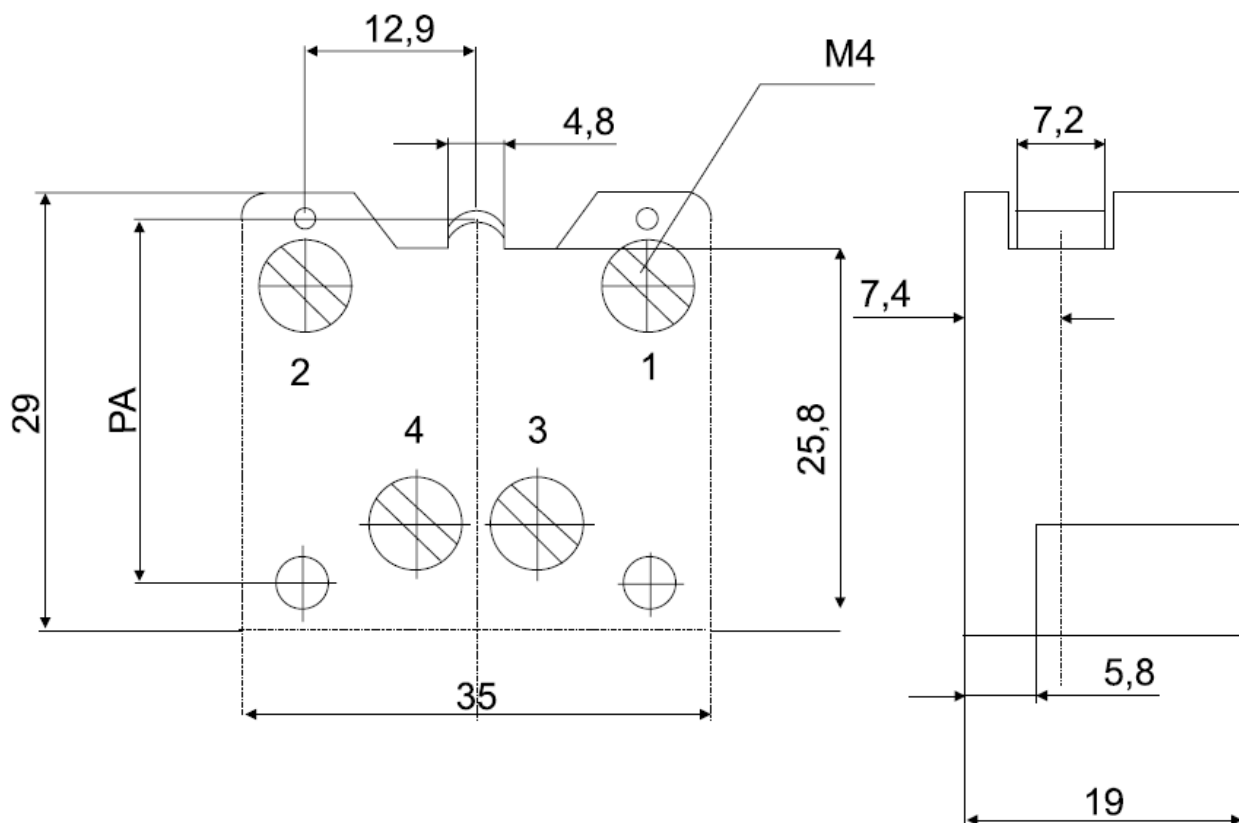
	81050 22	Driving head with a return force, controlled with a side pusher	56-519012	220
	81050 32	Driving head with a return force, controlled with a side pusher and a horizontal roll	56-519022	240
	81050 42	Driving head with a return force, controlled with a side pusher and a vertical roll	56-519092	230
	81050 52	Revolving head with a spindle, with a return force, and a left-sided direction of operation	56-519052	230
	81050 62	Revolving head with a spindle, with a return force, and a right-sided direction of operation	56-519062	230
	81050 72	Revolving head with a spindle, with a return force, and a left- and right-sided direction of operation	56-519072	230
	81050 82	Revolving head with a spindle, without a return force; right-side: actuation, left-side: disconnection	56-519082	230

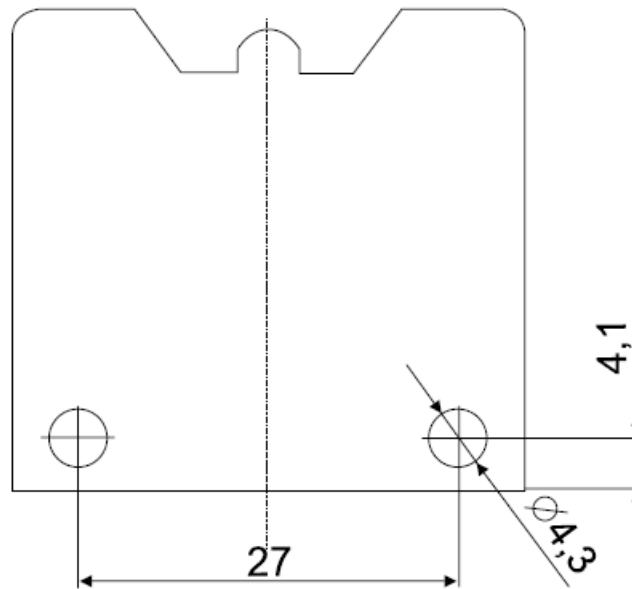
TYPES OF LEVERS FOR LIMIT SWITCHES 83 758 02

	Designation	Description	Catalogue no.	Weight (g)
	79 210 371 2	Straight lever with a roll	56-514352	27

	79 210 372 2	Straight lever with a roll, adjustable length	56-514312	48
	79 210 373 2	Two-arm lever with rolls	56-514332	49
	79 210 375 2	Lever with a spring	56-514282	41
	79 210 393 2	Straight lever (bar type)	56-514292	33

DIMENSIONS

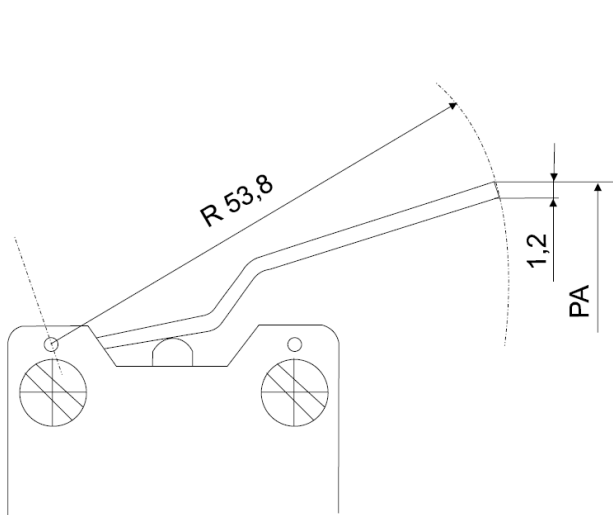




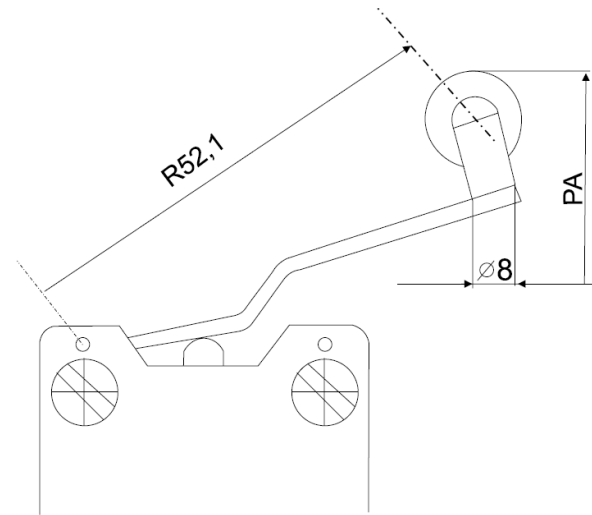
Permissible driving force	Force required to switch back	Travel after switching over	Travel needed to switch back
FFC [N]	FR [N]	CRA [mm]	CD [mm]
max. 20	min. 1	min. 0,8	0,6 ^{±0,25}

83 135

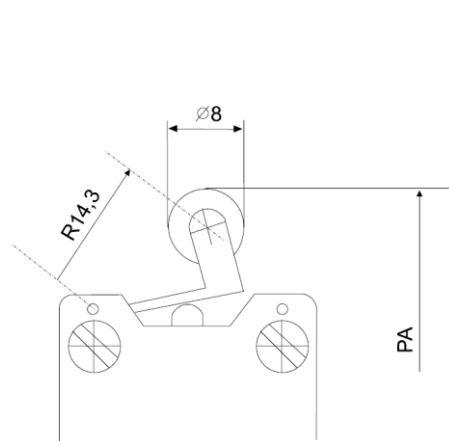
Type of switch	Active length of lever	Position of operation	Travel to switch over	Force needed to activate
	[mm]	PA [mm]	CA [mm]	FC [N]
83 135	-	22,8 ^{±0,3}	max. 1,4	max. 4,5
83 135 1	-	-	2 ^{±1}	max. 14
83 135 58A	53,8	30,1 ^{±1,1}	max. 7,2	max. 1,1
83 135 58E	52,1	42,5 ^{±0,7}	max 6,8	max. 1,15
83 135 58F	14,3	32,5 ^{±0,2}	max. 1,7	max. 4,5
83 135 58G	32,6	17,1 ^{±0,6}	max 4,1	max. 1,9



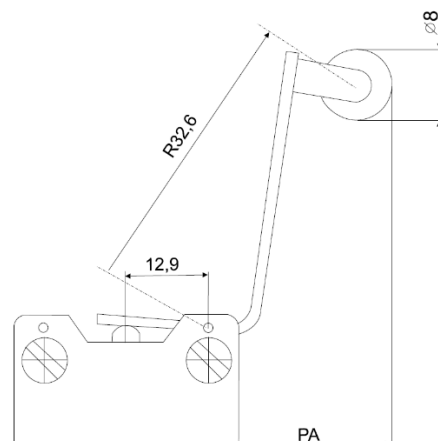
83 135 58A



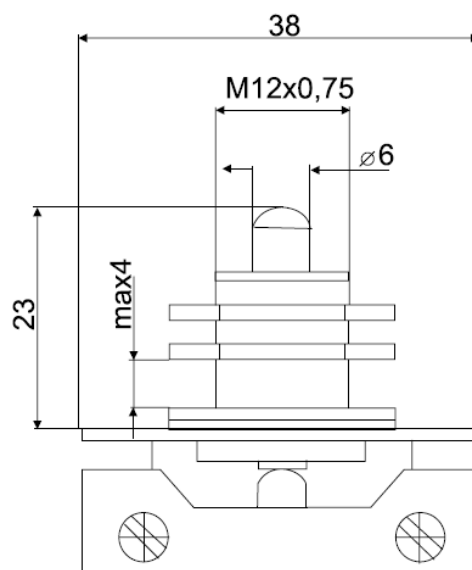
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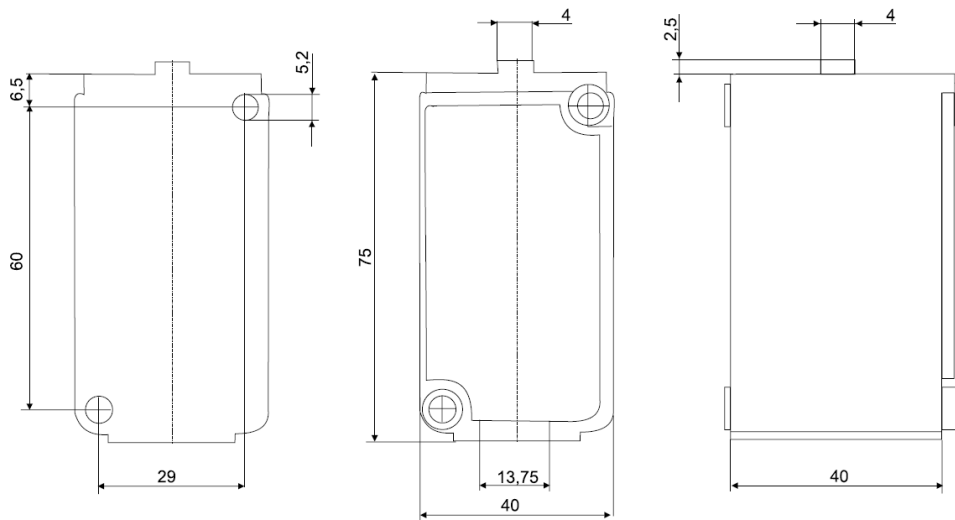
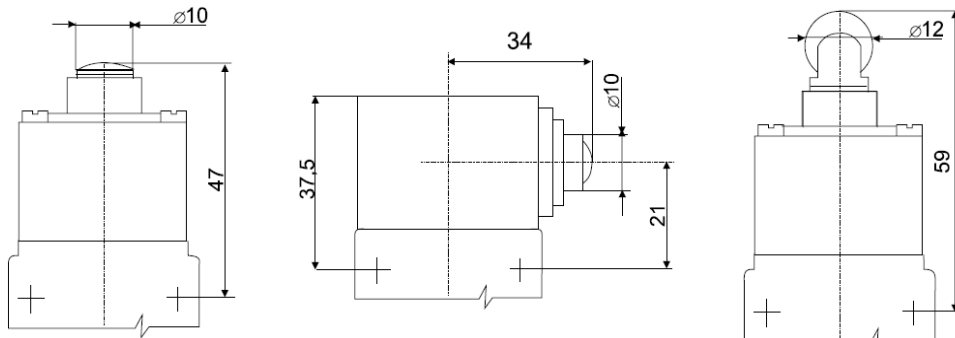
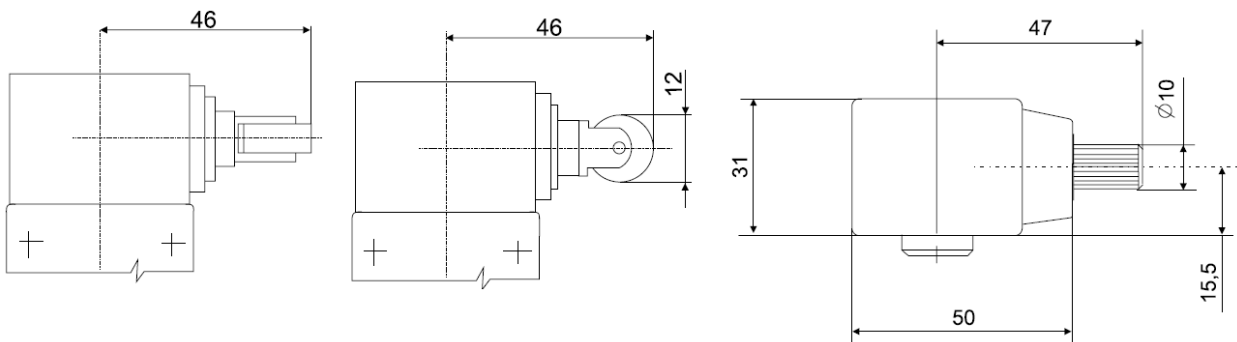
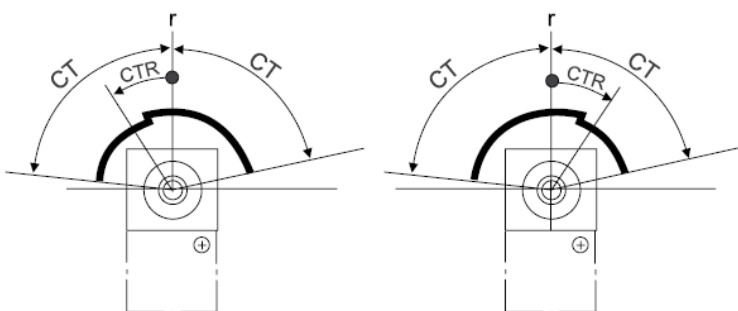
83 135 58F



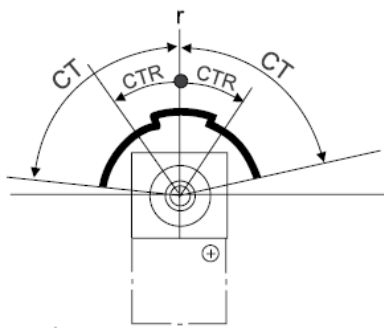
83 135 58G



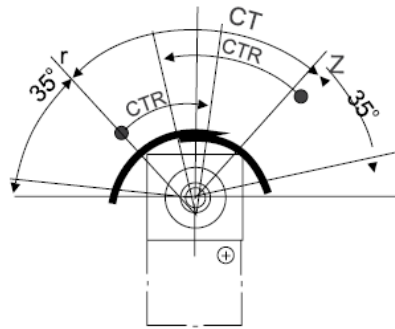
83 135 1


83 758 52

81 050 02
81050 22
81 050 12

81 050 32
81050 42
81 050 52-82


- CT** - total travel
- CTR** - operational travel
- r** - NC contacts
- z** - NO contacts

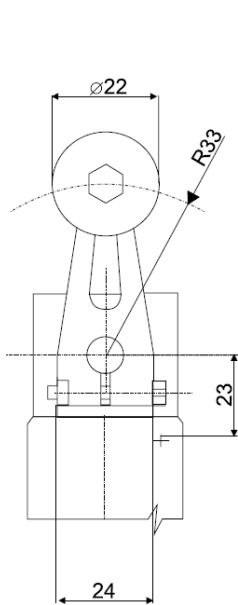


81 050 52

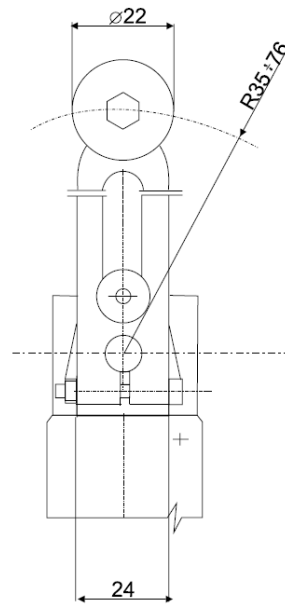
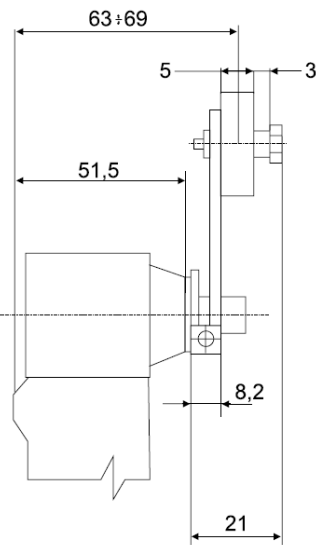


81050 62

- CT** - total travel
- CTR** - operational travel
- r** - NC contacts
- z** - NO contacts



79 210 371.2



79 210 372.2

