Overtravel limit switches
For power circuits, type XF9

Functions
The overtravel limit switches for power circuit switching are specifically designed to ensure the safety of hoisting equipment.

They directly break the power supply to the hoist motor if the load being handled accidentally exceeds the operating limits of the equipment.

Their mechanism is designed to ensure breakage of the power supply in the event of a malfunction and therefore, an overtravel limit switch cannot be used in place of an end of travel limit switch. It must only be used as a back-up device in the event of failure of the latter, or any other component forming part of an automated control circuit monitoring for excessive overtravel.

Description
Overtravel limit switches XF9-D●●● are housed in an aluminium alloy case and are fitted with the head of an LC1-D contactor.

Overtravel limit switches XF9-F●●● are housed in a sheet steel enclosure and are fitted with the head of an LC1-F contactor.

Operation
Mounting and operating precautions
It is recommended that the overtravel limit switch be connected as near as possible to the motor, in order to minimise the risk of shunting.

The switch must be positioned in such a manner so as to avoid any damage in the event of the load exceeding the end of travel limits.

In order to ensure positive operation, the operating lever of the overtravel limit switch must be actuated directly by the moving part being monitored. It is essential that the use of any flexible or deformable intermediate actuators be avoided.

Manual reset switches - resetting after tripping
- Before resetting the overtravel limit switch ensure that the cause of its tripping is located and rectified.
- Rotate and hold lever up against end stop.
- Simultaneously press the reset button (XF9-D), using accessory included with switch, or operate the reset lever (XF9-F) and turn the control station switch away from the trip position.
- Rotate lever back to its initial position.

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Environment

Overtravel limit switch type				XF9 D251	XF9 D651	XF9 F1151 XF9 F1152	XF9 F1851 XF9 F1852	XF9 F2651 XF9 F2652
Conformity to standards				IEC 158-1, NF C 63-110, VDE 0660, IEC 947-1, IEC 947-4				
Product certification	3-phase			CSA				
				20 HP 40 A, 600 V	20 HP 80 A, 600 V	100 HP 175 A, 600 V	150 HP40 A, 200 A, 600 V	200 HP 428 A, 600 V
	Single-phase, 2-pole			3 HP 40 A, 230 V	10 HP 80 A, 230 V	–	–	–
Protective treatment	Standard version			"TC"				
	Special version			"TH" on request				
Ambient air temperature	For storage		**°C**	- 40…+ 70				
	For operation		**°C**	- 25…+ 70				
Degree of protection	Conforming to IEC/EN 60529			IP 54		IP 43		
Housing				Aluminium alloy case		Sheet steel enclosure		
Cable entry				2 tapped entries for n° 21 cable gland	3 tapped entries for n° 29 cable gland	2 entries incorporating n° 36 plastic cable gland		

Contact block characteristics

Number of poles				4		3		
Rated operational current (Ie)	For 2-pole scheme		**A**	50	130	–	–	–
	For 3-pole scheme on AC-3		**A**	25	65	115	185	265
Conventional thermal current (Ithe) at θ ≤ 40 °C	For 2-pole scheme		**A**	80	160	–	–	–
	For 3-pole scheme		**A**	40	80	200	275	350
Rated insulation voltage (Ui)	Conforming to IEC 158-1, IEC 947-4, VDE 0110 Group C		**V**	500		660		
	Conforming to CSA 22-2 n° 14		**V**	600				
Rated breaking capacity (I rms)	Conforming to IEC 158-1 For 2-pole scheme	500 V	**A**	400	1000	1100	1600	2200
		660 V	**A**	180	630	900	1200	1750
Connection Min./max. cable c.s.a.	Flexible wiring, without cable end	1 conductor	**mm²**	1.5/10	2.5/25	–	–	–
		2 conductors	**mm²**	1.5/6	2.5/16	–	–	–
	Flexible wiring, with cable end	1 conductor	**mm²**	1/6	2.5/16	–	–	–
		2 conductors	**mm²**	1/4	2.5/6	–	–	–
	Solid wiring, without cable end	1 conductor	**mm²**	1.5/6	2.5/25	–	–	–
		2 conductors	**mm²**	1.5/6	4/16	–	–	–
	Cable	1 conductor	**mm²**	–	–	95	150	240
		2 conductors	**mm²**	–	–	95	150	240

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Overtravel limit switches
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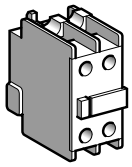
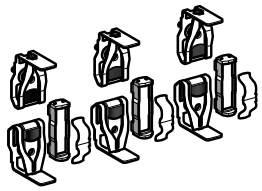
XF9 D651

XF9 F●●●2



LA1 DN11



LA5 FG431

References

Switches without auxiliary contact block

Description	Rated operational current	Conventional thermal current	Disconnection	Reference	Weight
	A	A			kg
With manual latching and resetting restricted by a padlockable device Snap action opening mechanism Maximum travel: 75° in each direction	25 or 50	40 or 80	3-pole or 4-pole 2-pole	**XF9 D251**	2.200
	65 or 130	80 or 160	3-pole or 4-pole 2-pole	**XF9 D651**	5.000
With manual latching and resetting Horizontal or vertical actuation Snap action opening mechanism	115	200	3-pole	**XF9 F1151**	25.500
	185	275	3-pole	**XF9 F1851**	26.000
	265	350	3-pole	**XF9 F2651**	27.500
With counterweights and automatic resetting Horizontal or vertical actuation Snap action opening mechanism Minimum actuation speed: 2.5m/s	115	200	3-pole	**XF9 F1152**	28.500
	185	275	3-pole	**XF9 F1852**	29.000
	265	350	3-pole	**XF9 F2652**	32.500

Auxiliary contact blocks

Description	For use with switches	Reference	Weight kg
N/C + N/O instantaneous	XF9-D●●● and XF9-F●●●	**LA1 DN11**	0.030

Replacement parts

Description	For use with switches	Reference	Weight kg
Contact set comprising per pole: - 2 fixed contacts, - 1 moving contact, - 2 deflectors, - 1 backplate, clamping screw and washers	XF9 F115●	**LA5 FF431**	0.270
	XF9 F185●	**LA5 FG431**	0.350
	XF9 F265●	**LA5 FH431**	0.660
Arc chambers	XF9 F115●	**LA5 11550**	0.490
	XF9 F185●	**LA5 18550**	0.670
	XF9 F265●	**LA5 26550**	0.920

Contacts closed
Contacts open

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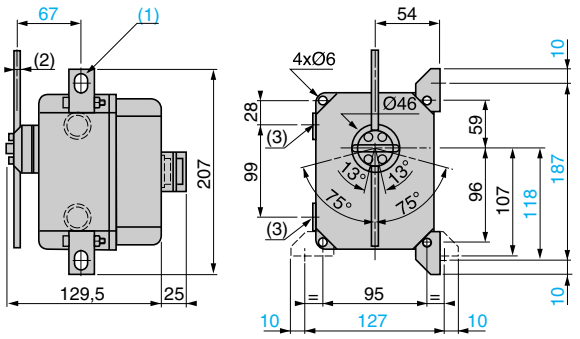
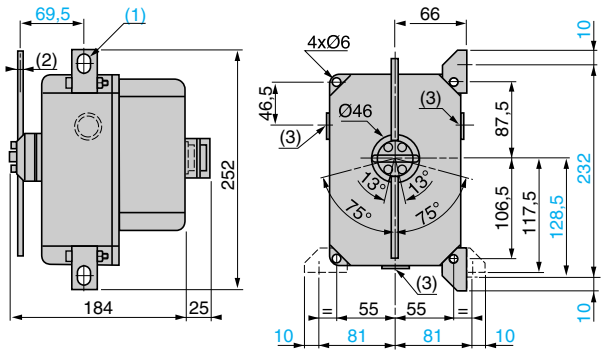
Dimensions

XF9 D251



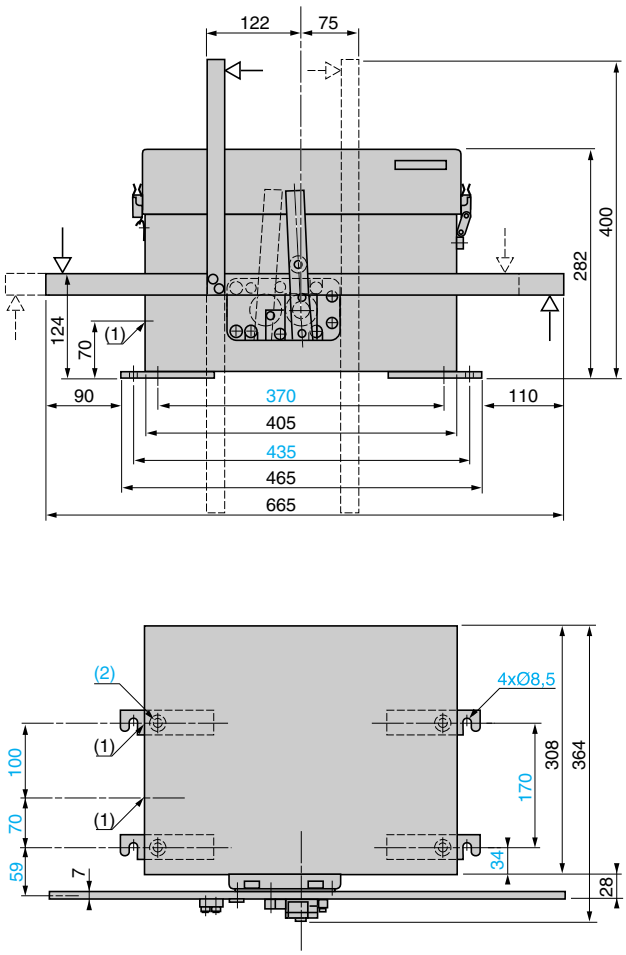
(1) 2 elongated holes Ø 6 x 8.5 (removable fixing lugs).
(2) 6 mm square rod, length 200 (can be mounted at 90°).
(3) 2 tapped entries for n° 21 cable gland.
13° = contact actuation, 75° = maximum travel.

XF9 D651



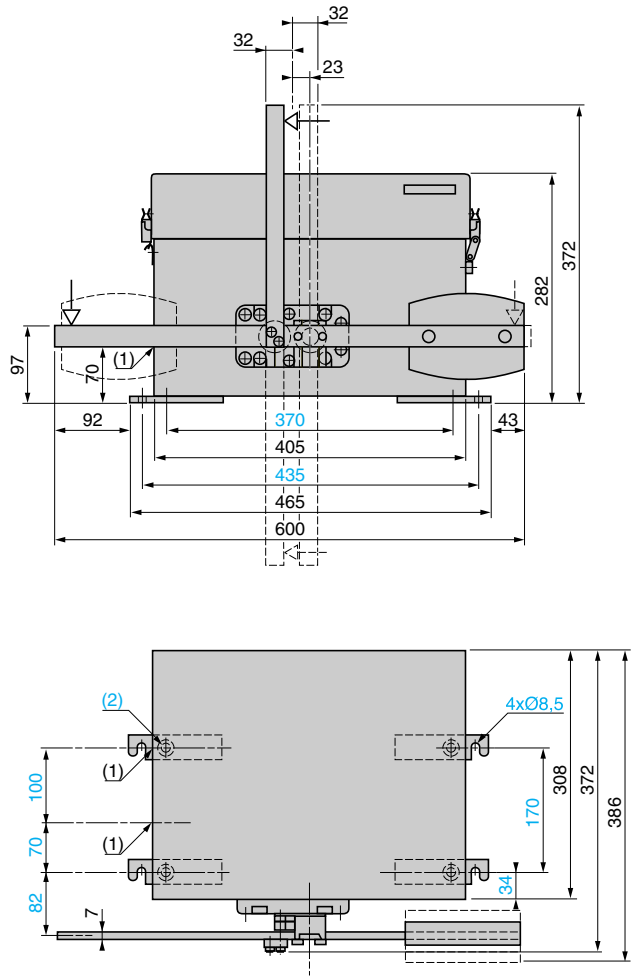
(1) 2 elongated holes Ø 6 x 8.5 (removable fixing lugs).
(2) 6 mm square rod, length 200 (can be mounted at 90°).
(3) 3 plain entries for n° 29 cable gland.
13° = contact actuation, 75° = maximum travel.

XF9 F●●●1
Manual resetting



(1) 2 entries incorporating n° 36 plastic cable gland.
(2) 4 holes Ø 8.5 to be drilled by user (for attaching fixing lugs to enclosure base).

XF9 F●●●2
Automatic resetting



(1) 2 entries incorporating n° 36 plastic cable gland.
(2) 4 holes Ø 8.5 to be drilled by user (for attaching fixing lugs to enclosure base).

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