DATASHEET - T0-3-15680/I1/SVB



Main switch, T0, 20 A, surface mounting, 3 contact unit(s), 3 pole + N, 1 N/ 0, 1 N/C, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position



Part no. T0-3-15680/I1/SVB

Catalog No. 207153

EL-Nummer 0001417156

(Norway)

(Norway)			
Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			TO
Stop Function			Emergency switching off function
			With red rotary handle and yellow locking ring
Number of poles			3 pole + N
Auxiliary contacts			
r		N/0	1
7		N/C	1
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			IP65
			totally insulated
Design			surface mounting
Contact sequence			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Switching angle		0	90
Design number			15680
Function			OFF O
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	5.5
Rated uninterrupted current	I _u	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
Number of contact units		contact unit(s)	3

Technical data General

Standards	IEC/EN 60947, VDE 0660, IEC/EN 60204
	Switch-disconnector according to IEC/EN 60947-3

Climate contrology Climate	Oliveration and Company			D ht
Demonstrating captagen/primition (egene paragen/primition (egene par	Cillians proofing			
Owner bidge schopny bulbanch degree Ump V AC 00 Flanked implacte whetened voltage Ump V AC 00 Mountage position See V AC 10 Contracts** V AC A required Mechanical variables V V A point N Authority or protect V V 300 in N Authority or protect V V V AC Authority or protection of variables V V V AC Best contracts clear clear form V V V AC Best contract variation values V V V AC Readed uninterropated current () V V V AC Ask 40 in DF V V V AC Ask 9 in DF V V V A	Ambient temperature			
Renel impulse withstands violategon Mentalsurial sheck resistance Mountaing position Charlace Renel and position Auralian contacts Renel or position and violategon Auralian contacts Renel or position and violategon Auralian contacts Renel or position and violategon R	Enclosed		°C	-25 - +40
Mounting proteins	Overvoltage category/pollution degree			III/3
Montania posisism	Rated impulse withstand voltage	U _{imp}	V AC	6000
Mechanical vortido Section Mechanical vortido Section Mechanical vortido Section S	Mechanical shock resistance		g	15
Mechanical vortido Section Mechanical vortido Section Mechanical vortido Section S	Mounting position			As required
Number of poles				
Autoliany contacts	Mechanical variables			
Bile trick	Number of poles			3 pole + N
Retrical characteristics	Auxiliary contacts			
Read operational voltage			N/0	1
Related operational voltage Related uninstrurquoted current 1 Note on rated uninstrurquoted current 1 AB 20			N/C	1
Nate of uninterrupted current	Electrical characteristics			
Related uninterrupted current	Rated operational voltage	U _e	V AC	690
Note on reted uninterrupted carrent l _u Load rating with intermittent operation, class 12 AB 25 % 10 F AB 40 % 10 F AB 40 % 10 F AB 40 % 10 F AB 60 % 10 F Short-circuit rating Fuse A 96/gL Note on rated abort-time withstand current (1 s current) A 100 A	Rated uninterrupted current		Α	20
Load rating with intermittent operation, class 12 x l _e x l _e 2 AB 26 % DF x l _e x l _e 1.5 AB 60 % DF x l _e x l _e 1.3 Short-circuit rating x l _e x l _e 2.3 Fuse A gG/gL 20 Read of short-time withstand current Icw l _e x l _e A 2 20 Note on rated short-time withstand current Icw l _e x l _e A 3 20 Read of short-time withstand current Icw l _e x l _e A 3 20 Switching capacity L _e x l _e A 3 10 Switching capacity x l _e A 3 10 220 V A 10 10 400/415 V A 10 10 500 V A 2 A 2 805 U A 2 A 3 816 solution to EN 8140 V AC 40 9 Evidenth back loss per centect at l _e X 2 Y AC 40 Current heat loss per centect at l _e X 2 Y AC 40 Litespan, mechanical Qperations Y 2 20 0 Maximum operating frequency Qperations Y 2 20 0 A 230		u		
AB 25 % DF				
AB 40 % DF			1	
AB 80 % DF				
Note or rated short-time withstand current (1 s current)	AB 40 % DF		x l _e	1.6
Fuse A g6/gl 20 Rated short-time withstand current (I's current) I _{cov} A _{TM} 32 Note on rated short-time withstand current (Iw I _{cov} A _{TM} Current for a time of 1 second Rated conditional short-circuit current I _{cov} A _T Current for a time of 1 second Switching capacity V A 10 cos g rated making capacity as per IEC 60947-3 A 10 230 V A A 10 400415 V A B 80 500 V A B 80 850 V A B 80 Sale isolation to EN 81140 V 44 44 Current heat loss per contact at I _B V A 40 Current heat loss per auxiliary circuit at I _B (AC-15/230 V) Co 6 44 Maximum operating frequency Operations/ 1 40 4 AC-3 P KW 5 4 ABsign, motor load switch P KW 5 5	AB 60 % DF		x I _e	1.3
Rated short-time withstand current Icw Icw Arms 320 Note on rated short-time withstand current Icw Ic Icm Current for a time of 1 second Rated conditional short-circuit current Ic Icm Icm Current for a time of 1 second Switching capacity Second Conditional short-circuit current Second Conditional short-circuit current Icm A 130 Rated broaking capacity as per IEC 60947-3 A 100 Icm Conditional Short-circuit Current shall provided the Conditional Short-circuit and C	Short-circuit rating			
Note on rated short-time withstand current low Iq KA 6 Rated conditional short-circuit current Iq KA 6 Switching capacity cos φ rated making capacity as par IEC 60947-3 A 100 230 V 400415 V A 100 400415 V A 110 500 V A 80 680 V B A 80 Safa isolation to EN 61140 VAC 40 40 between the contacts VAC 40 40 Current heat loss per contact at I ₀ VAC 40 40 Current heat loss per auxiliary circuit at I ₀ (AC-15/230 V) C 0 5 Lifespan, mechanical Operations x 10 ⁶ >0.4 Maximum operating frequency Operations x 10 ⁶ >0.4 AC-3 X XW 5 AC-3 XW 5 XW AC-3 XW 5 AC-3 XW 5 A 00 V	Fuse		A gG/gL	20
Rated conditional short-circuit current Iq IkA Exercises Iq IkA	Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	320
Switching capacity	Note on rated short-time withstand current lcw			Current for a time of 1 second
ccs φ rated making capacity as per IEC 60947-3 A 30 Rated breaking capacity cos φ to IEC 60947-3 A 100 400/415 V A 110 500 V A A 100 690 V A 60 Safe isolation to EN 61140 V 400 400 Current heat loss per contact at I _e VAC 440 400 Current heat loss per auxiliary circuit at I _e (AC-15/230 V) C0 0.6 400 Lifespan, mechanical Operations/N YAC 400 Maximum operating frequency Operations/N 200 200 AC-3 8ating, motor load switch P kW 3 2 230 V Star-delta P kW 5.5 4 400 V Star-delta P kW 5.5 4 40 V Star-delta P kW 5.5 5 500 V Star-delta P kW 5.5 6 80 V Star-delta P kW 5.5 6 80 V Star-delta P kW 5.5	Rated conditional short-circuit current	Iq	kA	6
Rated breaking capacity cos φ to IEC 60947-3 A 100 230 V 400/415 V 110 500 V A 80 690 V A 60 Safe isolation to EN 61140 VAC 40 between the contacts VAC 440 Current heat loss per contact at I _θ VAC 40 Current heat loss per auxiliary circuit at I _θ (AC-15/230 V) C0 0.6 Lifespan, mechanical Operations/h x 10 ⁶ > 0.4 Maximum operating frequency Operations/h x 10 ⁶ > 0.4 AC-3 8ating, motor load switch P kW 3 220 V 230 V P kW 5.5 400 V 15 V - delta P kW 5.5 400 V 15 V - delta P kW 5.5 500 V Star-delta P kW 5.5 690 V Star-delta P kW 5.5 690 V Star-delta P kW 5.5 690 V Star-delta P kW 5.5	Switching capacity			
230 V			Α	130
A00/415 V	Rated breaking capacity $\cos \phi$ to IEC 60947-3		A	
Solition to EN 61140	230 V		Α	100
A 60	400/415 V		Α	110
Safe isolation to EN 61140 VAC 440 between the contacts VAC 440 Current heat loss per contact at I _e W 0.6 Current heat loss per auxiliary circuit at I _e (AC-15/230 V) CO 0.6 Lifespan, mechanical Operations/h x 10 ⁶ > 0.4 Maximum operating frequency Operations/h 1200 AC-3 Rating, motor load switch P kW 3 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 7.5 500 V Star-delta P kW 7.5 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch I _e A 11.5	500 V		Α	80
between the contacts V AC 440 Current heat loss per contact at I _e W 0.6 Current heat loss per auxiliary circuit at I _e (AC-15/230 V) CO 0.6 Lifespan, mechanical Operations / x 10 ⁶ > 0.4 Maximum operating frequency Operations / h 1200 AC-3 1200 Rating, motor load switch P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 7.5 500 V Star-delta P kW 7.5 690 V Star-delta P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch I _e A 11.5	690 V		Α	60
Current heat loss per contact at I _e W 0.6 Current heat loss per auxiliary circuit at I _e (AC-15/230 V) CO 0.6 Lifespan, mechanical Operations/x x 10 ⁶ > 0.4 Maximum operating frequency Operations/h 1200 AC-3 P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 7.5 690 V P kW 5.5 Rated operational current motor load switch P kW 5.5 Rated operational current motor load switch I _e A 11.5	Safe isolation to EN 61140			
Current heat loss per auxiliary circuit at I _e (AC-15/230 V) V 0.6 Lifespan, mechanical Operations x 10 ⁶ > 0.4 Maximum operating frequency Operations/h 1200 AC-3 Tating, motor load switch P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 5.5 500 V Star-delta P kW 5.5 500 V Star-delta P kW 5.5 690 V Star-delta P kW 5.5 Rated operational current motor load switch P kW 5.5	between the contacts		V AC	440
Current heat loss per auxiliary circuit at I _B (AC-15/230 V) CO 0.6 Lifespan, mechanical Operations x 10 ⁶ > 0.4 Maximum operating frequency Operations/h 1200 AC-3 1200 Rating, motor load switch P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 7.5 690 V P kW 5.5 Rated operational current motor load switch P kW 5.5 Rated operational current motor load switch I _B A 11.5	Current heat loss per contact at I _o		W	0.6
Lifespan, mechanical Operations / Maximum operating frequency Value 1200 AC-3 Rating, motor load switch P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 5.5 500 V P kW 5.5 500 V Star-delta P kW 7.5 690 V Star-delta P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch P kW 5.5 Rated operational current motor load switch I _e A 11.5	, ,		CU	0.6
Maximum operating frequency Operations/h 1200 AC -3		Onerations		
AC- AC-3 Rating, motor load switch P kW 3 220 V 230 V P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 7.5 500 V P kW 5.5 400 V Star-delta P kW 5.5 AND V Star-delta P kW 7.5 AND V Star-delta P kW 4 AND V Star-delta P kW 5.5 Rated operational current motor load switch I B A 11.5			x 10 ⁰	> 0.4
AC-3 Rating, motor load switch P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 5.5 500 V Star-delta P kW 7.5 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch Ie A 11.5		Operations/h		1200
Rating, motor load switch P kW 220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 5.5 500 V Star-delta P kW 4 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch I _e A 11.5				
220 V 230 V P kW 3 230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 5.5 500 V Star-delta P kW 7.5 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch 230 V I _e A 11.5	AC-3			
230 V Star-delta P kW 5.5 400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 5.5 500 V Star-delta P kW 7.5 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch Ie A 11.5	Rating, motor load switch	Р	kW	
400 V 415 V P kW 5.5 400 V Star-delta P kW 7.5 500 V P kW 5.5 500 V Star-delta P kW 7.5 690 V P kW 5.5 Rated operational current motor load switch 230 V le A 11.5	220 V 230 V	Р	kW	3
400 V Star-delta P kW 7.5 500 V P kW 5.5 500 V Star-delta P kW 7.5 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch I _e A 11.5	230 V Star-delta	P	kW	5.5
500 V	400 V 415 V	P	kW	5.5
500 V Star-delta P kW 7.5 690 V P kW 4 690 V Star-delta P kW 5.5 Rated operational current motor load switch Ie A 11.5	400 V Star-delta	P	kW	7.5
690 V 690 V Star-delta P kW 5.5 Rated operational current motor load switch 230 V le A 11.5	500 V	P	kW	5.5
690 V Star-delta P kW 5.5 Rated operational current motor load switch I _e A 11.5	500 V Star-delta	Р	kW	7.5
Rated operational current motor load switch 230 V I _e A 11.5	690 V	P	kW	4
230 V I _e A 11.5	690 V Star-delta	Р	kW	5.5
•	Rated operational current motor load switch			
	230 V	l _e	Α	11.5
zju v star-deita I _a A ZU	230 V star-delta	I _e	A	20
400V 415 V I _e A 11.5				
ig A II.J	T00V T10 V	'e	^	1110

400 V star-delta	I _e	Α	20
500 V	l _e	Α	9
500 V star-delta	l _e	Α	15.6
690 V	I _e	Α	4.9
690 V star-delta	l _e	Α	8.5
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	3
	P P	kW	
400 V 415 V			5.5
500 V	P	kW	7.5
690 V	Р	kW	5.5
Rated operational current motor load switch			
230 V	le	Α	13.3
400 V 415 V	l _e	Α	13.3
500 V	l _e	Α	13.3
690 V	I _e	Α	7.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I _e	Α	10
	-6	V	60
Voltage per contact pair in series DC-21A		V A	uu
	l _e		
Rated operational current	l _e	Α	1
Contacts		Quantity	1
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	l _e	Α	10
Contacts		Quantity	1
48 V			
Rated operational current	I _e	Α	10
Contacts		Quantity	2
60 V			
Rated operational current	l _e	A	10
Contacts	C	Quantity	
120 V		Quantity	
		^	E
Rated operational current	l _e	Α	5
Contacts		Quantity	3
240 V			
Rated operational current	l _e	Α	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	Ie	Α	10
Voltage per contact pair in series		V	32
Control circuit reliability at 24 V DC, 10 mA	Fault	H _F	< 10 ⁻⁵ ,< 1 failure in 100,000 switching operations
	probability		. • • • • • • • • • • • • • • • • • • •
Terminal capacities		2	1 v /1 25)
Solid or stranded		mm ²	1 x (1 - 2,5) 2 x (1 - 2,5)
Flexible with ferrules to DIN 46228		mm ²	1 x (0.75 - 2.5)
			2 x (0.75 - 2.5)
Terminal screw			M3.5
Tightening torque for terminal screw		Nm	1
Technical safety parameters:			
Notes			$\mathrm{B10_{d}}$ values as per EN ISO 13849-1, table C1
Rating data for approved types			
Terminal capacity			
Terminal screw			M3.5
Terminal capacity			M3.5

Tightening torque Ib-in 8.83

Design verification as per IEC/EN 61439

Design vernication as per 1EG/EN 01433			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	20
Heat dissipation per pole, current-dependent	P _{vid}	W	0.6
Equipment heat dissipation, current-dependent	P _{vid}	W	0
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.	4.00	°C	-25
Operating ambient temperature max.		°C	40
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			UV resistance only in connection with protective shield.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

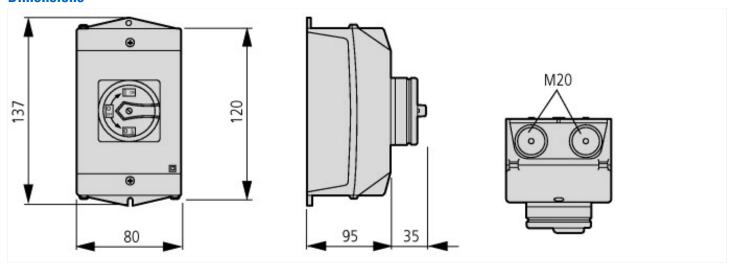
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

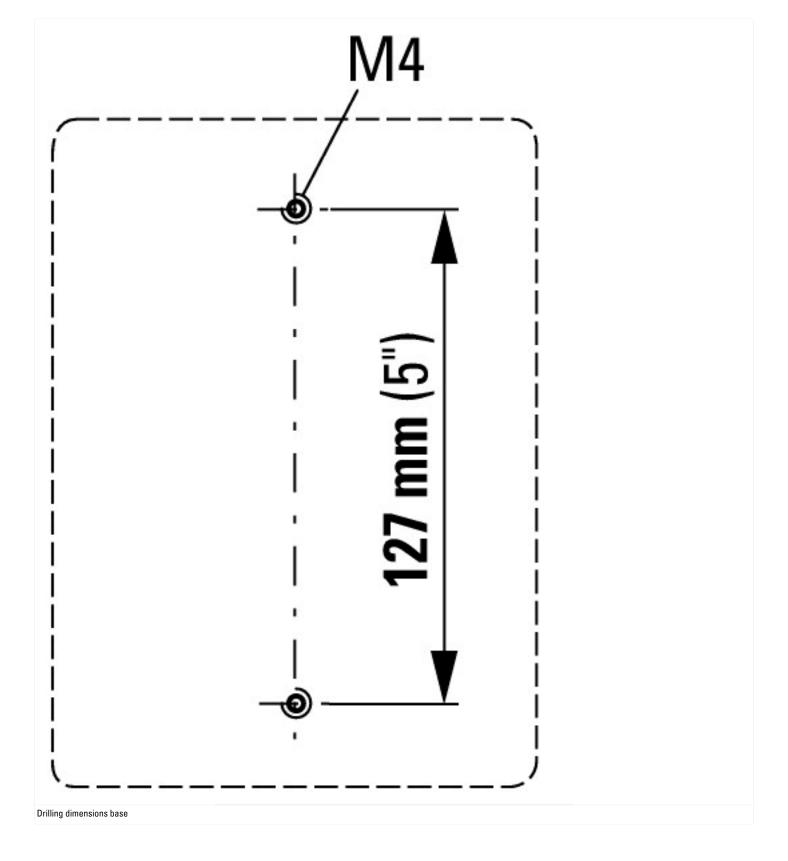
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

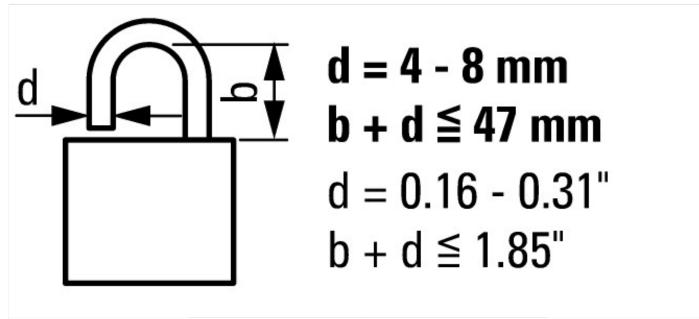
Rated permanent current at AC-23, 400 V Rated permanent current at AC-21, 400 V	A A	13.3
Rated permanent current lu	Α	20
Rated operating voltage	V	690 - 690
Max. rated operation voltage Ue AC	V	690
Number of switches		1
Version as reversing switch		No
Version as emergency stop installation		Yes
Version as safety switch		Yes
Version as maintenance-/service switch		Yes
Version as main switch		Yes

Rated short-time withstand current lcw	k	κA	0.32
Rated operation power at AC-23, 400 V	k	W	5.5
Switching power at 400 V	k	(W	5.5
Conditioned rated short-circuit current Iq	k	κA	6
Number of poles			4
Number of auxiliary contacts as normally closed contact			1
Number of auxiliary contacts as normally open contact			1
Number of auxiliary contacts as change-over contact			0
Motor drive optional			No
Motor drive integrated			No
Voltage release optional			No
Device construction			Complete device in housing
Suitable for ground mounting			Yes
Suitable for front mounting 4-hole			No
Suitable for front mounting centre			No
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Colour control element			Red
Type of control element			Door coupling rotary drive
Interlockable			Yes
Type of electrical connection of main circuit			Screw connection
Degree of protection (IP), front side			IP65
Degree of protection (NEMA)			Other

Dimensions







≦3 padlocks