DATASHEET - T0-3-15680/I1/SVB



Main switch, 3 pole + N + 1 N/O + 1 N/C, 20 A, Emergency-Stop function, 90 $^{\circ}$, Lockable in the 0 (Off) position, surface mounting



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

Catalog No. 207153

EL-Nummer 0001417156 (Norway)

Delivery progran

Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			ТО
Stop Function			Emergency switching off function
			With red rotary handle and yellow locking ring
Number of poles			3 pole + N
Auxiliary contacts			
4		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			- 0.004000000000000000000000000000000000
Switching angle		0	90
Design number			15680
Function			OFF ION
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 $\mathbf{I}_{\mathbf{u}}$			Rated uninterrupted current $\mathbf{I}_{\mathbf{U}}$ is specified for max. cross-section.
Number of contact units		contact unit(s)	3

Technical data General

delicial	
Standards	IEC/EN 60947, VDE 0660, IEC/EN 60204 Switch-disconnector according to IEC/EN 60947-3
Climatic proofing	Damp heat, constant, to IEC 60068-2-78

			Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Enclosed		°C	-25 - +40
Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	U _{imp}	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Contacts			
Mechanical variables			
Number of poles			3 pole + N
Auxiliary contacts			
		N/0	1
		N/C	1
Electrical characteristics			
Rated operational voltage	U _e	V AC	690
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.
Load rating with intermittent operation, class 12			
AB 25 % DF		x I _e	2
AB 40 % DF		x I _e	1.6
AB 60 % DF		x I _e	1.3
Short-circuit rating			
Fuse		A gG/gL	20
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	320
Note on rated short-time withstand current lcw	CVV	11113	Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	6
Switching capacity	•ч		
cos φ rated making capacity as per IEC 60947-3		Α	130
Rated breaking capacity cos φ to IEC 60947-3		Α	
230 V		Α	100
400/415 V		Α	110
500 V		Α	80
690 V		Α	60
Safe isolation to EN 61140			
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
		X IU	
Maximum operating frequency AC	Operations/h		1200
AC-3			
	P	L /\/	
Rating, motor load switch 220 V 230 V	P P	kW	2
220 V 230 V 230 V Star-delta	P	kW	3
230 V Star-oeita 400 V 415 V	P	kW	5.5 5.5
	P	kW	
400 V Star-delta 500 V	P	kW	7.5
500 V Star-delta	P	kW	5.5 7.5
500 V Star-delta	P	kW	
690 V Star-delta	P	kW	5.5
Rated operational current motor load switch		KVV	J.J
230 V		۸	11.5
	le	A	11.5
230 V star-delta	l _e	Α	20
400 V star-delta	I _e	Α	11.5 20

1				
BOS VI star-delta	500 V	l _e	Α	9
BSD V star-detian	500 V star-delta	l _e	Α	15.6
AC-21A Rated operational current swinch 44 By V AC-23A Motor rating AC-23A, 59 - 80 Hz 20 V P WW 210 V By W 55 50D V P WW 55 50D V Rated operational current motor load switch 220 V Rated operational current By A CO-1, Load-break switches L/R = 1 ms Rated operational current Rated operational curr	690 V	l _e	Α	4.9
AC-21A Rated operational current Ad 90 V AC 23A Motor rating AC-23A, 59 - 60 Hz 201	690 V star-delta	l _e	Α	8.5
Rated operational current switch				
Motor rating AC 23A, 50 - 60 Hz				
AC 23A Mattor rating AC 23A, 50 - 80 Hz		ı	Δ	20
Motor rating AC 224, 50 -50 Hz		'e	^	20
		n	LAAZ	
MOV 415 V P				
SOU				
Rated operational current wotor load switch				
Rated operational current motor load switch Ie				
		Р	kW	5.5
A00 V 415 V				
Source S		l _e	Α	13.3
Best	400 V 415 V	l _e	Α	13.3
DC DC-1, Load-break switches L/R = 1 ms Rated operational current I	500 V	l _e	Α	13.3
DC-1, Load-break switches L/R = 1 ms Rated operational current Ie A 10	690 V	l _e	А	7.6
Rated operational current I	DC			
Rated operational current	DC-1, Load-break switches L/R = 1 ms			
Voltage per contact pair in series V 60		l _e	A	10
DC-21A			V	60
Rated operational current Ie				
Contacts DC-23A, motor load switch L/R = 15 ms 24 V Rated operational current Contacts Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Ratel operational current Voltage per contact pair in series Solid or stranded mm² 1 x (1 - 2,5) 2 x (1 - 2,5) 2 x (1 - 2,5)				1
DC-23A, motor load switch L/R = 15 ms 24 V Rated operational current 48 V Rated operational current Ie A 10 Contacts Quantity Rated operational current Ie A 10 Contacts Quantity 2 80 V Rated operational current Ie A 10 Contacts Quantity 3 120 V Rated operational current Ie A 5 Contacts Quantity 3 240 V Rated operational current Ie A 5 Contacts Quantity 3 Contacts Quantity 3 Contacts Quantity 5 Contacts Quantity 5 Contacts Quantity 5 Contacts DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded				
Rated operational current			Quantity	1
Rated operational current				
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Rated operational current Contacts Quantity Rated operational current Ie A 5 Contacts Quantity 3 240 V Rated operational current Ie A 5 Contacts Quantity 3 240 V Rated operational current Ie A 5 Contacts Quantity 5 DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series V 32 Control circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded In A 10 1 × (1 - 2,5) 2 × (1 - 2,5)	Contacts		Quantity	2
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Rated operational current Contacts Quantity Rated operational current Rated operational current Ie A 5 Contacts Quantity 5 DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded A 5 Quantity 5 Quantity 5 Cuntrol circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded Mm² 1 x (1 - 2,5) 2 x (1 - 2,5)	Contacts		Quantity	3
Contacts Quantity Rated operational current Contacts DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Terminal capacities Solid or stranded Quantity 1 A 5 Quantity 6 Quantity 7 Quantity 5 Quantity 6 Quantity 7 Qu	120 V			
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Rated operational current Rated operational current Ie Quantity DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded Ie A 10 V 32 Control circuit reliability at 24 V DC, 10 mA Fault probability mm² 1 x (1 - 2,5) 2 x (1 - 2,5)	Contacts		Quantity	3
Contacts DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Terminal capacities Solid or stranded Control circuits at 24 V DC, 10 mA Terminal capacities Solid or stranded Cuantity 5 Quantity 5 V 32 Control circuit reliability at 24 V DC, 10 mA Fault probability HF C10 -5, < 1 fault in 100000 operations mm² 1 x (1 - 2,5) 2 x (1 - 2,5)	240 V			
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DC-13, Control switches L/R = 50 ms Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded Mm² 1 x (1 - 2,5) 2 x (1 - 2,5)		•		
Rated operational current Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Terminal capacities Solid or stranded Rated operational current I e A 10 V 32 Fault probability HF <10 -5, < 1 fault in 100000 operations mm² 1 x (1 - 2,5) 2 x (1 - 2,5)				-
Voltage per contact pair in series Control circuit reliability at 24 V DC, 10 mA Fault probability Fault probability HF <10 -5, < 1 fault in 100000 operations Terminal capacities Solid or stranded mm² 1 x (1 - 2,5) 2 x (1 - 2,5)		l _a	Δ	10
Control circuit reliability at 24 V DC, 10 mA Fault probability H_F $< 10^{-5}$, < 1 fault in 100000 operations Terminal capacities Solid or stranded mm^2 $1 \times (1 - 2,5)$ $2 \times (1 - 2,5)$		•		
Terminal capacities Solid or stranded mm² 1 x (1 - 2,5) 2 x (1 - 2,5)				
Solid or stranded $ mm^2 \qquad 1 \times (1 - 2,5) \\ 2 \times (1 - 2,5) $	point of Circuit Teriability at 24 V DC, TO IIIA F	probability	ΠF	< 10 °, < 1 fault in 100000 operations
2 x (1 - 2,5)	erminal capacities			
	Solid or stranded		mm^2	1 x (1 - 2,5)
1 I GAIDIG WILLI I GIT LIES LU DITY 40220	layible with farrules to DIN 16229		2	
2 x (0.75 - 2.5)	IGAIDIG WILLI IGITUIGS LU DIIN 40220		mm ²	2 x (0.75 - 2.5)
Terminal screw M3.5	erminal screw			M3.5
Tightening torque for terminal screw Nm 1	Fightening torque for terminal screw		Nm	1
Technical safety parameters:				
Notes B10 _d values as per EN ISO 13849-1, table C1	Notes			B10 _d values as per EN ISO 13849-1, table C1

Rating data for approved types

Terminal capacity		
Terminal screw		M3.5
Tightening torque	lb-in	8.83

Design verification as per IEC/EN 61439

Design verincation as per ille/liv 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

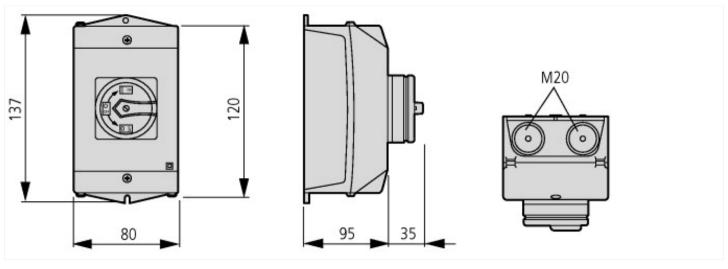
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

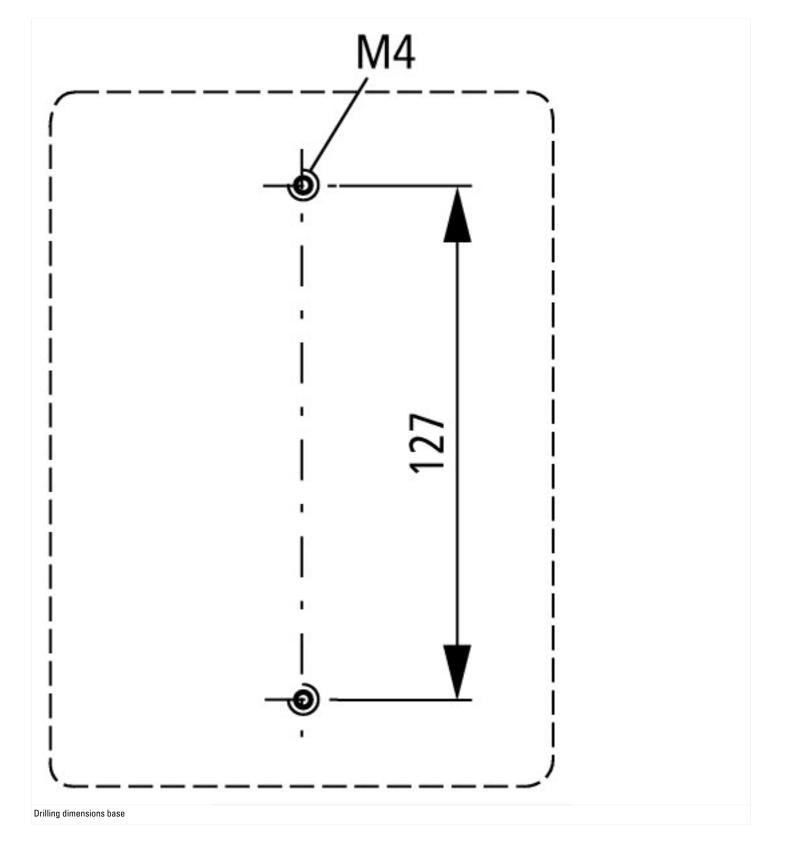
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

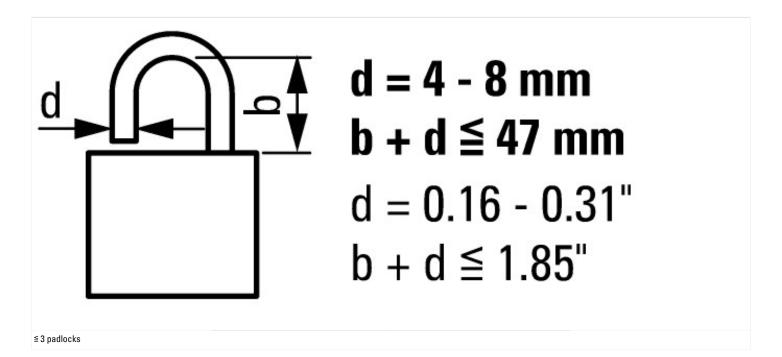
[AKF000013])		
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		Yes
Version as emergency stop installation		Yes
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	20

Rated permanent current at AC-23, 400 V	Α	13.3
Rated permanent current at AC-21, 400 V	Α	20
Rated operation power at AC-3, 400 V	kW	5.5
Rated short-time withstand current lcw	kA	0.32
Rated operation power at AC-23, 400 V	kW	5.5
Switching power at 400 V	kW	5.5
Conditioned rated short-circuit current Iq	kA	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







Assets (links)

Declaration of CE Conformity

00003075

Instruction Leaflets

IL03801007Z2018_05