

ON-OFF switches, 3 pole, 20 A, Cylinder lock SVA, front plate 0-1, 90 °, maintained, surface mounting, \boldsymbol{P}

Powering Business Worldwide*

Part no. T0-2-1/I1/SVA(A)
Article no. 207083

Similar to illustration

Product range			Switch with locking mechanism
Part group reference			TO
Basic function			ON-OFF switches
add tuttetion			with black thumb grip and front plate
nformation about equipment supplied			with two keys
Number of poles			3 pole
ocking arrangement			Cylinder lock SVA
Notes			Key can only be withdrawn in position 0 (Pos A)
ocking 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		o	90
witching performance			maintained
Front plate no.			FS 908
ront plate			0-1
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	5.5
Rated uninterrupted current	I _u	Α	20

Technical data General

General			
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
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Contacts			
Mechanical variables			
Number of poles			3 pole
Electrical characteristics			
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	lu	Α	20
Note on rated uninterrupted current !u			Rated uninterrupted current lu 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 l _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	7 11115	Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	6
Switching capacity	14	Ю	
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	Operations/h		1200
AC			
AC-3	D	LAA	
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
000 1/	D	114	
690 V	P	kW	4
690 V Star-delta	P P	kW	4 5.5
690 V Star-delta Rated operational current motor load switch	Р	kW	5.5
690 V Star-delta			

400)/ 445)/		•	
400V 415 V	l _e	Α	11.5
400 V star-delta	l _e	Α	20
500 V	l _e	Α	9
500 V star-delta	l _e	Α	15.6
690 V	l _e	Α	4.9
690 V star-delta	le	Α	8.5
AC-21A			
Rated operational current switch			
440 V	l _e	Α	20
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	Р	kW	3
400 V 415 V	P	kW	5.5
500 V	Р	kW	7.5
690 V	Р	kW	5.5
Rated operational current motor load switch			
230 V	l _e	Α	13.3
400 V 415 V	I _e	Α	13.3
500 V	I _e	Α	13.3
690 V	l _e	Α	7.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l _e	Α	10
Voltage per contact pair in series		V	60
DC-21A	l _e	Α	
Rated operational current	I _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	l _e	Α	10
Contacts		Quantity	2
60 V			
Rated operational current	l _e	Α	10
Contacts		Quantity	3
120 V			
Rated operational current	I _e	Α	5
Contacts		Quantity	3
240 V			
Rated operational current	I _e	Α	5
Contacts		Quantity	5
DC-13, Control switches L/R = 50 ms			
Rated operational current	I _e	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 fault in 100000 operations
Terminal capacities	probability		
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
Max. tightening torque		Nm	1

Technical safety parameters:

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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	o-in	8.83

Design verification as per IEC/EN 61439

Design verification as per IEC/EN 61439			
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.		°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			Please enquire
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. $\label{eq:continuous}$

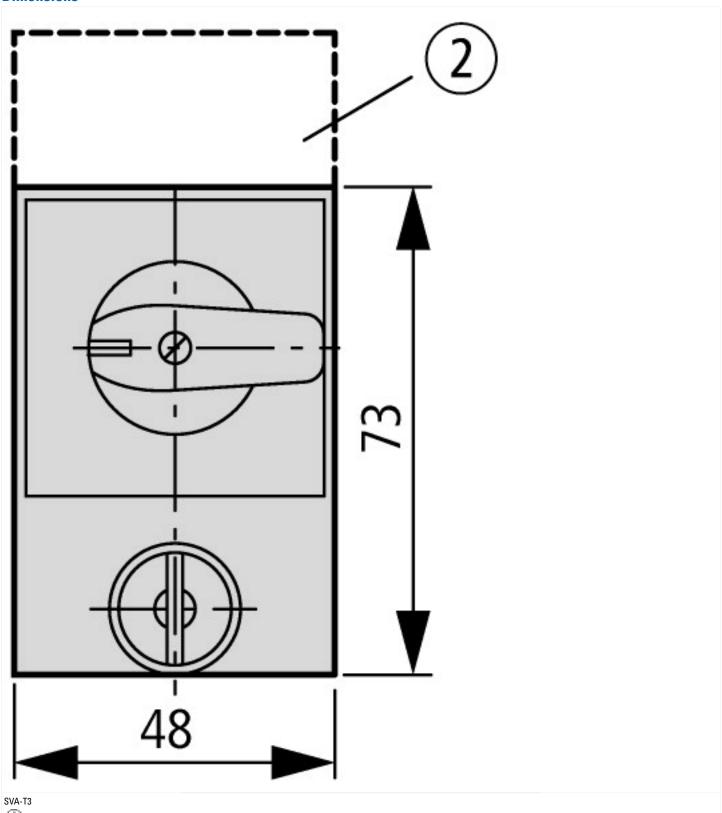
Technical data ETIM 6.0

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

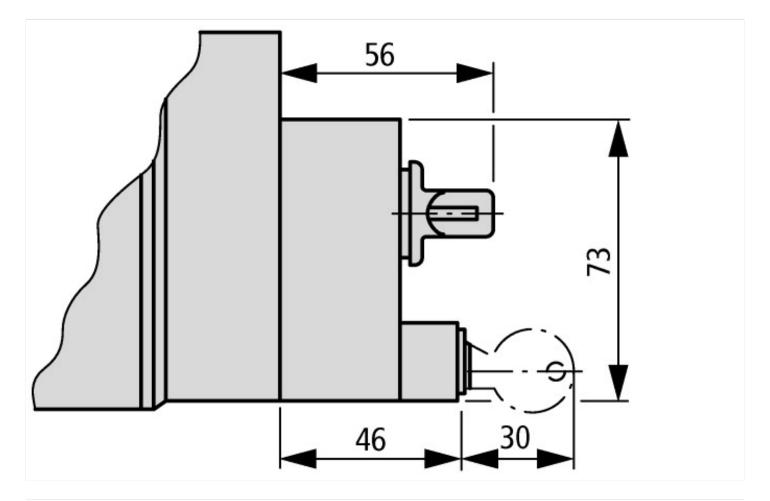
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss8.1-27-37-14-03 [AKF060010])

[AKF060010])		
Version as main switch		No
Version as maintenance-/service switch		No
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
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-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		3
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as normally open contact		0
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 center		No
Suitable for distribution board installation		No
Suitable for intermediate mounting		No
Colour control element		Black
Type of control element		Toggle
Interlockable		Yes
Type of electrical connection of main circuit		Screw connection
Degree of protection (IP), front side		IP65



2 ZFS-... Label mount not included as standard



Additional product information (links)

IL03801015Z (AWA1150-1367, AWA115-1368) Cylinder lock, Padlocking feature		
IL03801015Z (AWA1150-1367, AWA115-1368) Cylinder lock, Padlocking feature	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801015Z2016_07.pdf	
Form for ordering non-standard front plates	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=4.87	
Display flip catalog page.	http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=40	
Technical overview cam switch, switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.2	
System overview cam switch T	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.4	
System overview switch-disconnector P	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.6	
Key to part numbers Cam switch	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8	
Key to part numbers Switch-disconnector	http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8	
Switches for ATEX	http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html	