

### Main switch, 3 pole, 25 A, STOP function, surface mounting

Powering Business Worldwide\*

Part no. P1-25/l1/SVB-SW Article no. 233988

Similar to illustration

Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			P1
Stop Function			STOP function
			With black rotary handle and locking ring
Information about equipment supplied			Auxiliary contact or neutral conductor fitted by user.
Number of poles			3 pole
Auxiliary contacts			
\		N/0	0
7		N/C	0
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 0
Function			OFF OFF
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	11
Rated uninterrupted current	I <sub>u</sub>	Α	25

# Technical data

delleral	
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		Ü	III/3
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Mechanical shock resistance	○limp		15
		g	As required
Mounting position  Protection against direct contact when actuated from front (EN 50274)			
Contacts			Finger and back-of-hand proof
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
		N/O	0
		N/C	0
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	Iu	Α	25
Note on rated uninterrupted current !u	·u		Rated uninterrupted current lu is specified for max. cross-section.
			Trated difficult rapids defined to the state of the state
Load rating with intermittent operation, class 12  AB 25 % DF		v I	2
		x l <sub>e</sub>	
AB 40 % DF		x I <sub>e</sub>	1.6
AB 60 % DF		x I <sub>e</sub>	1.3
Short-circuit rating			
Fuse		A gG/gL	
Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	640
Note on rated short-time withstand current lcw			Current for a time of 1 second
Rated conditional short-circuit current	Iq	kA	50
Switching capacity		Α	240
cos φ rated making capacity as per IEC 60947-3  Rated breaking capacity cos φ to IEC 60947-3		A	240
230 V		A	190
400/415 V		A	150
500 V		A	170
690 V		A	150
Safe isolation to EN 61140		,,	
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	1.1
Lifespan, mechanical	Operations		> 0.3
		x 10 <sup>6</sup>	
Maximum operating frequency	Operations/h		1200
AC A			
AC-3	D	LAA	
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	5.5
400 V 415 V	P	kW	7.5
500 V	P	kW	7.5
690 V	Р	kW	7.5
Rated operational current motor load switch		Δ	10.6
230 V	l <sub>e</sub>	A	19.6
400V 415 V	l <sub>e</sub>	Α	15.2
500 V	l <sub>e</sub>	Α	12.1
690 V	l <sub>e</sub>	Α	8.8
AC-21A			
Rated operational current switch			
440 V	l <sub>e</sub>	Α	25
AC-23A			

Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	5.5
400 V 415 V	P	kW	11
500 V	P	kW	11
690 V	P	kW	11
Rated operational current motor load switch			
230 V	l <sub>e</sub>	Α	25
400 V 415 V	l <sub>e</sub>	Α	25
500 V	I <sub>e</sub>	Α	17.4
690 V	I <sub>e</sub>	Α	12.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	Α	25
Voltage per contact pair in series		V	60
DC-23A, motor load switch L/R = 15 ms			
24 V			
Rated operational current	I <sub>e</sub>	Α	25
Contacts		Quantity	1
48 V			
Rated operational current	le	Α	25
Contacts		Quantity	2
60 V			
Rated operational current	I <sub>e</sub>	Α	25
Contacts		Quantity	2
120 V			
Rated operational current	I <sub>e</sub>	Α	12
Contacts		Quantity	3
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H <sub>F</sub>	$< 10^{-5}, < 1$ fault in 100000 operations
Terminal capacities			
Solid or stranded		mm <sup>2</sup>	1 x (1,5 - 6) 2 x (1,5 - 6)
Flexible with ferrules to DIN 46228		mm <sup>2</sup>	1 x (1 - 4) 2 x (1 - 4)
Terminal screw			M4
Max. tightening torque		Nm	1.6
Technical safety parameters:			51100 tools 1
Notes			$\mathrm{B10_{d}}$ values as per EN ISO 13849-1, table C1
Rating data for approved types			

Terminal capacity
Terminal screw
M4

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation		A	25
·	<sup>I</sup> n		23
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.1
Equipment heat dissipation, current-dependent	$P_{vid}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	P <sub>diss</sub>	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 w provide heat dissipation data for the devices.
10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear mu observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear mu observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

#### **Technical data ETIM 6.0**

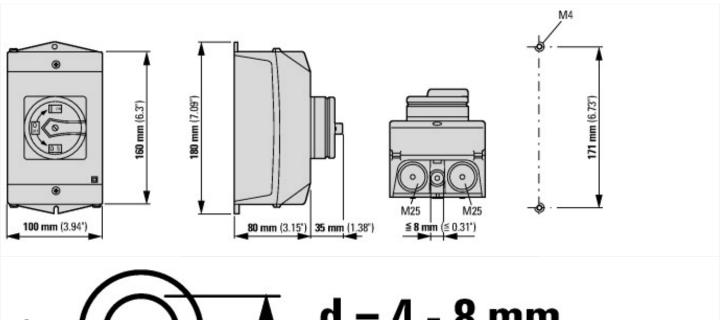
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

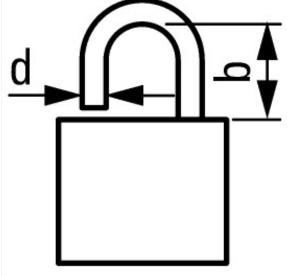
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss8.1-27-37-14-03 [AKF060010])

Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Max. rated operation voltage Ue AC	٧	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	А	25
Rated permanent current at AC-21, 400 V	А	25
Rated operation power at AC-3, 400 V	kW	7.5
Rated short-time withstand current lcw	kA	0.64
Rated operation power at AC-23, 400 V	kW	13
Switching power at 400 V	kW	13
Conditioned rated short-circuit current Iq	kA	80
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		Door coupling rotary drive

Interlockable	Yes
Type of electrical connection of main circuit	Screw connection
Degree of protection (IP), front side	IP65

#### **Dimensions**





d = 4 - 8 mm  $b + d \le 47 mm$  d = 0.16 - 0.31  $b + d \le 1.85$ 

≦ 3 padlocks

#### Additional product information (links)

riaditional product information (inito)	
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