DATASHEET - P1-25/I2/SVB



Main switch, 3 pole, 25 A, Emergency-Stop function, Lockable in the ${\bf 0}$ (Off) position, surface mounting



P1-25/I2/SVB Part no. Catalog No. 207293

EL-Nummer 1457888 (Norway)

Delivery program			
Product range			Main switch maintenance switch Repair switch
Part group reference			P1
Stop Function			Emergency switching off function
			With red rotary handle and yellow 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
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			IP65
			totally insulated
Design			surface mounting
Contact sequence			0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Function			ION O _ O OFF
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	11
Rated uninterrupted current	I _u	Α	25

Technical data

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	~IIIIp		15
Mounting position		g	As required
Contacts			As required
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
		N/O	0
		N/C	0
Electrical characteristics		, -	
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	Iu	A	25
Note on rated uninterrupted current ! _u	'u	^	Rated uninterrupted current I_u is specified for max. cross-section.
			nated difficent upled current i _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 l _e	1.6
AB 60 % DF		x I _e	1.3
Short-circuit rating			
Fuse		A gG/gL	25
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	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			
cos φ rated making capacity as per IEC 60947-3		Α	240
Rated breaking capacity cos φ to IEC 60947-3		Α	
230 V		Α	190
400/415 V		Α	150
500 V		Α	170
690 V		Α	150
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I _e		W	1.1
Lifespan, mechanical	Operations	x 10 ⁶	> 0.3
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	Р	kW	
220 V 230 V	Р	kW	5.5
400 V 415 V	P	kW	7.5
500 V	P	kW	7.5
690 V	P	kW	7.5
Rated operational current motor load switch			
230 V	I _e	Α	19.6
400V 415 V	l _e	Α	15.2
500 V	I _e	Α	12.1
690 V	l _e	Α	8.8
AC-21A			
Rated operational current switch			
440 V	I _e	Α	25
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	P	kW	5.5
400 V 415 V	P	kW	11

500 V	P	kW	11
690 V	Р	kW	11
Rated operational current motor load switch			
230 V	l _e	Α	25
400 V 415 V	I _e	Α	25
500 V	Ie	Α	17.4
690 V	I _e	Α	12.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	I _e	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 _e	Α	25
Contacts		Quantity	1
48 V			
Rated operational current	I _e	Α	25
Contacts		Quantity	2
60 V			
Rated operational current	le	Α	25
Contacts		Quantity	2
120 V			
Rated operational current	I _e	Α	12
Contacts		Quantity	3
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 x (1,5 - 6) 2 x (1,5 - 6)
Flexible with ferrules to DIN 46228		mm ²	1 x (1 - 4) 2 x (1 - 4)
Terminal screw			M4
Tightening torque for terminal screw		Nm	1.6
Technical safety parameters:			
Notes			B10 _d values as per EN ISO 13849-1, table C1
Rating data for approved types			
Terminal capacity			
Terminal screw			M4
Tightening torque		lb-in	14.128

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	25
Heat dissipation per pole, current-dependent	P _{vid}	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_{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	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 lobserved.	
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must 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])

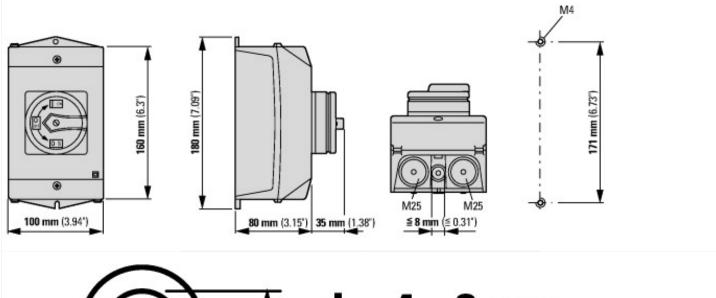
Version as maintenance-jservice switch Version as safety switch Version as safety switch Version as safety switch Version as samergency stop installation Version as reversing switch No			
Version as safety switch Yes Version as emergency stop installation Yes Version as reversing switch No Max. rated operation voltage Ue AC Y 690 - 890 Rated operation youtage Y 690 - 890 Rated operation gover at AC-21, 400 Y A 25 Rated operation power at AC-3, 400 Y KW 7.5 Rated operation power at AC-3, 400 Y KW 13 Rated short-time withstand current lew KA 0.84 Rated operation power at AC-3, 400 Y KW 13 Switching power at 400 Y KW 13 Switching power at 400 Y KW 13 Number of poles KW 3 Number of poles KW 3 Number of poles KW 10 Number of poles KW 3 Number of poles KW 10 Number of poles	Version as main switch		Yes
Version as emergency stop installation Yes Version as reversing switch No Max. rated operation voltage Ue AC V 890 - 690 Rated operating voltage V 890 - 690 Rated permanent current at AC-21, 400 V A 25 Rated permanent current at AC-23, 400 V kW 7.5 Rated short-time withstand current lcw kA 0.84 Rated short-time withstand current lcw kW 13 Rated short-time withstand current lcw kA 0.84 Rated short-time withstand current lcw kW 13 Round short-time withstand current lcw kA 0.84 Rated short-time withstand current lcw kW 13 Conditioned rated short-time it current lq kA 80 Number of auxiliary contacts as normally closed contact kA 80 Number of auxiliary contacts as normally open contact kA 80 Number of auxiliary contacts as change-over contact kA 80 Motor drive optional kA 80 Voltage release optional kW kA <t< td=""><td>Version as maintenance-/service switch</td><td></td><td>Yes</td></t<>	Version as maintenance-/service switch		Yes
Version as reversing switch V 690 Max. rated operation voltage Ue AC V 690 - 690 Rated operating voltage V 690 - 690 Rated operating voltage V 690 - 690 Rated permanent current to Urrent to Work 14 CV-21,400 V A 25 Rated operation power at AC-23,400 V kW 7.5 Rated operation power at AC-23,400 V kW 13 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 3 Number of auxiliary contacts as normally closed contact V 9 Number of auxiliary contacts as change-over contact V 9 Motor drive integrated No No Voltage release optional No Complete device in housing Device construction No Complete device in housing Suitable for ground mounting 4-hole No No Suitable for front mounting 4-hole No No <t< td=""><td>Version as safety switch</td><td></td><td>No</td></t<>	Version as safety switch		No
Max. rated operation voltage Ue AC V 690 - 690 Rated operating voltage V 690 - 690 Rated permanent current Iu A 25 Rated permanent current at AC-21, 400 V A 25 Rated operation power at AC-3, 400 V KW 75 Rated short-time withstand current Icw 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 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as normally open contact 0 0 Motor drive integrated No No Motor drive integrated No No Voltage release optional No Complete device in housing Suitable for ground mounting Yes No Suitable for front mounting 4-ohe No No Suitable for front mounting 4-ohe No No Suitable for fistribut	Version as emergency stop installation		Yes
Rated operating voltage Rated permanent current lu Rated permanent current at AC-21, 400 V Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-3, 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-23, 400 V Rated operation power at AC-23, 400 V RW Rated operation power at AC-23, 400 V RW Rated operation power at AC-23, 400 V RW Rated operation power at AC-3, 400 V RW RATED Rated operation power at AC-3, 400 V RW RATED Rated operation power at AC-3, 400 V RW RATED R	Version as reversing switch		No
Rated permanent current lu Rated permanent current at AC-21,400 V Rated operation power at AC-3,400 V Rated short-time withstand current lcw Rated operation power at AC-23,400 V Rated short-time withstand current lcw Rated operation power at AC-23,400 V Rated operation power at AC-23,400 V Rw Rated short-circuit current lcw Rated operation power at AC-23,400 V Rw Rated operation power at AC-23,400 V Rw Rated short-circuit current lcw Rated short-circuit current lcw Rated short-circuit current lcw Rated operation power at AC-23,400 V Rw Rated operation power at AC-23,400 V Rw Rated short-circuit current lcw Rated short-circuit curr	Max. rated operation voltage Ue AC	V	690
Rated permanent current at AC-21, 400 V Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated short-time withstand current lcw Rated operation power at AC-23, 400 V Rated operation power at 400 V Conditioned rated short-circuit current lq Rated operation power at 400 V Rothiting power at 400 V Rothiting power at 400 V Rothiting power at 400 V Rother of poles Rumber of auxiliary contacts as normally closed contact Rumber of auxiliary contacts as normally closed contact Rumber of auxiliary contacts as normally open contact Rumber of auxiliary contacts as change-over contact Rothor drive optional Rothor drive optional Rothor drive integrated Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of control element	Rated operating voltage	V	690 - 690
Rated operation power at AC-3, 400 V kW 7.5 Rated short-time withstand current Icw 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 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as change-over contact 0 No Motor drive optional No No Motor drive integrated No No Voltage release optional No Complete device in housing Suitable for ground mounting Yes No Suitable for front mounting 4-hole No No Suitable for front mounting center No No Suitable for intermediate mounting No No Suitable for inter	Rated permanent current lu	Α	25
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 lq kA 80 Number of poles kA 80 Number of auxiliary contacts as normally closed contact C C Number of auxiliary contacts as change-over contact C C Motor drive optional No No Motor drive integrated No No Voltage release optional No Complete device in housing Suitable for ground mounting Yes Complete device in housing Suitable for front mounting 4-hole No No Suitable for front mounting center No No Suitable for distribution board installation No No Suitable for intermediate mounting No No <tr< td=""><td>Rated permanent current at AC-21, 400 V</td><td>Α</td><td>25</td></tr<>	Rated permanent current at AC-21, 400 V	Α	25
Rated operation power at AC-23, 400 V Switching power at 400 V Conditioned rated short-circuit current Iq Number of poles Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of control element W W 33 3 80 RA 80 RO 0 0 0 0 0 0 0 0 0 0 0 0 0	Rated operation power at AC-3, 400 V	kW	7.5
Switching power at 400 V Conditioned rated short-circuit current Iq kA 80 Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Notor drive optional Motor drive integrated Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control el	Rated short-time withstand current lcw	kA	0.64
Conditioned rated short-circuit current Iq kA 80 Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact No control rive integrated No No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of control element Na Sa	Rated operation power at AC-23, 400 V	kW	13
Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No Motor drive optional No No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Type of control element Door coupling rotary drive	Switching power at 400 V	kW	13
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for front mounting center Suitable for intermediate mounting Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Suitable for control element Type of control element Door coupling rotary drive	Conditioned rated short-circuit current Iq	kA	80
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for firont mounting center Suitable for intermediate mounting Suitable for intermediate mounting Suitable for control element Type of control element Door coupling rotary drive	Number of poles		3
Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for front mounting center Suitable for intermediate mounting Suitable for intermediate mounting Suitable for intermediate mounting Suitable for ontrol element Type of control element Door coupling rotary drive	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated No Voltage release optional No Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Suitable for control element Type of control element No Suor coupling rotary drive	Number of auxiliary contacts as normally open contact		0
Motor drive integrated No Voltage release optional No Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting Column control element Suitable for control element Type of control element No No No Red Door coupling rotary drive	Number of auxiliary contacts as change-over contact		0
Voltage release optionalNoDevice constructionComplete device in housingSuitable for ground mountingYesSuitable for front mounting 4-holeNoSuitable for front mounting centerNoSuitable for distribution board installationNoSuitable for intermediate mountingNoColour control elementRedType of control elementDoor coupling rotary drive	Motor drive optional		No
Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting Complete device in housing Yes No No No Suitable for front mounting center No No Suitable for distribution board installation No Colour control element Type of control element Door coupling rotary drive	Motor drive integrated		No
Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Suitable for control element Suitable for control element Suitable for intermediate mounting S	Voltage release optional		No
Suitable for front mounting 4-hole Suitable for front mounting center No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element No No Red Door coupling rotary drive	Device construction		Complete device in housing
Suitable for front mounting center Suitable for distribution board installation Suitable for intermediate mounting No Colour control element Type of control element No Door coupling rotary drive	Suitable for ground mounting		Yes
Suitable for distribution board installation Suitable for intermediate mounting No Colour control element Type of control element Door coupling rotary drive	Suitable for front mounting 4-hole		No
Suitable for intermediate mounting Colour control element Red Type of control element Door coupling rotary drive	Suitable for front mounting center		No
Colour control element Red Type of control element Door coupling rotary drive	Suitable for distribution board installation		No
Type of control element Door coupling rotary drive	Suitable for intermediate mounting		No
	Colour control element		Red
Interlockable Yes	Type of control element		Door coupling rotary drive
	Interlockable		Yes

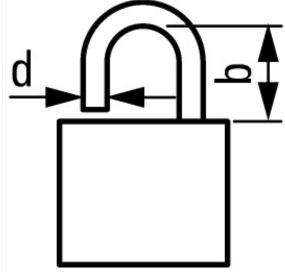
Type of electrical connection of main circuit	Screw connection
Degree of protection (IP), front side	IP65

Approvals

North America Certification For UL/CSA certification order article number 255886

Dimensions





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

≦3 padlocks

Additional product information (links)

IL03802001Z (AWA1150-1689) Switch-Disconne	ectors in insulated enclosures
IL03802001Z (AWA1150-1689) Switch- Disconnectors in insulated enclosures	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03802001Z2018_04.pdf
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
Ordering form for SOND switches and SOND front plates(DE_EN)	ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU_Orderform_Customized_Switch.pdf
Ordering form for SOND switches and SOND front plates(DE_EN)	ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf