DATASHEET - P1-25/I2/SVB



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



Part no. P1-25/I2/SVB Catalog No. P1-25/3

EL-Nummer 0001457888 (Norway)

Delivery progran

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			
5		N/0	0
7		N/C	0
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			totally insulated
Design			surface mounting
Contact sequence			L1 L2 L3 $ \begin{array}{ccccccccccccccccccccccccccccccccccc$
Switching angle		0	90
Function			OFF ON
Motor rating AC-23A, 50 - 60 Hz			
400 V	P	kW	11
Rated uninterrupted current	Iu	Α	25
Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.

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	- IIIIp		15
		g	As required
Mounting position Contacts			Astequiled
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
,		N/0	0
		N/C	0
Electrical characteristics		, -	
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current		A	25
·	I _u	^	
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	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			
$\cos \phi$ 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	Р	kW	7.5
Rated operational current motor load switch			
230 V	l _e	Α	19.6
400V 415 V	I _e	A	15.2
500 V			12.1
	le	A	
690 V	l _e	Α	8.8

AC-21A			
Rated operational current switch			
440 V	l _e	Α	25
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	Р	kW	5.5
400 V 415 V	P	kW	11
500 V	Р	kW	11
690 V	Р	kW	11
Rated operational current motor load switch			
230 V	l _e	Α	25
400 V 415 V	l _e	Α	25
500 V	le	Α	17.4
690 V	I _e	Α	12.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l _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	l _e	Α	25
Contacts		Quantity	2
120 V			
Rated operational current	I _e	Α	12
Contacts		Quantity	
Control circuit reliability at 24 V DC, 10 mA	Fault	H _F	< 10 ⁻⁵ , < 1 fault in 100000 operations
	probability	'	< 10 , < 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

/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])

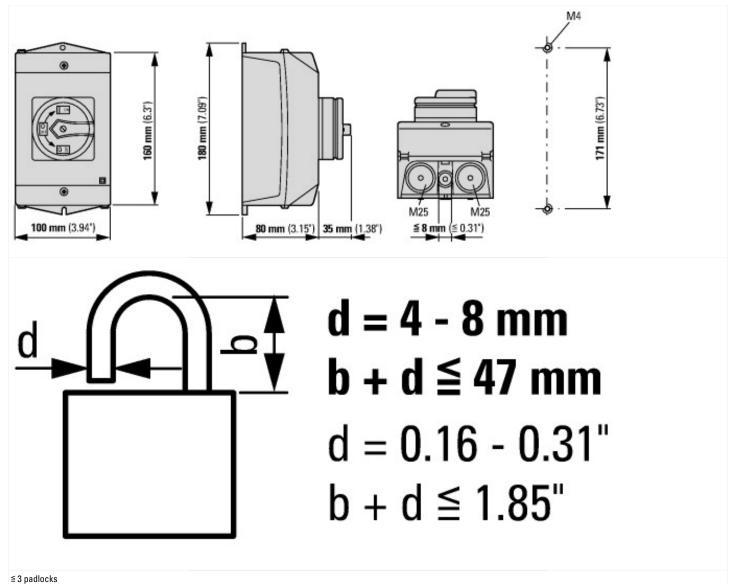
Version as maintenance-/service switch Version as safety switch Version as emergency stop installation Version as emergency stop installation Version as reversing switch Number of switches No Namber of switches Nated operation voltage Ue AC No Rated operation voltage Rated permanent current tu Rated permanent current at AC-23, 400 V Rated permanent current at AC-3, 400 V Rated permanent current at AC-3, 400 V Rated permanent current at AC-3, 400 V Rated short-time withstand current low Rated short-time withstand current low Rated short-time withstand current low Rated operation power at AC-23, 400 V RW Nated operation power at AC-24, 400 V RW Nated operation power at AC-25, 400 V RW Nated operation power at AC-20, 400 V RW Nate	[AKF060013])		
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 Rated operating voltage V Rated permanent current Iu A Rated permanent current at AC-23, 400 V A Rated permanent current at AC-21, 400 V A Rated short-time withstand current Icw KA Rated short-time withstand current Icw KA Rated short-time withstand current Icw KA Rated operation power at AC-23, 400 V W Wuth 13 3 Switching power at 400 V W Conditioned rated short-circuit current Iq KA 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 No	Version as main switch		Yes
Version as emergency stop installation Version as reversing switch Number of switches Max. rated operation voltage Ue AC No 690 Rated operating voltage Rated permanent current lu Rated permanent current at AC-23, 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 short-time withstand current lcw Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated operation power at AC-3, 400 V Rated short-time withstand current lcw Rated operation power at AC-3, 400 V Rated operation power	Version as maintenance-/service switch		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 A 25 Rated permanent current at AC-23, 400 V A 25 Rated operation power at AC-3, 400 V A 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 KA 90 Number of auxiliary contacts as change-over contact KA 0 Motor drive optional KA No Motor drive integrated KA No Voltage release optional KA No	Version as safety switch		Yes
Number of switches 1 Max. rated operation voltage Ue AC V 690 Rated operating voltage V 690 - 690 Rated permanent current lu A 25 Rated permanent current at AC-23, 400 V A 25 Rated permanent current 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 lq KA 80 Number of poles 3 3 Number of auxiliary contacts as normally closed contact O 0 Number of auxiliary contacts as change-over contact O 0 Mutor drive optional No No Motor drive integrated No No Voltage release optional No No	Version as emergency stop installation		Yes
Max. rated operation voltage Ue AC V 690 Rated operating voltage V 690 - 690 Rated permanent current Iu A 25 Rated permanent current at AC-23, 400 V A 25 Rated permanent current at AC-21, 400 V A 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 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 optional No No Motor drive integrated No No Voltage release optional No No	Version as reversing switch		No
Rated operating voltage Rated permanent current lu Rated permanent current lu Rated permanent current at AC-23, 400 V 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 short-time withstand current lcw 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 short-time withstand current lcw Rated operation power at AC-23, 400 V Rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Roditioned rated short-circuit current lq Rated operation power at 400 V Rated operation	Number of switches		1
Rated permanent current Iu A 25 Rated permanent current at AC-23, 400 V A 25 Rated permanent current at AC-21, 400 V A 25 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 AC-23, 400 V KW 13 Switching power at 400 V KW 13 Conditioned rated short-circuit current Iq KA 80 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 change-over contact Motor drive optional Motor drive integrated Voltage release optional	Max. rated operation voltage Ue AC	V	690
Rated permanent current at AC-23, 400 V 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-3, 400 V Rated operation power at AC-23, 400 V RW Rated operation power at AC-21, 400 V RW Rated operation power at AC-3, 400 V RW Rated operation power at AC-23, 40	Rated operating voltage	V	690 - 690
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 operation power at AC-23, 400 V Rated operation power at AC-23, 400 V Rated operation power at 400 V Routing routing routing current Iq Routing routing routing current Iq Routing routin	Rated permanent current lu	Α	25
Rated operation power at AC-3, 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 Routed operation power at 400 V RW Routed operation power at 400 V RW RW RATED Routed Routed short-circuit current lq RW	Rated permanent current at AC-23, 400 V	А	25
Rated short-time withstand current lcw Rated operation power at AC-23, 400 V RW 13 Switching power at 400 V RW 13 Conditioned rated short-circuit current Iq RATED ROTE SHORT	Rated permanent current at AC-21, 400 V	Α	25
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 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 Motor drive optional Motor drive integrated Voltage release optional No No	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 No Motor drive optional Notor drive integrated Voltage release optional No No	Rated short-time withstand current lcw	kA	0.64
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 Number of auxiliary contacts as change-over contact 0 Motor drive optional No Motor drive integrated No Voltage release optional No	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 Voltage release optional No	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 Number of auxiliary contacts as change-over contact No Motor drive optional No Voltage release optional No	Conditioned rated short-circuit current Iq	kA	80
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact O Motor drive optional No Motor drive integrated No Voltage release optional No	Number of poles		3
Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No Voltage release optional No	Number of auxiliary contacts as normally closed contact		0
Motor drive optional No Motor drive integrated No Voltage release optional No	Number of auxiliary contacts as normally open contact		0
Motor drive integrated No Voltage release optional No	Number of auxiliary contacts as change-over contact		0
Voltage release optional No	Motor drive optional		No
	Motor drive integrated		No
Device construction Complete device in housing	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

Approvals

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

Dimensions



Assets (links)

Declaration of CE Conformity

00003102

Instruction Leaflets

IL03802001Z2018_04