### DATASHEET - P1-25/I2H/SVB



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



Part no. Catalog No. P1-25/I2H/SVB 226900

#### Technical data

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Note: Second and in the Control of ECCN and	General Standards			
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Rared inputs withtand voltage         Um         Um         Out         Out<	Enclosed		°C	-25 - +40
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Monting positionIn equidamental sectorContractContractNumber drabbasicNumber dr	Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Contracts         Contracts <thcontracts< th=""> <thcontracts< th=""> <thc< td=""><td>Mechanical shock resistance</td><td></td><td>g</td><td>15</td></thc<></thcontracts<></thcontracts<>	Mechanical shock resistance		g	15
Mechanical variables         Analysis         Analysis           Number of poles         Number of poles         Number of poles           Analysis	Mounting position			As required
Number of polesPart of polePart of poleAubiary contactsNoNoNoAubiary contactsNoNoNoRed operational voltageNoNoSoRed operational voltageNoNoSoRed operational voltageNoNoSoNote on rack uninterrupted current 1,NoNoSoAbd 25% DFNoNoSoAbd 25% DFNoNoSoAbd 5% DFNoNoAbd 5% DFNoNoSoAbd 5% DFNoNoSoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNo	Contacts			
Audiary contactsImage: section of the sec	Mechanical variables			
Image of the sector of the s	Number of poles			3 pole
NCNCNCNCBetween leverated sets sets sets sets sets sets sets s	Auxiliary contacts			
Beterical characteristicsNeNeNeNeRed operational voltageNeNeSecondRed operational voltageNeSecondSecondNot on rated uninterrupted current laNeSecondSecondAB 2% DFNeSecondSecondSecondAB 2% DFNeSecondSecondSecondAB 2% DFNeSecondSecondSecondNot on rated uninterrupted current laNeSecondSecondAB 2% DFNeSecondSecondSecondNot on rated short-line voltation durint la current laNeSecondSecondNot on rated short-line voltation durint la current laNeSecondSecondNet on rated short-line voltation durint la current la curr			N/0	0
Read operational voltageNeVector90Relation interrupted current lyuASNot on rated uninterrupted current lyuRelation interrupted current lySRelation interrupted current lyvRelation interrupted current lySA B d % DFvNeSSA B d % DFvNeSSA B d % DFvNeSSShort-circuit BvNeSSShort-circuit BvNeSSShort-circuit BvNeSSNot on rated short-time withstand current lowNeSSShort-circuit BNeNeSSShort-circuit BNeNeSS			N/C	0
Bade uninterrupted current lu         Image of the second current lu sepecified for max. cross-section.           Note on rated uninterrupted current lu         Fee         Rated uninterrupted current lu sepecified for max. cross-section.           A B 25% 0 F         Image of the second current lu sepecified for max. cross-section.         Image of the second current lu sepecified for max. cross-section.           A B 25% 0 F         Image of the second current lu sepecified for max. cross-section.         Image of the second current lu sepecified for max. cross-section.           A B 25% 0 F         Image of the second current lu sepecified for max. cross-section.         Image of the second current lu second c	Electrical characteristics			
Net on rated uninterrupted current luis specified for max. cross-section.Ada 25% DFFRetuninterrupted current luis specified for max. cross-section.Ada 25% DFFRetuninterrupted current luis specified for max. cross-section.Ada 26% DFFRetuninterrupted current luis specified for max. cross-section.Ada 26% DFFRetuninterrupted current luis currentAba 26% DFFRetuninterrupted current luis currentShort-circuit ratingFRetuninterrupted current luis currentFue de contention short-tircuit currentRetuninterrupted current luis currentNet con rated short-tircuit currentRetuninterrupted current luis currentNet con rated making capacity as por IEC 60947-3Retuninterrupted current luis currentAda 200 \Retuninterrupted current luis currentAda 201 \ </td <td>Rated operational voltage</td> <td>Ue</td> <td>V AC</td> <td>690</td>	Rated operational voltage	Ue	V AC	690
datating with intermittent operation, class 12ProveRefSecondA B 2% 0 FSSSA B 0% 0 FSSSA B 0% 0 FSSSFuseA 0%SSBated short-time withstand current (s current)Image: SSSNote our rated short-time withstand current (s current)Image: SSSBated short-time withstand current (s current)Image: SSSNote our rated short-time withstand current (s current)Image: SSSNote our rated short-time withstand current (s current)Image: SSSBated short-time withstand current (s current)Image: SSSSNote our rated short-time withstand current (s current)Image: SSSSBated short-time withstand current (s current)Image: SS	Rated uninterrupted current	l <sub>u</sub>	А	25
AB 2% DF         اد         xia         2           AB 40% DF         xia         16           AB 60% DF         xia         13           Short-circuit rating         xia         3           Fuse         A gfor         64           Atted short-time withstand current (1s current)         xia         A gfor           Note on rated short-time withstand current (2s current)         xia         A gfor           Stated short-time withstand current (2s current)         xia         A gfor           Stated short-time withstand current (2s current)         xia         A gfor           Stated short-time withstand current (2s current)         xia         A gfor           Stated transing capacity as per IEC 60947-3         xia         3           Stated transing capacity cas per IEC 60947-3         A a         3           Stated transing capacity cas per IEC 60947-3         A a         3           Stated transing capacity cas per IEC 60947-3         A a         3           Stated transing capacity cas per IEC 60947-3         A a         3           Stated transing capacity cas per IEC 60947-3         A a         3           Stated transing capacity cas per IEC 60947-3         A a         3           State statation to EN 61140         Xia	Note on rated uninterrupted current !u			Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section.
AB 40 % DF         AB 60 % DF         Ke         Ke         Ke           AB 60 % DF         A 60 %         A 100 %         A 100 %           Short-circuit ator         A 100 %         A 100 %         Current for a time of 1 second           Fuse         A 100 %         A 100 %         Current for a time of 1 second           Note on rated short-time withstand current (1 s current)         Ke         A 100 %         Current for a time of 1 second           Note on rated short-time withstand current (1 s current)         Ke         A 10 %         Current for a time of 1 second           Note on rated short-time withstand current (1 s current)         Ke         A 10 %         Current for a time of 1 second           Status conditional short-time withstand current (1 s current)         Ke         A 10 %         A 10 %           Status conditional short-time withstand current (1 s current)         Ke         A 10 %         A 10 %           Status conditional short-time withstand current (1 s current)         Ke         A 10 %         A 10 %           Status conditional short-time withstand current (1 s current)         Ke         A 10 %         A 10 %           Status conditional short-time with short contact short sh	Load rating with intermittent operation, class 12			
AB 60 % DFAB 60 % DFAB 60 % DFAB 60 % DFAB 60 % DFA 60 % DF	AB 25 % DF		x I <sub>e</sub>	2
Bis         Image: state short-inc withstand current (1 s current)         Image: state short-inc with (1	AB 40 % DF		x I <sub>e</sub>	1.6
FuseIntermediate secondIntermediate secondIntermediate secondRated short-time withstand current lowIntermediate secondIntermediate secondNameIntermediate secondIntermediate secondIntermediate secondRated conditional short-circuit currentIntermediate secondIntermediate secondIntermediate secondRated conditional short-circuit currentIntermediate secondIntermediate secondIntermediate secondRated conditional short-circuit currentIntermediate secondIntermediate secondIntermediate secondRated breaking capacity as per IEC 60947-3Intermediate secondIntermediate secondIntermediate second230 VIntermediate secondIntermediate secondIntermediate secondIntermediate second200 VIntermediate secondIntermediate secondIntermediate secondIntermediate second600 VIntermediate secondIntermediate seco	AB 60 % DF		x I <sub>e</sub>	1.3
Aled short-time withstand current [1 s current]         Image: Participation of the stand current [1 s current]         Participation [1 s current]         Participatin [1 s current]         Participation [1 s current]	Short-circuit rating			
Note on rated short-time withstand current low         Note         Note         Test of a time of 1 second           Rated conditional short-circuit current         I         I current for a time of 1 second         I current for a time of 1 second           Switching capacity         Sourceine         I current for a time of 1 second         I current for a time of 1 second           Switching capacity         Sourceine         I current for a time of 1 second         I current for a time of 1 second           Switching capacity         Sourceine         I current for a time of 1 second         I current for a time of 1 second           Switching capacity         Sourceine         I current for a time of 1 second         I current for a time of 1 second           Switching capacity core to IEC 60947-3         I current for a time of 1 second         I current for a time of 1 second           Sourceine         I current for a time of 1 second         I current for a time of 1 second         I current for a time of 1 second           Sourceine         I current for a time of 1 second         I current for a time of 1 second         I current for a time of 1 second           Sourceine         I current for a time of 1 second         I current for a time of 1 second         I current for a time of 1 second           Sourceine         I current for a time of 1 second         I current for a time of 1 second         I current for a time of 1 second	Fuse		A gG/gL	25
Rade conditional short-circuit current         Iq         Rade         Solution           Source-construit current         Image: Solution of the state shore s	Rated short-time withstand current (1 s current)	I <sub>cw</sub>	A <sub>rms</sub>	640
Automatical space by as per IEC 60947-3         Automatical space by as pe	Note on rated short-time withstand current lcw			Current for a time of 1 second
cos φ rated making capacity as per IEC 60947-3       A       40         Rated breaking capacity cos φ to IEC 60947-3       A       A         230 V       A       90         400/415 V       A       90         500 V       A       10         690 V       A       70         Sete isolation to EN 61140       A       A         between the contacts       VAC       40         Curren theat loss per contact at I <sub>0</sub> VAC       40         Maximum operating frequency       Operations       x10 <sup>6</sup> AC-3       Per tots       20         Rating, motr load switch       Per tots       X10 <sup>6</sup> Rating, motr load switch       Per tots       X10 <sup>6</sup>	Rated conditional short-circuit current	Ιq	kA	50
Ated breaking capacity cos & to LEC 60947-3AA230 VAA50400/15 VA5050500 VA7070690 VA1070501 VVVV502 VVV70503 VVV70504 vVV70505 VVV10505 VVVV505 VVVV505 VVVV505 VVVV505 VVVV505 V	Switching capacity			
230 VA9400/415 VA10500 VA10690 VA10690 VA10Stafe isolation to EN 61140VAbetween the contactsV40Current heat loss per contact at I <sub>e</sub> OperationsNAtimum operating frequencyOperationsNAC-3A10Ating, moto load switchPKWAting, moto load switchPKW	cos φ rated making capacity as per IEC 60947-3		A	240
400/415 V       A       50         500 V       A       70         600 V       A       50         600 V       A       50         600 V       A       50         Safe isolation to EN 61140       V       V         between the contacts at I <sub>e</sub> V       V         Current heat loss per contact at I <sub>e</sub> V       V         Lifespan, mechanical       Operations/       Y         Act       Dereations/       Y         Act       A       Sol         Act Act       P       W         Rating moter load switch       P       W	Rated breaking capacity cos φ to IEC 60947-3		A	
50 VA70690 VA50Safe isolation to EN 61140VVbetween the contactsVACVACformer theat loss per contact at IgVACVACLifespan, mechanicalOperationsYaGActionPerations/HSoActionPerations/HPerations/HAction<	230 V		А	190
فول المعالية	400/415 V		A	
Safe isolation to EN 61140     Image: solation to EN 61140       between the contacts     V AC       between the contacts at le     V AC       Current heat loss per contact at le     V AC       Lifespan, mechanical     Operations       Act-a     V AC	500 V		A	170
between the contacts at lease per contact at lease	690 V		A	150
Current heat loss per contact at le     W     1.1       Lifespan, mechanical     Operations ${}_{10}^{OP}$ >0.3       Maximum operating frequency     Operations/h ${}_{10}^{OP}$ >0.3       AC-3     Action     Action     Action     Action       Rating, motor load switch     P     Action     Action	Safe isolation to EN 61140			
Lifespan, mechanical     Operations     x 10 <sup>6</sup> > 0.3       Maximum operating frequency     Operations/h     120       AC-3     I     I       Rating, motor load switch     P     KW	between the contacts			440
Maximum operating frequency     Operations/h     1200       AC-3     F     F       Rating, motor load switch     P     KW	Current heat loss per contact at l <sub>e</sub>		W	1.1
AC-3 P kW	Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.3
AC-3 Rating, motor load switch P kW	Maximum operating frequency	Operations/h		1200
Rating, motor load switch P kW	AC			
-	AC-3			
220 V 230 V P kW 5.5	Rating, motor load switch	Р	kW	
	220 V 230 V	Р	kW	5.5

400 V 415 V	Р	kW	7.5
500 V	Р	kW	7.5
690 V	Р	kW	7.5
Rated operational current motor load switch			
230 V	۱ <sub>e</sub>	А	19.6
400V 415 V	le	A	15.2
500 V	I <sub>e</sub>	A	12.1
690 V	l <sub>e</sub>	A	8.8
AC-21A	·e	~	
Rated operational current switch		٨	25
440 V	l <sub>e</sub>	A	25
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	Р	kW	5.5
400 V 415 V	Р	kW	11
500 V	Р	kW	11
690 V	Р	kW	11
Rated operational current motor load switch			
230 V	۱ <sub>e</sub>	А	25
400 V 415 V	۱ <sub>e</sub>	А	25
500 V	Ι <sub>e</sub>	А	17.4
690 V	l <sub>e</sub>	А	12.6
DC			
DC-1, Load-break switches L/R = 1 ms			
Rated operational current	l <sub>e</sub>	A	25
Voltage per contact pair in series	0	V	60
DC-23A, motor load switch L/R = 15 ms		-	
24 V			
Rated operational current	I <sub>e</sub>	A	25
Contacts	·e	Quantity	
48 V		Quantity	
Rated operational current		A	25
	l <sub>e</sub>	Quantity	
Contacts		uuanuty	2
60 V			
Rated operational current	l <sub>e</sub>	A	25
Contacts		Quantity	2
120 V			
Rated operational current	l <sub>e</sub>	A	12
Contacts		Quantity	3
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H <sub>F</sub>	< 10 <sup>-5</sup> , < 1 fault in 100000 operations
Terminal capacities		•	4 (45 0)
Solid or stranded			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
Tightening torque for terminal screw		Nm	1.6
Technical safety parameters:			
Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
Rating data for approved types Contacts			
Rated operational voltage	U <sub>e</sub>	V AC	600
Rated uninterrupted current max.			
Main conducting paths			
General use		А	20

Auxiliary contacts			
General Use	lu	А	10
Pilot Duty			A 600 P 600
Switching capacity			
Maximum motor rating			
Single-phase			
120 V AC		HP	1
200 V AC		HP	2
240 V AC		HP	3
Three-phase			
200 V AC		HP	3
240 V AC		HP	5
480 V AC		HP	10
600 V AC		HP	15
Short Circuit Current Rating		SCCR	
Basic Rating		kA	5
max. Fuse		А	110
High fault rating		kA	10
max. Fuse		Α	50, Class J
Terminal capacity			
Solid or flexible conductor with ferrule		AWG	14 - 8
Terminal screw			M4
Tightening torque		lb-in	14.1

# Design verification as per IEC/EN 61439

<b>.</b>			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	25
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.1
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	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			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])

[ARI 000010])		
Version as main switch		Yes
Version as maintenance-/service switch		Yes
Version as safety switch		No
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	А	25
Rated permanent current at AC-23, 400 V	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 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)		12

## **Approvals**

Product Standards	UL 60947-4-1;CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL Category Control No.	NLRV
CSA File No.	12528
CSA Class No.	3211-05
North America Certification	UL listed, CSA certified

Specially designed for North America

Suitable for

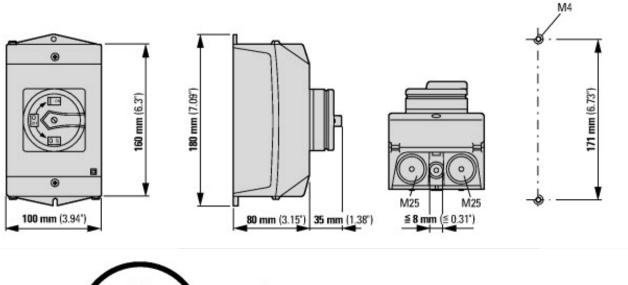
Degree of Protection

Yes, additional labeling according to UL on the enclosure in combination with "+NA-12" (105866)

Branch circuits, suitable as motor disconnect

IEC: IP65; UL/CSA Type 1, 12

#### Dimensions



# d = 4 - 8 mm $b + d \leq 47 mm$ d = 0.16 - 0.31'' $b + d \leq 1.85''$

≦ 3 padlocks