# DATASHEET - P1-32/I2/SVB-SW/HI11



Main switch, 3 pole + 1 N/O + 1 N/C, 32 A, STOP function, Lockable in the 0 (Off) position, surface mounting



Part no. P1-32/I2/SVB-SW/HI11

Catalog No. 207316

# 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			111/3
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Mechanical shock resistance		g	15
Mounting position			As required
Contacts			
Mechanical variables			
Number of poles			3 pole
Auxiliary contacts			
		N/0	1
		N/C	1
Electrical characteristics			
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated uninterrupted current	Iu	Α	32
Note on rated uninterrupted current !u			Rated uninterrupted current $I_u$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			
AB 25 % DF		x I <sub>e</sub>	2
AB 40 % DF		x l <sub>e</sub>	1.6
AB 60 % DF		x l <sub>e</sub>	1.3
Short-circuit rating			
Fuse		A gG/gL	50
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	80
Switching capacity	ч		
cos φ rated making capacity as per IEC 60947-3		Α	320
Rated breaking capacity cos φ to IEC 60947-3		Α	
230 V		Α	260
400/415 V		Α	300
500 V		Α	290
690 V		Α	250
Safe isolation to EN 61140			
between the contacts		V AC	440
Current heat loss per contact at I <sub>e</sub>		W	1.8
Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V)		CO	0.2
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 0.3
Maximum operating frequency	Operations/h		1200
AC	- po. a.iono/11		
AC-3			
Rating, motor load switch	P	kW	
3,			

200 / 201				
SOU   P	220 V 230 V	P	kW	7.5
P	400 V 415 V	Р	kW	13
Read operational current notice lead extention   19	500 V	P	kW	18.5
	690 V	Р	kW	15
	Rated operational current motor load switch			
	230 V	او	Α	26.4
SIDIV				
AC 214  AC 214  Rated approalisand current switch  440 V  AC 22A  Motor rating AC-22A, 30 -88 Hz  220				
AC-21A Read operational current swotch  440 V  AC-22A  More rating AC-22A, 50 - 90 Hz  P	500 V	I <sub>e</sub>	Α	23.4
Rested operational current switch	690 V	l <sub>e</sub>	Α	14.7
AC 22A	AC-21A			
AC-23A	Rated operational current switch			
Motor rating AC-22A, 50 - 60 ft /	440 V	I <sub>e</sub>	Α	32
Motor rating AC-23A, 50 - 00 Hz	AC-23A			
230 V		D	L\A/	
MOD V 415 V				75
SOU				
Rated operational current motor load switch   P				
Rated operational current color load switch	500 V	P	kW	18.5
	690 V	Р	kW	15
40 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Rated operational current motor load switch			
SOO V	230 V	Ie	Α	32
	400 V 415 V	l <sub>e</sub>	A	32
DC				
DC-1, Load-break switches L/R = 1 ms	690 V	I <sub>e</sub>	Α	19.8
Rated operational current	DC			
Voltage per contact pair in series   V   P   P	DC-1, Load-break switches L/R = 1 ms			
DC-23A, motor load switch L/R = 15 ms   24 V   Rated operational current   Ie   A   25	Rated operational current	l <sub>e</sub>	Α	32
DC-23A, motor load switch L/R = 15 ms	Voltage per contact pair in series		V	60
Rated operational current				
Rated operational current  48 V  Rated operational current  Contacts  Rated operational current  Pault  Rated operational current  Rated operational current				
Contacts  48 V  Rated operational current  60 V  Rated operational current  1e A 25  Contacts  60 V  Rated operational current  1e A 25  Contacts  Contacts  120 V  Rated operational current  1e A 12  Contacts  Contac			^	75
A8 V Rated operational current Contacts G0 V Rated operational current Rated operational current Rated operational current Contacts Contacts Le A 25 Contacts Contacts Le A 25 Contacts Contacts Le A 12 Contacts Control circuit reliability at 24 V DC, 10 mA Fault probability Fault probability  Terminal capacities Solid or stranded  mm² 1×(1.5 - 6) 2×(1.5 - 6) Flexible with ferrules to DIN 46228 mm² 1×(1 - 4) 2×(1 - 4)  Terminal screw Notes Notes Notes Rating data for approved types Terminal capacity  Ferminal capacity  Rated operational current Le A 25  Quantity 2  Tendinative 2  A 12  Quantity 3  To Quantity 3  A 12		l <sub>e</sub>		
Rated operational current  Contacts  60 V  Rated operational current  Contacts  Contacts  Contacts  Contacts  Contacts  Rated operational current  Le A 25  Contacts  Contacts  Contacts  Le A 12  Contacts  A 12  Contacts  Contacts  Contacts  A 25  Contacts  Contacts  Contacts  Contacts  Contacts  A 12  Contacts  Contacts  Contacts  A 12  Contacts  A			Quantity	1
Contacts  60 V  Rated operational current  Contacts  Contacts  Rated operational current  Iounity  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Fault probability  Rated operational current  Iounity	48 V			
Rated operational current  Contacts  Quantity  Rated operational current  Ie A 12  Contacts  Quantity  Rated operational current  Ie A 12  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Contacts  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault probability  Fault probability  Terminal capacities  Solid or stranded  mm² 1x (1,5 - 6) 2x (1,5 - 6) 2x (1,5 - 6) 2x (1,5 - 6)  Flexible with ferrules to DIN 46228  mm² 1x (1 - 4) 2x (1 - 4) 2x (1 - 4)  Terminal screw  M4  Tightening torque for terminal screw  M4  Tightening torque for terminal screw  Technical safety parameters:  Notes  B10 <sub>d</sub> values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity	Rated operational current	l <sub>e</sub>	Α	25
Rated operational current Contacts  120 V  Rated operational current Contacts  1e A 12  Quantity 3  Control circuit reliability at 24 V DC, 10 mA Fault probability Probability Probability Probability Fault probability Probability Fault probability Probability Fault probability Faul	Contacts		Quantity	2
Contacts  Rated operational current  Rated operational current  Contacts  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Terminal capacities  Solid or stranded  mm² 1×(1.5 - 6) 2×(1.5 - 6)  Rexible with ferrules to DIN 46228  Terminal screw  Technical safety parameters:  Notes  B10d values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity	60 V			
Contacts  Rated operational current  Rated operational current  Contacts  Control circuit reliability at 24 V DC, 10 mA  Fault probability  Terminal capacities  Solid or stranded  mm² 1×(1.5 - 6) 2×(1.5 - 6)  Rexible with ferrules to DIN 46228  Terminal screw  Technical safety parameters:  Notes  B10d values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity	Rated operational current	ام	Α	25
120 V Rated operational current Contacts Control circuit reliability at 24 V DC, 10 mA Fault probability Fault in 100000 operations  Flexible with ferrules to DIN 46228  mm² 1x (1,5 - 6) 2x (1,5 - 6)  Flexible with ferrules to DIN 46228  mm² 1x (1 - 4) 2x (1 - 4)  2x (1 - 4)  Terminal screw M4  Tightening torque for terminal screw M5  Technical safety parameters:  Notes B10 <sub>d</sub> values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity			Quantity	2
Rated operational current Contacts Control circuit reliability at 24 V DC, 10 mA Fault probability  Terminal capacities Solid or stranded Solid or stranded Flaxible with ferrules to DIN 46228 Flexible with ferrules to reminal screw Terminal screw Nm Tightening torque for terminal screw Notes  Notes  B10d values as per EN ISO 13849-1, table C1  Rating data for approved types Terminal capacity  I 2 Quantity 3  2 10 -5, < 1 fault in 100000 operations			addinaty	-
Control circuit reliability at 24 V DC, 10 mA  Fault probability  Fault in 100000 operations    1 x (1.5 - 6)				
Control circuit reliability at 24 V DC, 10 mA  Fault probability  Terminal capacities  Solid or stranded  mm² 1 x (1,5 - 6) 2 x (1,5 - 6)  Flexible with ferrules to DIN 46228  mm² 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  Terminal capacity		le		
Terminal capacities  Solid or stranded  mm² 1x (1,5 - 6) 2x (1,5 - 6)  Flexible with ferrules to DIN 46228  mm² 1x (1 - 4) 2x (1 - 4)  2x (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  Terminal capacity			Quantity	3
Terminal capacities  Solid or stranded  mm² 1 x (1,5 - 6) 2 x (1,5 - 6)  Flexible with ferrules to DIN 46228  mm² 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  Terminal capacity	Control circuit reliability at 24 V DC, 10 mA		H <sub>F</sub>	$< 10^{-5}$ , $< 1$ fault in 100000 operations
Solid or stranded  mm² 1 x (1,5 - 6) 2 x (1,5 - 6)  mm² 1 x (1 - 4) 2 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  Terminal capacity	Terminal canacities	probability		
Flexible with ferrules to DIN 46228  mm² 1x (1 - 4) 2x (1 - 4) 2x (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  Terminal capacity			2	1 x (1 5 - 6)
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  Terminal capacity	oona or strantagu		mm <sup>2</sup>	2 x (1,5 - 6)
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  Terminal capacity	Flexible with ferrules to DIN 46228		mm <sup>2</sup>	
Tightening torque for terminal screw  Technical safety parameters:  Notes  B10 <sub>d</sub> values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity				
Technical safety parameters:  Notes  B10 <sub>d</sub> values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity	Terminal screw			M4
Notes B10 <sub>d</sub> values as per EN ISO 13849-1, table C1  Rating data for approved types  Terminal capacity	Tightening torque for terminal screw		Nm	1.6
Rating data for approved types Terminal capacity	Technical safety parameters:			
Terminal capacity	Notes			B10 <sub>d</sub> values as per EN ISO 13849-1, table C1
	Rating data for approved types			
Terminal screw M4	Terminal capacity			
	Terminal screw			M4
Tightening torque Ib-in 14.128	Tightening torque		lb-in	14.128

Design verification as per IEC	:/EN 61	1439
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Technical data for design verification

Rated operational current for specified heat dissipation	In	Α	32
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	1.8
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 switch gear must be observed. $\label{eq:specification}$
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.

## **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])

[AKI 000010])		
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	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	А	32
Rated permanent current at AC-21, 400 V	А	32
Rated operation power at AC-3, 400 V	kW	13
Rated short-time withstand current lcw	kA	0.64
Rated operation power at AC-23, 400 V	kW	15
Switching power at 400 V	kW	15
Conditioned rated short-circuit current Iq	kA	80

Number of poles	3
Number of auxiliary contacts as normally closed contact	1
Number of auxiliary contacts as normally open contact	1
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

### **Approvals**

North America Certification For UL/CSA certification order article number 255895

### **Dimensions**

