DATASHEET - P1-32/M4/SVB/N



Main switch, P1, 32 A, rear mounting, 3 pole + N, Emergency switching off function, Lockable in the 0 (Off) position, With metal shaft for a control panel depth of 400 mm



Part no. P1-32/M4/SVB/N

Catalog No. 172867

EL-Nummer (Norway) 1417140

Delivery program

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 fitted by user.
Notes			With metal shaft for a control panel depth of 400 mm
Number of poles			3 pole + N
Auxiliary contacts			
1		N/0	0
7		N/C	0
Locking facility			Lockable in the 0 (Off) position
Degree of Protection			Front IP65
Design			rear mounting
Contact sequence			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Function			O OFF
Motor rating AC-23A, 50 - 60 Hz			
400 V	Р	kW	15
Rated uninterrupted current	Iu	Α	32
Note on rated uninterrupted current !u			Rated uninterrupted current l _u is specified for max. cross-section.

Technical data General

donora.		
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		
Open	°C	-25 - +50
Enclosed	°C	-25 - +40

Overvoltage category/pollution degree			III/3
Rated impulse withstand voltage	U _{imp}	V AC	6000
Mechanical shock resistance	Cillip		15
Mounting position		g	As required
Contacts			As required
Mechanical variables			
Number of poles			3 pole + N
Auxiliary contacts			
,		N/O	0
		N/C	0
Electrical characteristics		, -	
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current	Iu	A	32
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	50
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	I_q	kA	80
Switching capacity			
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 l _e		W	1.8
Lifespan, mechanical	Operations	x 10 ⁶	> 0.3
Maximum operating frequency	Operations/h		1200
AC			
AC-3			
Rating, motor load switch	P	kW	
220 V 230 V	P	kW	7.5
400 V 415 V	P	kW	13
500 V	P	kW	18.5
690 V	P	kW	15
Rated operational current motor load switch			
230 V	l _e	Α	26.4
400V 415 V	le	Α	26.4
500 V	l _e	Α	23.4
690 V	I _e	Α	14.7
AC-21A			
Rated operational current switch			
440 V	I _e	Α	32
AC-23A	-		
Motor rating AC-23A, 50 - 60 Hz	P	kW	
230 V	P	kW	7.5
400 V 415 V	P	kW	15

Rated operational current Part Rated operational current Part Rated operational current Part Rated operational current Part Part Part Part Part				
Read operational current materical souties I A.D. 2.2. 2.2. A.D. 2.2. 2.2. 2.2. 3.2.<	500 V	Р	kW	18.5
1907 1908	690 V	Р	kW	15
	Rated operational current motor load switch			
1909	230 V	l _e	Α	32
CO	400 V 415 V	I _e	Α	32
DC-1. Leads diversit workches L/R = 1 mis Feet Description of current Ig A 32 Mobility per consisted pair in series Ig A 32 DC-1. Leads diversit form in series Ig V 6 DC-1. Lead diversit consisted series (IR = 1 mis) Ig A 25 Billed diversitional current Ig Causanty 1 Gall Y Cartactes Ig A 25 Billed operational current Ig A 25 GUIV Cartactes Ig A 25 Billed operational current Ig A 25 Cattactes Ig Ig 15 15 15 15 15 15 15 15 15 15 15	500 V	l _e	Α	30
DC-1, Lead-downsk solichest L/B - 1 ms I. AU 32 Motted geneticonal corrent I. AU 32 DC-200, moral solich spain in societis I. AU 32 DC-200, moral solich spain in societis I. AU 32 Bated operational current I. AU 32 Getrates II AU 32 Certates II AU 32 Certates II AU 32 Certates II II 32 Certates II III 32 Certate	690 V	l _e	A	19.8
	nc.			
Related agenerational current Vicus per connect pair in anterias Vicus per conn				
Voltage per contact pair in series Voltage p			۸	22
		'e		
A			V	60
Rated aperational current Age Contacts Contacts				
Contacts				
### Abard operational current	Rated operational current	I _e		
Rated operational current			Quantity	1
Contracts	48 V			
Rated operational current	Rated operational current	l _e	Α	25
Rated operational current Le	Contacts		Quantity	2
Contracts	60 V			
120 V Rated operational current	Rated operational current	Ie	Α	25
120 V Rated operational current	Contacts		Quantity	2
Contracts Quantity probability If a part probability If part probability	120 V			
Contracts Quantity probability If a part probability If part probability	Rated operational current	l _e	Α	12
Control circuit reliability at 24 VDC.10 mA Fault probability at 24 VDC.10 mA To descript the formulation of the following at 24 VDC.10 mA In mary 2 (24 (1 - 4)) (24 (1 -				3
Terminal capacities		Fault		
Solid or stranded mm² ½ x (1,5 - 6) 2 x (1,5 - 6)<	Control Chedit Tollability at 24 v Bo, To IIIA		''F	< 10 °, < 1 fault in 100000 operations
Flexible with ferrules to DIN 46228	Terminal capacities			
Flexible with ferrules to DIN 46228 mm² 2 x (1 - 4) Terminal screw m² 2 x (1 - 4) Tightening torque for terminal screw m² 16 Terminal screw Total safety parameters: Works b10g values as per EN ISO 13849-1, table C1 Rating data for approved types Contacts 0 VAC 800 Rated uninterrupted current max. 0 0 0 Main conducting paths 4 0 0 General use Auxiliary contacts 0 0 0 General Use 4 0 <td>Solid or stranded</td> <td></td> <td>mm^2</td> <td>1 x (1,5 - 6) 2 x (1 5 - 6)</td>	Solid or stranded		mm^2	1 x (1,5 - 6) 2 x (1 5 - 6)
Terminal screw 2x (1 - 4) Tightening torque for terminal screw Mo M4 Technical safety parameters: Technical safety parameters: Notes Blog values as per EN ISO 13849-1, table C1 Rating data for approved types Contacts 600 Rated operational voltage Ve VAC 600 Rated uninterrupted current max. Amount on conducting paths Amount on conducting paths <th< td=""><td>Elevible with farrules to DIN 46229</td><td></td><td>2</td><td></td></th<>	Elevible with farrules to DIN 46229		2	
Tightening torque for terminal screw Nm 1.6 Technical safety parameters: VACS B10 _d values as per EN ISO 13849-1, table C1 Rating data for approved types Contacts Rated operational voltage VAC 600 Rated uninterrupted current max. Amain conducting paths Amain conducting pat	HEALDE WITH TEHLUES TO DITY 40220		mm	
Notes B10g values as per EN ISO 13849-1, table C1	Terminal screw			M4
Rating data for approved types Ue VAC B10g values as per EN ISO 13849-1, table C1 Rated uninterrupted current max. Ve VAC 600 Main conducting paths Very VAC 30 Auxiliary contacts Very Pilot Duty Amount of the pilot Duty Amoun	Tightening torque for terminal screw		Nm	1.6
Rated operational voltage	Technical safety parameters:			
Contacts Ve VAC 600 Rated operational voltage Ve VAC 600 Rated uninterrupted current max. Ve VAC VAC Main conducting paths P 30 Auxiliary contacts Ve Maximum conducting paths 10 Pilot Duty Application of paths Application of paths 10 Switching capacity Application of paths Application of paths Single-phase F F 120 V AC F P 200 V AC F P 240 V AC F P 200 V AC F P 200 V AC F P 240 V AC F P 480 V AC F P 480 V AC F P 600 V AC F P 600 V AC F P 100 V AC F P 100 V AC F P 100 V AC F P	Notes			$\mathrm{B10_{d}}$ values as per EN ISO 13849-1, table C1
Rated operational voltage U _e V AC 600 Rated uninterrupted current max. Walin conducting paths A 30 General use Auxiliary contacts A 10 Pilot Duty A 10 Switching capacity A600 P 600 Maximum motor rating BP 1 Single-phase HP 2 200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 V AC HP 3 480 V AC HP 7.5 480 V AC HP 10 600 V AC HP 10 HP 10	Rating data for approved types			
Rated uninterrupted current max. Main conducting paths General use A 30 Auxiliary contacts Iu A 10 Pilot Duty A 600 P 600 P 600 Switching capacity A 600 P 600 P 600 Single-phase HP 1 120 V AC HP 1 200 V AC HP 3 Three-phase HP 3 200 V AC HP 3 480 V AC HP 7.5 480 V AC HP 10 600 V AC HP 10 600 V AC HP 15				
Main conducting paths A 30 Auxiliary contacts Iu A 10 General Use Iu A 10 Pilot Duty A 600 P 600 P600 Switching capacity P600 P600 Maximum motor rating P600 P600 Single-phase P7 1 200 V AC PP 2 240 V AC PP 3 Three-phase PP 3 200 V AC PP 7.5 480 V AC PP 10 480 V AC PP 15	Rated operational voltage	U _e	V AC	600
Auxiliary contacts	Rated uninterrupted current max.			
Auxiliary contacts Iu A 10 General Use Iu A 600 P 600 Pilot Duty A 600 P 600 Switching capacity Feb. 2 Maximum motor rating HP 1 Single-phase HP 2 200 V AC HP 3 240 V AC HP 3 Three-phase HP 3 200 V AC HP 7.5 480 V AC HP 10 480 V AC HP 15	Main conducting paths			
Filot Duty A 10 A 600 P 600	General use		Α	30
Pilot Duty A 600 P 600 Switching capacity February Maximum motor rating February Single-phase February 120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 Three-phase February HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	Auxiliary contacts			
Switching capacity P 600 Maximum motor rating P 600 Single-phase T 120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	General Use	I _U	Α	10
Switching capacity P 600 Maximum motor rating P 600 Single-phase T 120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	Pilot Duty			
Maximum motor rating Single-phase 120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15				P 600
Single-phase HP 1 120 V AC HP 1 200 V AC HP 2 Three-phase HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	Switching capacity			
120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 Three-phase HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	Maximum motor rating			
200 V AC 240 V AC HP 3 Three-phase 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	Single-phase			
240 V AC HP 3 Three-phase HP 3 200 V AC HP 3.5 480 V AC HP 10 600 V AC HP 15	120 V AC		HP	1
Three-phase 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15	200 V AC		HP	2
200 V AC	240 V AC		HP	3
240 V AC	Three-phase			
480 V AC	200 V AC		НР	3
600 V AC HP 15	240 V AC		НР	7.5
600 V AC HP 15	480 V AC		НР	10
			НР	
	<u> </u>			

Basic Rating	kA	5
max. Fuse	Α	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

besign vermeation as per 120/214 01-405			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	32
Heat dissipation per pole, current-dependent	P _{vid}	W	1.8
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	50
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])

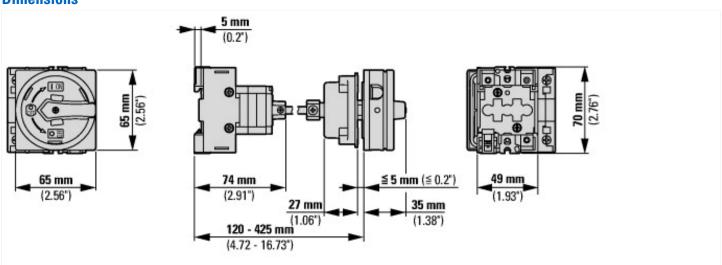
[AKI 0000 To])	
Version as main switch	Yes
Version as maintenance-/service switch	Yes
Version as safety switch	No
Version as emergency stop installation	Yes
Version as reversing switch	No

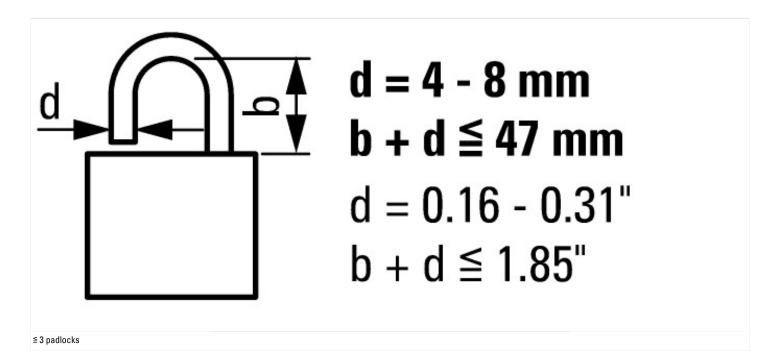
Number of switches		1
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	32
Rated permanent current at AC-23, 400 V	Α	32
Rated permanent current at AC-21, 400 V	Α	32
Rated operation power at AC-3, 400 V	kW	13
Rated short-time withstand current lcw	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		4
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		Built-in device fixed built-in technique
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		Yes
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

• •	
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
Suitable for	Branch circuits, suitable as motor disconnect

Dimensions





Assets (links)

Declaration of CE Conformity

00003102

Instruction Leaflets

IL008007ZU2018_05

Eaton 172867 ED2019 V61.0 EN