DATASHEET - P1-32/Z



On-Off switch, P1, 32 A, rear mounting, 3 pole, with black thumb grip and front plate



Part no. P1-32/Z Catalog No. 098049

EL-Nummer 1456113

(Norway)

Delivery program

Delivery program			
Product range			On-Off switch
Part group reference			P1
			with black thumb grip and front plate
Information about equipment supplied			Auxiliary contact or neutral conductor fitted by user.
Number of poles			3 pole
Auxiliary contacts			
1		N/0	0
7		N/C	0
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 0
Front plate no.			FS 908
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 I _u is specified for max. cross-section.

Technical data

General			
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL 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		g	15
Mounting position		9	As required
Contacts			7.6 Toquillou
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	l _u	Α	32
Note on rated uninterrupted current !u			Rated uninterrupted current $I_{\rm u}$ is specified for max. cross-section.
Load rating with intermittent operation, class 12			u
AB 25 % DF		x I _e	2
AB 40 % DF		x l _e	1.6
AB 60 % DF		x l _e	1.3
Short-circuit rating		A 0/ I	
Fuse		A gG/gL	
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	80
Switching capacity cos φ rated making capacity as per IEC 60947-3		Α	320
Rated breaking capacity cos φ to IEC 60947-3		A	320
230 V		A	260
400/415 V		A	300
500 V		A	290
690 V		A	250
Safe isolation to EN 61140		^	200
between the contacts		V AC	440
Current heat loss per contact at I _e		W	1.8
Lifespan, mechanical	Operations		> 0.3
		x 10 ⁶	
Maximum operating frequency	Operations/h		1200
AC			
AC-3		114/	
Rating, motor load switch	P	kW	35
220 V 230 V	P	kW	7.5
400 V 415 V	P	kW	13
500 V 690 V	P P	kW	18.5
	٢	kW	15
Rated operational current motor load switch		٨	26.4
230 V	l _e	A	26.4
400V 415 V	l _e	A	26.4
500 V	l _e	Α	23.4
690 V	l _e	Α	14.7
AC-23A			
Motor rating AC-23A, 50 - 60 Hz	Р	kW	
230 V	Р	kW	7.5
400 V 415 V	Р	kW	15
500 V	Р	kW	18.5
690 V	Р	kW	15
Rated operational current motor load switch			
230 V	I _e	Α	32
400 V 415 V	I _e	Α	32

March Marc				
Delitation brask switches LR = 1 ms File File	500 V	I _e	Α	30
### 17	690 V	l _e	Α	19.8
Retract operational current Parish Parish	DC			
Motorago per contento pair in senies Para	DC-1, Load-break switches L/R = 1 ms			
DC-29A	Rated operational current	l _e	Α	32
Part	Voltage per contact pair in series		V	60
Related operational current	DC-23A, motor load switch L/R = 15 ms			
Contacts Inter-operational current Inter-operational	24 V			
Contacts	Rated operational current	I _e	Α	25
Age	Contacts		Quantity	1
Rated operational current Part			,	
Contracts Quantity Quantity Quantity Percentage of Contracts Quantity Asset operational current Quantity Quantity Percentage of Contracts Quantity Quantity <th< td=""><td></td><td>l_a</td><td>Δ</td><td>25</td></th<>		l _a	Δ	25
Maria depertament current Maria depertament		·e		
Read operational current			Qualitity	2
Contacts Contacts Contacts Contacts Law It is a positional current Law It is a positional current Law It is a positional current Law It is a positional current (Incidibility at 24 V DC, 10 mA) Four Important (Incidibility at 24 V DC, 10 mA) Four Important (Incidibility at 24 V DC, 10 mA) Four Important (Incidibility at 24 V DC, 10 mA) Important (Incidibility at 24 V DC, 10 mA) <t< td=""><td></td><td></td><td></td><td>ar.</td></t<>				ar.
Nation		I _e		
Rated operational current			Quantity	2
Contracts Quantity Quantity Quantity 10 % 1 feature in 100,000 switching operations Control ciorie ralability at 24 V D C, 10 mA Fault probability I x 1 .5 .6 % 1 feature in 100,000 switching operations Control ciorie ralability at 24 V D C, 10 mA I x 1 .5 .6 % 2 x 1 .5 .6 % Control ciorie with ferrules to DIN 46223 x 1 x 1 .5 .6 % x 1 x 1 .5 .6 % Flexible with ferrules to DIN 46223 x 1 x 1 .5 .6 % x 1 x 1 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4				
Part	Rated operational current	l _e		
Prominal Capacities	Contacts		Quantity	3
	Control circuit reliability at 24 V DC, 10 mA		HF	< 10 ⁻⁵ ,< 1 failure in 100,000 switching operations
Solid or stranded mm 11 1 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal consoities	probability		
			2	1 x (1 5 - 6)
	Sond of Stranded		mm ⁻	2 x (1,5 - 6)
Terminal screw Topinour progrege for the progrege for t	Flexible with ferrules to DIN 46228		mm ²	
Name				
Notes	Terminal screw			M4
Notes Bioly values as per EN ISO 13849-1, table C1 Rating data for approved types VAC Both Contacts Secondary (and the conducting paths) VAC Both Conducting paths Secondary (and the conducting paths) Amain conducting paths Amain condu			Nm	1.6
Nation Contracts Contrac				
Contacts Ue VAC 600 Rated uninterrupted current max. Feed				B10 _d values as per EN ISU 13849-1, table C1
Rated operational voltage Ue VAC 600 Rated uninterrupted current max. ————————————————————————————————————				
Rated uninterrupted current max. Main conducting paths A gas and a general use A gas a			VAC	000
Main conducting paths A 30 Auxiliary contacts IU A 10 General Use IU A 10 Pilot Duty A600 p 600 p Switching capacity F00 F00 Maximum motor rating F00 F00 Single-phase F00 1 200 V AC HP 1 200 V AC HP 2 300 V AC HP 3 480 V AC HP 5 480 V AC HP 15 480 V AC HP 15 480 V AC HP 15 600 V AC HP 15 880 V AC HP 15 880 V AC HP 15 880 V AC HP 15 980 V AC HP 15 1980 V AC HP 15 199 V AC HP 15 190 V AC HP 15 190 V AC HP 15		ue	V AC	000
General use Auxiliary contacts Auxiliary contacts Auxiliary contacts Iu A to Incompanies A 600 P 600				
Auxiliary contacts Iu A 10 General Use Iu A 600 p 600				
General Use Iu A 10 Pilot Duty A 6000 P 6000 Switching capacity F F Maximum motor rating F F Single-phase F 1 120 V AC HP 2 240 V AC HP 3 250 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 480 V AC HP 15 600 V AC HP 15 Short Circuit Current Rating SCCR F Basic Rating KA 5 max. Fuse A 110 High fault rating KA 50 (class J			Α	30
Pilot Duty				
Switching capacity P 600 Maximum motor rating Control of the place o	General Use	lu	Α	10
Switching capacity Image: Company of the plane of the pl	Pilot Duty			
Maximum motor rating Image: Company of the part of	Suitabing apposits			1 000
Single-phase 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 Short Circuit Current Rating SCCR Basic Rating KA 5 max. Fuse A 110 High fault rating KA 10 max. Fuse A 10 max. Fuse A 50, Class J				
120 V AC HP 1 200 V AC HP 2 240 V AC HP 3 200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
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 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J			ш	
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 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
Three-phase HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating KA 5 max. Fuse A 110 High fault rating KA 10 max. Fuse A 50, Class J				
200 V AC HP 3 240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J			HP	3
240 V AC HP 7.5 480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
480 V AC HP 10 600 V AC HP 15 Short Circuit Current Rating SCCR SCCR Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				
600 V AC HP 15 Short Circuit Current Rating SCCR Company Basic Rating kA 5 max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J				7.5
Short Circuit Current Rating Basic Rating MA 5 max. Fuse A 110 High fault rating Max. Fuse A 50, Class J			HP	10
Basic RatingkA5max. FuseA110High fault ratingkA10max. FuseA50, Class J			HP	15
max. Fuse A 110 High fault rating kA 10 max. Fuse A 50, Class J	Short Circuit Current Rating		SCCR	
High fault rating kA 10 max. Fuse A 50, Class J	Basic Rating		kA	5
max. Fuse A 50, Class J	max. Fuse		Α	110
	High fault rating		kA	10
Terminal capacity	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

Design vermoation as per 120/214 01733			
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])

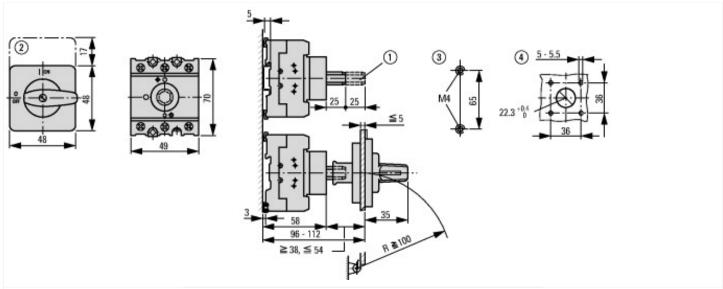
Version as main switch		No
Version as maintenance-/service switch		No
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage Ue AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current lu	Α	32
Rated permanent current at AC-23, 400 V	А	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		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		Built-in device fixed built-in technique
Suitable for ground mounting		No
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		Black
Type of control element		Toggle
Interlockable		No
Type of electrical connection of main circuit		Screw connection
Degree of protection (IP), front side		IP65
Degree of protection (NEMA)		12

Approvals

- ipprovate	
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
Degree of Protection	IEC: IP65; UL/CSA Type 1, 12

Dimensions



- Shaft extension with ZAV-T0 possible, max. 4 x 25 = 100 mm
 ZFS-... Label mount not included as standard
 Drilling dimensions base
 Drilling dimensions door

Additional product information (links)	
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