DATASHEET - P1-32/E

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

Part no.	P1-32/E
	079065
EL Number (Norway)	1456110

General specifications

Product name		Eaton Moeller® series P1 On-Off switch
Part no.		P1-32/E
EAN		4015080790655
Product Length/Depth		95 millimetre
Product height		70 millimetre
Product width		49 millimetre
Product weight		0.143 kilogram
Certifications		UL Category Control No.: NLRV UL IEC/EN 60947 UL 60947-4-1 CSA File No.: 012528 CSA IEC/EN 60947-3 CSA Class No.: 3211-05 CSA-C22.2 No. 94 CSA-C22.2 No. 60947-4-1-14 UL File No.: E36332 VDE 0660 IEC/EN 60204 CE
Product Tradename		P1
Product Type		On-Off switch
Product Sub Type		None
Catalog Notes		Rated Short-time Withstand Current (Icw) for a time of 1 second

Features & Functions

Fitted with:		Black thumb grip and front plate
Number of poles		3

General information

Accessories		Auxiliary contact or neutral conductor fitted by user.
Degree of protection		NEMA 12
Degree of protection (front side)		IP65
Lifespan, mechanical		300,000 Operations
Mounting method		Flush mounting
Mounting position		As required
Operating frequency		1200 Operations/h
Overvoltage category		III
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6000 V AC
Safe isolation		440 V AC, Between the contacts, According to EN 61140
Safety parameter (EN ISO 13849-1)		B10d values as per EN ISO 13849-1, table C.1
Shock resistance		15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
Suitable for		Front mounting 4-hole Branch circuits, suitable as motor disconnect, (UL/CSA)

Climatic environmental conditions

Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		50 °C
Ambient operating temperature (enclosed) - min		-25 °C
Ambient operating temperature (enclosed) - max		40 °C
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Terminal capacities

Terminal capacity		1 x (1.5 - 6) mm², solid or stranded 2 x (1.5 - 6) mm², solid or stranded 1 x (1 - 4) mm², flexible with ferrules to DIN 46228 2 x (1 - 4) mm², flexible with ferrules to DIN 46228 14 - 8 AWG, solid or flexible with ferrule
Screw size		M4, Terminal screw
Tightening torque		1.6 Nm, Screw terminals 14.1 lb-in, Screw terminals

Electrical rating

Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)		260 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		300 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)		290 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		250 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		26.4 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		26.4 A
Rated operational current (Ie) at AC-3, 500 V		23.4 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		14.7 A
Rated operational current (Ie) at AC-21, 440 V		32 A
Rated operational current (Ie) at AC-23A, 230 V		32 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		32 A
Rated operational current (Ie) at AC-23A, 500 V		30 A
Rated operational current (Ie) at AC-23A, 690 V		19.8 A
Rated operational current (Ie) at DC-1, load-break switches l/r = 1 ms		32 A
Rated operational current (Ie) at DC-23A, 24 V		25 A
Rated operational current (Ie) at DC-23A, 48 V		25 A
Rated operational current (Ie) at DC-23A, 60 V		25 A
Rated operational current (Ie) at DC-23A, 120 V		12 A
Rated operational power at AC-3, 380/400 V, 50 Hz		13 kW
Rated operational power at AC-3, 415 V, 50 Hz		13 kW
Rated operational power at AC-3, 500 V, 50 Hz		18.5 kW
Rated operational power at AC-3, 690 V, 50 Hz		15 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz		7.5 kW
Rated operational power at AC-23A, 400 V, 50 Hz		15 kW
Rated operational power at AC-23A, 500 V, 50 Hz		18.5 kW
Rated operational power at AC-23A, 690 V, 50 Hz		15 kW
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		32 A
Uninterrupted current		Rated uninterrupted current Iu is specified for max. cross-section.

Short-circuit rating

Rated conditional short-circuit current (Iq)		80 kA
Rated short-time withstand current (Icw)		640 A, Contacts, 1 second 0.64 kA
Short-circuit current rating (basic rating)		5 kA, SCCR (UL/CSA) 110A, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault)		50 A, Class J, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit protection rating		50 A gG/gL, Fuse, Contacts

Switching capacity

Load rating		1.6 x I# (with intermittent operation class 12, 40 % duty factor) 2 x I# (with intermittent operation class 12, 25 % duty factor) 1.3 x I# (with intermittent operation class 12, 60 % duty factor)
Number of contacts in series at DC-23A, 24 V		1
Number of contacts in series at DC-23A, 48 V		2
Number of contacts in series at DC-23A, 60 V		2
Number of contacts in series at DC-23A, 120 V		3
Switching capacity (main contacts, general use)		30 A, Rated uninterrupted current max. (UL/CSA)
Switching capacity (auxiliary contacts, general use)		10A, IU, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)		A600 (UL/CSA) P600 (UL/CSA)

Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)		320 A
Voltage per contact pair in series		60 V

Motor rating

Assigned motor power at 115/120 V, 60 Hz, 1-phase		1 HP
Assigned motor power at 200/208 V, 60 Hz, 1-phase		2 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase		3 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase		3 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase		7.5 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase		10 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase		15 HP

Contacts

Control circuit reliability		1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
Number of auxiliary contacts (change-over contacts)		0
Number of auxiliary contacts (normally closed contacts)		0
Number of auxiliary contacts (normally open contacts)		0

Actuator

Actuator color		Black
Actuator type		Short thumb-grip

Design verification

Equipment heat dissipation, current-dependent Pvid		0 W
Heat dissipation capacity Pdiss		0 W
Heat dissipation per pole, current-dependent Pvid		1.8 W
Rated operational current for specified heat dissipation (In)		32 A
Static heat dissipation, non-current-dependent Pvs		0 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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 9.0

Low-voltage industrial components (EG000017) / Switch disconnector (low voltage) (EC000216)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss13-27-37-14-03 [AKF060018])		
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 Iu		A	32
Rated permanent current at AC-23, 400 V		A	32
Rated permanent current at AC-21, 400 V		A	32
Rated operation power at AC-3, 400 V		kW	13
Rated short-time withstand current Icw		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 floor mounting			No
Suitable for front mounting 4-hole			Yes
Suitable for front mounting centre			No
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Colour control element			Black
Type of control element			Short thumb-grip
Interlockable			No
Type of electrical connection of main circuit			Screw connection
With pre-assembled cabling			No
Degree of protection (IP), front side			IP65
Degree of protection (NEMA)			12
Width		mm	49
Height		mm	70
Depth		mm	95
Width in number of modular spacings			