

**On-Off switch, P1, 32 A, service distribution board mounting, 3 pole + N,  
with black thumb grip and front plate**

**Part no.**                    **P1-32/IVS/N**  
**010402**

<b>General specifications</b>	
Product name	Eaton Moeller® series P1 On-Off switch
Part no.	P1-32/IVS/N
EAN	4015080104025
Product Length/Depth	90 millimetre
Product height	70 millimetre
Product width	63 millimetre
Product weight	0.183 kilogram
Certifications	UL Category Control No.: NLRV UL IEC/EN 60947-3 CSA-C22.2 No. 94 CSA File No.: 012528 UL File No.: E36332 CSA-C22.2 No. 60947-4-1-14 UL 60947-4-1 IEC/EN 60204 CE CSA IEC/EN 60947 CSA Class No.: 3211-05 VDE 0660
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
<b>Features &amp; Functions</b>	
Fitted with:	Black thumb grip and front plate
Number of poles	4
<b>General information</b>	
Accessories	Auxiliary contact fitted by user.
Degree of protection	NEMA Other
Degree of protection (front side)	IP30
Lifespan, mechanical	300,000 Operations
Mounting method	Service distribution board 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	Distribution board installation Branch circuits, suitable as motor disconnect, (UL/CSA)
<b>Climatic environmental conditions</b>	
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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
<b>Terminal capacities</b>	
Terminal capacity	2 x (1.5 - 6) mm <sup>2</sup> , solid or stranded

		1 x (1 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x (1 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228 1 x (1.5 - 6) mm <sup>2</sup> , solid or stranded 14 - 8 AWG, solid or flexible with ferrule
Screw size		M4, Terminal screw
Tightening torque		14.1 lb-in, Screw terminals 1.6 Nm, Screw terminals
<b>Electrical rating</b>		
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 I/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.
<b>Short-circuit rating</b>		
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
<b>Switching capacity</b>		
Load rating		1.3 x I# (with intermittent operation class 12, 60 % duty factor) 2 x I# (with intermittent operation class 12, 25 % duty factor) 1.6 x I# (with intermittent operation class 12, 40 % 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)		P600 (UL/CSA) A600 (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
<b>Motor rating</b>		
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
<b>Contacts</b>		
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
<b>Actuator</b>		
Actuator color		Black
Actuator type		Short thumb-grip
<b>Design verification</b>		
Equipment heat dissipation, current-dependent Pvid		0 W
Heat dissipation capacity Pdis		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		Meets the product standard's requirements.
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 disconnecter (low voltage) (EC000216)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ec!@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		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 floor mounting		No
Suitable for front mounting 4-hole		No
Suitable for front mounting centre		No
Suitable for distribution board installation		Yes
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		IP30
Degree of protection (NEMA)		Other
Width	mm	63
Height	mm	70
Depth	mm	90
Width in number of modular spacings		