

On-Off switch, P3, 100 A, surface mounting, 3 pole, with black thumb grip and front plate

Powering Business Worldwide™

Part no. P3-100/I5

207381

EL Number

1456131

(Norway)

General specifications	
Product name	Eaton Moeller® series P3 On-Off switch
Part no.	P3-100/I5
EAN	4015082073817
Product Length/Depth	162 millimetre
Product height	280 millimetre
Product width	200 millimetre
Product weight	1.46 kilogram
Certifications	IEC/EN 60947 CSA IEC/EN 60947-3 VDE 0660 UL IEC/EN 60204 CSA UL
Product Tradename	P3
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	100,000 Operations
Mounting method	Surface 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	Ground mounting
Switching angle	90 °
Climatic environmental conditions	
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	40 °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
Terminal capacities	
Terminal capacity	2 x (1.5 - 6) mm ² , flexible with ferrules to DIN 46228 1 x (1.5 - 25) mm ² , flexible with ferrules to DIN 46228 1 x (2.5 - 35) mm ² , solid or stranded 2 x (2.5 - 10) mm ² , solid or stranded

		14 - 2 AWG, solid or flexible with ferrule
Screw size		M5, Terminal screw
Tightening torque		3 Nm, Screw terminals 26.5 lb-in, Screw terminals
Electrical rating		
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)		760 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		740 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)		880 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		520 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		71 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		71 A
Rated operational current (Ie) at AC-3, 500 V		65 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		23.8 A
Rated operational current (Ie) at AC-21, 440 V		100 A
Rated operational current (Ie) at AC-23A, 230 V		100 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		100 A
Rated operational current (Ie) at AC-23A, 500 V		96 A
Rated operational current (Ie) at AC-23A, 690 V		68 A
Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms		100 A
Rated operational current (Ie) at DC-23A, 24 V		50 A
Rated operational current (Ie) at DC-23A, 48 V		50 A
Rated operational current (Ie) at DC-23A, 60 V		50 A
Rated operational current (Ie) at DC-23A, 120 V		25 A
Rated operational power at AC-3, 380/400 V, 50 Hz		37 kW
Rated operational power at AC-3, 415 V, 50 Hz		37 kW
Rated operational power at AC-3, 500 V, 50 Hz		45 kW
Rated operational power at AC-3, 690 V, 50 Hz		37 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz		30 kW
Rated operational power at AC-23A, 400 V, 50 Hz		55 kW
Rated operational power at AC-23A, 500 V, 50 Hz		55 kW
Rated operational power at AC-23A, 690 V, 50 Hz		55 kW
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		100 A
Uninterrupted current		Rated uninterrupted current Iu is specified for max. cross-section.
Short-circuit rating		
Rated conditional short-circuit current (Iq)		4 kA (Load side) 80 kA (Supply side)
Rated short-time withstand current (Icw)		2 kA
Short-circuit current rating (basic rating)		150A, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit protection rating		100 A gG/gL, Fuse, Contacts
Switching capacity		
Load rating		2 x I# (with intermittent operation class 12, 25 % duty factor) 1.6 x I# (with intermittent operation class 12, 40 % 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)		100 A, If used with neutral conductor IU = max. 90 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)		950 A
Voltage per contact pair in series		60 V
Motor rating		
Assigned motor power at 115/120 V, 60 Hz, 1-phase		5 HP

Assigned motor power at 200/208 V, 60 Hz, 1-phase			10 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase			20 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase			15 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase			25 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase			60 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase			75 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 P _{vid}			7.5 W
Heat dissipation capacity P _{diss}			0 W
Heat dissipation per pole, current-dependent P _{vid}			7.5 W
Rated operational current for specified heat dissipation (I _n)			100 A
Static heat dissipation, non-current-dependent P _{vs}			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 disconnecter (low voltage) (EC000216)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (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	100
Rated permanent current at AC-23, 400 V	A	100
Rated permanent current at AC-21, 400 V	A	100
Rated operation power at AC-3, 400 V	kW	37
Rated short-time withstand current Icw	kA	2
Rated operation power at AC-23, 400 V	kW	55
Switching power at 400 V	kW	55
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		Complete device in housing
Suitable for floor 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		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	200
Height	mm	280
Depth	mm	162
Width in number of modular spacings		