DATASHEET - P3-100/I5-RT

On-Off switch, P3, 100 A, surface mounting, 3 pole, Emergency switching off function, with red thumb grip and yellow front plate

Powering Business Worldwide™

Part no. P3-100/I5-RT
207382

General specifications

Product name	Eaton Moeller® series P3 On-Off switch
Part no.	P3-100/I5-RT
EAN	4015082073824
Product Length/Depth	162 millimetre
Product height	280 millimetre
Product width	200 millimetre
Product weight	1.46 kilogram
Certifications	UL CSA IEC/EN 60947 IEC/EN 60947-3 VDE 0660 IEC/EN 60204
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

Features	Version as emergency stop installation
Fitted with:	Red thumb grip and yellow front plate
Functions	Emergency switching off function
Number of poles	Three-pole

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

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, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Terminal capacities

Terminal capacity	1 x (1.5 - 25) mm^2, flexible with ferrules to DIN 46228 2 x (2.5 - 10) mm^2, solid or stranded 1 x (2.5 - 35) mm^2, solid or stranded 2 x (1.5 - 6) mm^2, flexible with ferrules to DIN 46228 14 - 2 AWG, solid or flexible with ferrule

Screw size	M5, Terminal screw
Tightening torque	26.5 lb-in, Screw terminals 3 Nm, 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 l/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)	10 kA, SCCR (UL/CSA) 150A, max. Fuse, 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) 1.3 x I# (with intermittent operation class 12, 60 % 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)	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	Red
Actuator type	Short thumb-grip

Design verification

Equipment heat dissipation, current-dependent Pvid	7.5 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	7.5 W
Rated operational current for specified heat dissipation (In)	100 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 8.0

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 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			Red
Type of control element			Short thumb-grip
Interlockable			No
Type of electrical connection of main circuit			Screw connection
Degree of protection (IP), front side			IP65
Degree of protection (NEMA)			12