

On-Off switch, P1, 40 A, surface mounting, 3 pole, Emergency switching off function, with red thumb grip and yellow front plate, hard knockout version

Part no. P1-40/I2H-RT
199928
EL Number 1403751
(Norway)

General specifications		
Product name		Eaton Moeller® series P1 On-Off switch
Part no.		P1-40/I2H-RT
EAN		4015082953409
Product Length/Depth		107 millimetre
Product height		180 millimetre
Product width		100 millimetre
Product weight		0.534 kilogram
Compliances		UKCA CE
Certifications		IEC/EN 60947 IEC/EN 60204 IEC/EN 60947-3
Product Tradename		P1
Product Type		On-Off switch
Product Sub Type		None
Catalog Notes		Rated Short-time Withstand Current (I _{cw}) for a time of 1 second
Features & Functions		
Enclosure material		Polycarbonate
Fitted with:		Red thumb grip and yellow front plate Auxiliary contact
Functions		Emergency switching off function
Number of poles		3
General information		
Degree of protection		IP65
Degree of protection (front side)		IP65
Lifespan, mechanical		300,000 Operations
Mounting method		Surface mounting
Mounting position		As required
Operating frequency		50 Operations/h
Overvoltage category		III
Pollution degree		3
Rated impulse withstand voltage (U _{imp})		6000 V AC
Safe isolation		440 V AC, Between the contacts, According to EN 61140
Shock resistance		15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
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		1 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 2 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 1 x 10 mm ² with fork terminal 2 x 10 mm ² with fork terminal
Screw size		M4, Terminal screw

Tightening torque		1.6 Nm, Screw terminals
Electrical rating		
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		290 kA
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		130 kA
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		30 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		30 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		17 A
Rated operational current (Ie) at AC-21, 440 V		40 A
Rated operational current (Ie) at AC-23A, 230 V		40 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		40 A
Rated operational current (Ie) at AC-23A, 690 V		20 A
Rated operational power at AC-3, 380/400 V, 50 Hz		15 kW
Rated operational power at AC-3, 415 V, 50 Hz		15 kW
Rated operational power at AC-3, 690 V, 50 Hz		15 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz		11 kW
Rated operational power at AC-23A, 400 V, 50 Hz		22 kW
Rated operational power at AC-23A, 690 V, 50 Hz		18.5 kW
Rated operational voltage (Ue) at AC - min		690 V
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		40 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)		0.64 kA 640 A, Contacts, 1 second
Short-circuit protection rating		50 A gG/gL, Fuse, Contacts
Switching capacity		
Load rating		1.3 x I# (with intermittent operation class 12, 60 % duty factor) 1.6 x I# (with intermittent operation class 12, 40 % duty factor) 2 x I# (with intermittent operation class 12, 25 % duty factor)
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		0 W
Heat dissipation capacity Pdiss		0 W
Heat dissipation per pole, current-dependent Pvid		3.5 W
Rated operational current for specified heat dissipation (In)		40 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 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
Rated permanent current Iu	A	40
Rated permanent current at AC-23, 400 V	A	40
Rated permanent current at AC-21, 400 V	A	40
Rated operation power at AC-3, 400 V	kW	15
Rated short-time withstand current Icw	kA	0.64
Rated operation power at AC-23, 400 V	kW	22
Switching power at 400 V	kW	22
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		No
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
With pre-assembled cabling		No
Degree of protection (IP), front side		IP65
Degree of protection (NEMA)		
Width	mm	100
Height	mm	180

Depth	mm	107
Width in number of modular spacings		