

# Specifications

Photo is representative

## Eaton 218963

Eaton Moeller® series T0 On-Off switch, 3 pole + N + 1 N/O + 1 N/C, 20 A, 90 °, surface mounting  
T0-3-15680/I1

### General specifications

PRODUCT NAME	Eaton Moeller® series T0 On-off switch
CATALOG NUMBER	218963
MODEL CODE	T0-3-15680/I1
EAN	4015082189631
PRODUCT LENGTH/DEPTH	137 mm
PRODUCT HEIGHT	122 mm
PRODUCT WIDTH	80 mm
PRODUCT WEIGHT	0.288 kg
CERTIFICATIONS	EN 60204 EN 60947 IEC 60947 VDE IEC/EN 60947 VDE 0660 IEC/EN 60204 IEC/EN 60947-3
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second

## Product specifications

<b>PRODUCT CATEGORY</b>	On-Off switch
<b>ACTUATOR COLOR</b>	Black
<b>ACTUATOR FUNCTION</b>	Maintained
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	UV resistance only in connection with protective shield.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS</b>	Is the panel builder's responsibility.

<b>AND CONNECTIONS</b>	
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>FITTED WITH:</b>	Black thumb grip and front plate
<b>OPERATING FREQUENCY</b>	1200 Operations/h
<b>POLLUTION DEGREE</b>	3
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ</b>	7.5 kW
<b>RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ</b>	5.5 kW
<b>RATED PERMANENT CURRENT AT AC-21, 400 V</b>	20 A
<b>RATED PERMANENT CURRENT AT AC-23, 400 V</b>	13.3 A
<b>RATED UNINTERRUPTED CURRENT (IU)</b>	20 A
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	0 W
<b>SWITCHING ANGLE</b>	90 °
<b>SWITCHING POWER AT 400 V</b>	5.5 kW
<b>VOLTAGE PER CONTACT PAIR IN SERIES</b>	60 V
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	5.5 kW
<b>DEVICE CONSTRUCTION</b>	Complete device in housing
<b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>	320 A, Contacts, 1 second 0.32 kA
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>DESIGN</b>	15680
<b>MOUNTING POSITION</b>	As required

<b>ACTUATOR TYPE</b>	Short thumb-grip
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	0.6 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	0.6 W
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	1
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)</b>	6 kA
<b>OVERVOLTAGE CATEGORY</b>	III
<b>CONTROL CIRCUIT RELIABILITY</b>	1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
<b>DEGREE OF PROTECTION (FRONT SIDE)</b>	IP65
<b>NUMBER OF POLES</b>	4
<b>MOUNTING METHOD</b>	Surface mounting
<b>DEGREE OF PROTECTION</b>	NEMA 12
<b>SUITABLE FOR</b>	Ground mounting
<b>NUMBER OF SWITCHES</b>	1
<b>SAFE ISOLATION</b>	440 V AC, Between the contacts, According to EN 61140
<b>SCREW SIZE</b>	M3.5, Terminal screw
<b>INSCRIPTION</b>	0-1
<b>SHOCK RESISTANCE</b>	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
<b>LIFESPAN, MECHANICAL</b>	400,000 Operations
<b>LOAD RATING</b>	1.3 x I <sub>e</sub> (with intermittent operation class 12, 60 % duty factor) 2 x I <sub>e</sub> (with intermittent operation class 12, 25 % duty factor)

	1.6 x I <sub>e</sub> (with intermittent operation class 12, 40 % duty factor)
<b>TERMINAL CAPACITY</b>	1 x (1 - 2.5) mm <sup>2</sup> , solid or stranded 1 x (0.75 - 2.5) mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x (0.75 - 2.5) mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x (1 - 2.5) mm <sup>2</sup> , solid or stranded
<b>SAFETY PARAMETER (EN ISO 13849-1)</b>	B10d values as per EN ISO 13849-1, table C.1
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	1
<b>NUMBER OF CONTACT UNITS</b>	3
<b>NUMBER OF CONTACTS IN SERIES AT DC-21A, 240 V</b>	1
<b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V</b>	3
<b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V</b>	1
<b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V</b>	5
<b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V</b>	2
<b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V</b>	3
<b>RATED BREAKING CAPACITY AT 220/230 V (COS PHI TO IEC 60947-3)</b>	100 A
<b>RATED BREAKING CAPACITY AT 400/415 V (COS PHI TO IEC 60947-3)</b>	110 A
<b>RATED BREAKING CAPACITY AT 500 V (COS PHI TO IEC 60947-3)</b>	80 A
<b>RATED BREAKING CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)</b>	60 A
<b>RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)</b>	130 A
<b>RATED OPERATING VOLTAGE (UE) - MAX</b>	690 V
<b>RATED OPERATING VOLTAGE (UE) - MIN</b>	690 V
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V
<b>SHORT-CIRCUIT PROTECTION RATING</b>	20 A gG/gL, Fuse, Contacts

<b>RATED OPERATIONAL CURRENT (IE) AT AC-21, 440 V</b>	20 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC- 23A, 230 V</b>	13.3 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC- 23A, 400 V, 415 V</b>	13.3 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC- 23A, 500 V</b>	13.3 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC- 23A, 690 V</b>	7.6 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V</b>	11.5 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>	11.5 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>	9 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>	4.9 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, LOAD-BREAK SWITCHES L/R = 1 MS</b>	10 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-13, CONTROL SWITCHES L/R = 50 MS</b>	10 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-21, 240 V</b>	1 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC- 23A, 120 V</b>	5 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC- 23A, 24 V</b>	10 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC- 23A, 240 V</b>	5 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC- 23A, 48 V</b>	10 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC- 23A, 60 V</b>	10 A
<b>RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 220/230 V</b>	20 A
<b>RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 380/400 V</b>	20 A
<b>RATED OPERATIONAL CURRENT (IE) STAR-</b>	15.6 A

<b>DELTA AT AC-3, 500 V</b>	
<b>RATED OPERATIONAL CURRENT (IE) STAR-DELTA AT AC-3, 690 V</b>	8.5 A
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	20 A
<b>RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ</b>	3 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ</b>	5.5 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ</b>	7.5 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ</b>	5.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	5.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>	5.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	4 kW
<b>RATED OPERATIONAL POWER STAR-DELTA AT 220/230 V, 50 HZ</b>	5.5 kW
<b>RATED OPERATIONAL POWER STAR-DELTA AT 380/400 V, 50 HZ</b>	7.5 kW
<b>TIGHTENING TORQUE</b>	1 Nm, Screw terminals
<b>UNINTERRUPTED CURRENT</b>	Rated uninterrupted current $I_u$ is specified for max. cross-section.

## Resources

<b>BROCHURES</b>	<a href="#">Brochure - T Rotary Cam switch and P Switch-disconnector</a>
<b>CATALOGS</b>	<a href="#">P1-40 Switch-disconnectors</a> <a href="#">P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-00004895.pdf</a> <a href="#">DA-DC-00004927.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-rotary-switches-t0-changeover-switch-dimensions-002.eps</a> <a href="#">eaton-rotary-switches-dimensions-t0-step-switch-dimensions.eps</a> <a href="#">eaton-rotary-switches-front-plate-t0-on-off-switch-symbol-002.eps</a> <a href="#">eaton-rotary-switches-surface-mounting-t0-changeover-switch-3d-drawing.eps</a>

	<a href="#">eaton-general-totally-insulated-t0-main-switch-symbol.eps</a> <a href="#">eaton-general-rotary-switch-t0-step-switch-symbol.eps</a>
ECAD MODEL	<a href="#">ETN.T0-3-15680_I1</a>
INSTALLATION INSTRUCTIONS	<a href="#">IL03801007Z2021_06.pdf</a>
INSTALLATION VIDEOS	<a href="#">Eaton's P Switch-disconnectors used in a factory</a>
MCAD MODEL	<a href="#">DA-CS-bauform4</a> <a href="#">DA-CD-bauform4</a>
PRODUCT NOTIFICATIONS	<a href="#">MZ008006ZU_Orderform_Customized_Switch.pdf</a> <a href="#">MZ008005ZU_Orderform_Customized_Switch.pdf</a>
SPECIFICATIONS AND DATASHEETS	<a href="#">Eaton Specification Sheet - 218963</a>
WIRING DIAGRAMS	<a href="#">eaton-rotary-switches-main-switch-t0-main-switch-wiring-diagram.eps</a>

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



Eaton Corporation plc  
Eaton House  
30 Pembroke Road  
Dublin 4, Ireland  
Eaton.com

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