

Specifications



Photo is representative

Eaton 015137

Eaton Moeller® series TM
Changeoverswitches, TM, 10 A, centre
mounting, 1 contact unit(s), Contacts: 2, 60 °,
maintained, With 0 (Off) position, 1-0-2,
Design number 8210

General specifications

PRODUCT NAME	Eaton Moeller® series TM Changeover switch
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CATALOG NUMBER	015137
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MODEL CODE	TM-1-8210/EZ
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EAN	4015080151371
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PRODUCT LENGTH/DEPTH	74 mm
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PRODUCT HEIGHT	30 mm
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PRODUCT WIDTH	30 mm
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PRODUCT WEIGHT	0.032 kg
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CERTIFICATIONS	UL 508 UL Category Control No.: NLRV IEC/EN 60947-5-1 UL report applies to both US and Canada CE IEC/EN 60947-3 UL CSA-C22.2 No. 14-05 CSA CSA-C22.2 No. 94 IEC/EN 60947 Certified by UL for use in Canada UL File No.: E36332 VDE 0660
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Powering Business Worldwide

Actuator

ACTUATOR FUNCTION	With 0 (Off) position Maintained
ACTUATOR TYPE	Short thumb-grip

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
NUMBER OF CONTACTS	2

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Design verification

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.
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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.15 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	10 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W

Electrical rating

RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	0 A
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RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	3 kW
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RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	1.1 kW
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RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	500 V
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RATED UNINTERRUPTED CURRENT (IU)	10 A
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UNINTERRUPTED CURRENT	Rated uninterrupted current Iu is specified for max. cross-section.
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General information

DEGREE OF PROTECTION	IP65
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DEGREE OF PROTECTION (FRONT SIDE)	IP65 NEMA 12
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LIFESPAN, MECHANICAL	1,000,000 Operations
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MODEL	Reverser
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MOUNTING METHOD	Center mounting
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MOUNTING POSITION	As required
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NUMBER OF CONTACT UNITS	1
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OPERATING FREQUENCY	1200 Operations/h
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OVERVOLTAGE CATEGORY	III
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POLLUTION DEGREE	3
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PRODUCT CATEGORY	Control switches
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RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4000 V AC
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SUITABLE FOR	Front mounting
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SWITCHING ANGLE	60 °
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TYPE	Changeover switch
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Short-circuit rating

SHORT-CIRCUIT PROTECTION RATING	10 A gG/gL, Fuse, Contacts
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Features & functions

ENCLOSURE MATERIAL	Plastic
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FITTED WITH:	0 (off) position Black thumb grip and front plate
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INSCRIPTION	1-0-2
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NUMBER OF POLES	1
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Motor rating

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	0.33 HP
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ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 3-PHASE	0.75 HP
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ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	0.75 HP
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ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	1 HP
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ASSIGNED MOTOR POWER AT 277 V, 60 HZ, 1-PHASE	0.75 HP
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Switching capacity

SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	10A, IU, (UL/CSA)
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SWITCHING CAPACITY	A300 (UL/CSA)
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**(AUXILIARY CONTACTS,
PILOT DUTY)****SWITCHING CAPACITY
(MAIN CONTACTS,
GENERAL USE)**10 A, Rated uninterrupted
current max. (UL/CSA)**Terminal capacities**

SCREW SIZE	M2.5, Terminal screw
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x 1.0 mm ² , ferrules to DIN 46228 2 x 1.0 mm ² , ferrules to DIN 46228
TERMINAL CAPACITY (FLEXIBLE)	1 x 1.5 mm ² 2 x 1.5 mm ²
TERMINAL CAPACITY (SOLID/FLEXIBLE WITH FERRULE AWG)	14
TERMINAL CAPACITY (SOLID/STRANDED)	1 x 1.5 mm ² 2 x 1,5 mm ²
TIGHTENING TORQUE	3.5 lb-in, Screw terminals 0.4 Nm, Screw terminals

Resources

BROCHURES	Brochure - T Rotary Cam switch and P Switch-disconnector
CATALOGUES	P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN
DECLARATIONS OF CONFORMITY	eaton-step-switch-declaration-of-conformity-uk251335en.pdf eaton-step-switch-declaration-of-conformity-eu250852en.pdf
DRAWINGS	eaton-rotary-switches-mounting-tm-step-switch-dimensions-017.eps eaton-rotary-switches-mounting-tm-step-switch-dimensions-002.eps eaton-rotary-switches-mounting-tm-step-switch-dimensions-011.eps eaton-general-rotary-switch-t0-step-switch-symbol-004.eps eaton-rotary-switches-mounting-t0-changeover-switch-3d-drawing-003.eps eaton-rotary-switches-front-plate-tm-changeover-switch-symbol-002.eps
ECAD MODEL	DA-CE-ETN.TM-1-8210_EZ
INSTALLATION INSTRUCTIONS	IL03801025Z

INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-tm1_ez eaton-cam-switches-mcad-drawings-tm1-ez.dwg
PRODUCT NOTIFICATIONS	MZ008006ZU_Orderform_Customized_Switch.pdf MZ008005ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-changeover-switch-t0-changeover-switch-wiring-diagram.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE: