DATASHEET - TM-1-8220/E

Changeoverswitches, TM, 10 A, flush mounting, 1 contact unit(s), Contacts: 2, 60 °, maintained, Without 0 (Off) position, 1-2, Design number 8220

Powering Business Worldwide™

Part no. TM-1-8220/E
081996

General specifications	
Product name	Eaton Moeller® series TM Changeover switch
Part no.	TM-1-8220/E
EAN	4015080819967
Product Length/Depth	62 millimetre
Product height	30 millimetre
Product width	30 millimetre
Product weight	0.029 kilogram
Certifications	IEC/EN 60947-3 CSA-C22.2 No. 94 UL Category Control No.: NLRV IEC/EN 60947 UL Certified by UL for use in Canada VDE 0660 CSA IEC/EN 60947-5-1 CE UL 508 CSA-C22.2 No. 14-05 UL File No.: E36332 UL report applies to both US and Canada
Product Tradename	TM
Product Type	Changeover switch
Product Sub Type	None
Features & Functions	
Enclosure material	Plastic
Fitted with:	Black thumb grip and front plate
Inscription	1-2
Number of poles	1
General information	
Degree of protection	IP65
Degree of protection (front side)	IP65 NEMA 12
Lifespan, mechanical	1,000,000 Operations
Model	Reverser
Mounting method	Flush mounting
Mounting position	As required
Number of contact units	1
Operating frequency	1200 Operations/h
Overvoltage category	III
Pollution degree	3
Rated impulse withstand voltage (Uimp)	4000 V AC
Suitable for	Front mounting
Switching angle	60 °
Type	Changeover switch
Climatic environmental conditions	
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	50 °C
Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
Terminal capacities	
Terminal capacity (flexible with ferrule)	2 x 1.0 mm^2, ferrules to DIN 46228

	1 x 1.0 mm^2, ferrules to DIN 46228
Terminal capacity (flexible)	2 x 1.5 mm^2 1 x 1.5 mm^2
Terminal capacity (solid/flexible with ferrule AWG)	14
Terminal capacity (solid/stranded)	2 x 1,5 mm^2 1 x 1.5 mm^2
Screw size	M2.5, Terminal screw
Tightening torque	0.4 Nm, Screw terminals 3.5 lb-in, Screw terminals
Electrical rating	
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V	0 A
Rated operational power at AC-3, 380/400 V, 50 Hz	1.1 kW
Rated operational power at AC-23A, 400 V, 50 Hz	3 kW
Rated operational voltage (Ue) at AC - max	500 V
Rated uninterrupted current (Iu)	10 A
Uninterrupted current	Rated uninterrupted current Iu is specified for max. cross-section.
Short-circuit rating	
Short-circuit protection rating	10 A gG/gL, Fuse, Contacts
Switching capacity	
Switching capacity (main contacts, general use)	10 A, Rated uninterrupted current max. (UL/CSA)
Switching capacity (auxiliary contacts, general use)	10A, IU, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)	A300 (UL/CSA)
Motor rating	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	0.33 HP
Assigned motor power at 115/120 V, 60 Hz, 3-phase	0.75 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	0.75 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	1 HP
Assigned motor power at 277 V, 60 Hz, 1-phase	0.75 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
Number of contacts	2
Actuator	
Actuator function	Without 0 (Off) position Maintained
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	0.15 W
Rated operational current for specified heat dissipation (In)	10 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) / Off-load switch (EC001105)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Load-break switch (ecl@ss13-27-37-14-05 [AKF062018])

Model			Reverser
Number of poles			1
With zero (off) position			No
With retraction in 0-position			No
Rated permanent current Iu		A	10
Rated operation current Ie at AC-3, 400 V		A	0
Rated operation power at AC-3, 400 V		kW	1.1
Degree of protection (IP), front side			IP65
Degree of protection (NEMA), front side			12
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
Suitable for floor mounting			No
Suitable for front mounting			Yes
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Complete device in housing			No
Housing material			Plastic
Type of control element			Short thumb-grip
Type of electrical connection of main circuit			Screw connection