

Reversing switches, TM, 10 A, flush mounting, 2 contact unit(s), Contacts: 4, $60^{\circ}$, maintained, With 0 (Off) position, 1-0-2, Design number 8400

Part no.
TM-2-8400/E
013181

| General specifications |  |
| :---: | :---: |
| Product name | Eaton Moeller® series TM Insulated enclosure |
| Part no. | TM-2-8400/E |
| EAN | 4015080131816 |
| Product Length/Depth | 74 millimetre |
| Product height | 30 millimetre |
| Product width | 30 millimetre |
| Product weight | 0.04 kilogram |
| Certifications | CSA <br> UL Category Control No.: NLRV <br> IEC/EN 60947-5-1 <br> CSA-C22.2 No. 14-05 <br> IEC/EN 60947-3 <br> UL <br> VDE 0660 <br> CE <br> IEC/EN 60947 <br> UL 508 <br> Certified by UL for use in Canada <br> CSA-C22.2 No. 94 <br> UL report applies to both US and Canada <br> UL File No.: E36332 |
| Product Tradename | TM |
| Product Type | Insulated enclosure |
| Product Sub Type | None |
| Features \& Functions |  |
| Enclosure material | Plastic |
| Fitted with: | Black thumb grip and front plate 0 (off) position |
| Inscription | 1-0-2 |
| Number of poles | 2 |
| General information |  |
| Degree of protection | IP65 |
| Degree of protection (front side) | IP65 <br> NEMA 12 |
| Lifespan, mechanical | 1,000,000 Operations |
| Model | Reversing switch |
| Mounting method | Flush mounting |
| Mounting position | As required |
| Number of contact units | 2 |
| 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 | $60^{\circ}$ |
| Type | Reversing switch |
| Climatic environmental conditions |  |
| Ambient operating temperature - min | $-25^{\circ} \mathrm{C}$ |
| Ambient operating temperature - max | $50^{\circ} \mathrm{C}$ |
| Climatic proofing | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| Terminal capacities |  |
| Terminal capacity (flexible with ferrule) | $1 \times 1.0 \mathrm{~mm}^{2}$, ferrules to DIN 46228 |

## $2 \times 1.0 \mathrm{~mm}^{2}$, ferrules to DIN 46228

Terminal capacity (flexible)
Terminal capacity (solid/flexible with ferrule AWG
Terminal capacity (solid/stranded)

Screw size
Tightening torque

## Electrical rating

Rated operational current (Ie) at AC-3, 380 V, $400 \mathrm{~V}, 415 \mathrm{~V}$
Rated operational power at AC-3, 380/400 V, 50 Hz
Rated operational power at AC-23A, $400 \mathrm{~V}, 50 \mathrm{~Hz}$
Rated operational voltage (Ue) at AC - max
Rated uninterrupted current (lu)
Uninterrupted current

## Short-circuit rating

Short-circuit protection rating

## Switching capacity

Switching capacity (main contacts, general use)
Switching capacity (auxiliary contacts, general use)
Switching capacity (auxiliary contacts, pilot duty)

## Motor rating

Assigned motor power at $115 / 120 \mathrm{~V}, 60 \mathrm{~Hz}, 1$-phase
Assigned motor power at $115 / 120 \mathrm{~V}, 60 \mathrm{~Hz}, 3$-phase
Assigned motor power at $230 / 240 \mathrm{~V}, 60 \mathrm{~Hz}, 1$-phase
Assigned motor power at $230 / 240 \mathrm{~V}, 60 \mathrm{~Hz}, 3$-phase
Assigned motor power at $277 \mathrm{~V}, 60 \mathrm{~Hz}$, 1-phase

## Contacts

Control circuit reliability
Number of auxiliary contacts (change-over contacts)

Number of auxiliary contacts (normally closed contacts)
Number of auxiliary contacts (normally open contacts)
Number of contacts

## Actuator

## Actuator function

Actuator type

## Design verification

Equipment heat dissipation, current-dependent Pvid
Heat dissipation capacity Pdiss
Heat dissipation per pole, current-dependent Pvid
Rated operational current for specified heat dissipation (In)
Static heat dissipation, non-current-dependent Pvs

### 10.2.2 Corrosion resistance

10.2.3.1 Verification of thermal stability of enclosures
10.2.3.2 Verification of resistance of insulating materials to normal heat
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects
10.2.4 Resistance to ultra-violet (UV) radiation
10.2.5 Lifting
10.2.6 Mechanical impact
10.2.7 Inscriptions
10.3 Degree of protection of assemblies
10.4 Clearances and creepage distances
10.5 Protection against electric shock
$1 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 1.5 \mathrm{~mm}^{2}$
14
$1 \times 1.5 \mathrm{~mm}^{2}$
$2 \times 1,5 \mathrm{~mm}^{2}$
M2.5, Terminal screw
0.4 Nm , Screw terminals
$3.5 \mathrm{lb}-\mathrm{in}$, Screw terminals

Rated uninterrupted current lu is specified for max. cross-section.

10 A gG/gL, Fuse, Contacts

10 A, Rated uninterrupted current max. (UL/CSA)
10A, IU, (UL/CSA)
A300 (UL/CSA)
0.33 HP
0.75 HP
0.75 HP

1 HP
0.75 HP

1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)

0
0
0
4

Maintained
With 0 (Off) position
Short thumb-grip

0 W
0 W
0.15 W

10 A
0 W
Meets the product standard's requirements.
Meets the product standard's requirements.
Meets the product standard's requirements.
Meets the product standard's requirements.
UV resistance only in connection with protective shield.
Does not apply, since the entire switchgear needs to be evaluated.
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Meets the product standard's requirements.
Does not apply, since the entire switchgear needs to be evaluated.
Meets the product standard's requirements.
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 (ECOO1105)
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 |  | Reversing switch |
| :---: | :---: | :---: |
| Number of poles |  | 2 |
| With zero (off) position |  | Yes |
| With retraction in 0-position |  | No |
| Rated permanent current lu | A | 10 |
| Rated operation current le at AC-3, 400 V | A | 0 |
| Rated operation power at AC-3, 400 V | kW | 2.2 |
| 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 |

