

## Eaton 199896

Eaton Moeller® series P1 Main switch, 40 A, flush mounting, 3 pole + N, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position



### General specifications

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| PRODUCT NAME         | Eaton Moeller® series P1 Main switch                            |
| CATALOG NUMBER       | 199896                                                          |
| EAN                  | 4015082953126                                                   |
| PRODUCT LENGTH/DEPTH | 120 mm                                                          |
| PRODUCT HEIGHT       | 70 mm                                                           |
| PRODUCT WIDTH        | 65 mm                                                           |
| PRODUCT WEIGHT       | 0.271 kg                                                        |
| COMPLIANCES          | UKCA<br>CE                                                      |
| CERTIFICATIONS       | IEC/EN 60947<br>IEC/EN 60947-3<br>IEC/EN 60204                  |
| CATALOG NOTES        | Rated Short-time Withstand Current (Icw) for a time of 1 second |
| MODEL CODE           | P1-40/EA/SVB/N                                                  |

### Features & Functions

|                  |                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------|
| FEATURES         | Version as main switch<br>Version as maintenance-/service switch<br>Version as emergency stop installation |
| FITTED WITH:     | Red rotary handle and yellow locking ring<br>Auxiliary contact                                             |
| FUNCTIONS        | Emergency switching off function<br>Interlockable                                                          |
| LOCKING FACILITY | Lockable in the 0 (Off) position                                                                           |
| NUMBER OF POLES  | 3+N                                                                                                        |

### General

|                                        |                                   |
|----------------------------------------|-----------------------------------|
| ACCESSORIES                            | Auxiliary contact fitted by user. |
| DEGREE OF PROTECTION                   | IP65                              |
| DEGREE OF PROTECTION (FRONT SIDE)      | IP65                              |
| LIFESPAN, MECHANICAL                   | 300,000 Operations                |
| MOUNTING METHOD                        | Flush mounting                    |
| MOUNTING POSITION                      | As required                       |
| OPERATING FREQUENCY                    | 50 Operations/h                   |
| OVERVOLTAGE CATEGORY                   | III                               |
| POLLUTION DEGREE                       | 3                                 |
| PRODUCT CATEGORY                       | Main switch                       |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) | 6000 V AC                         |

|                         |                                                                               |
|-------------------------|-------------------------------------------------------------------------------|
| <b>SAFE ISOLATION</b>   | 440 V AC, Between the contacts, According to EN 61140                         |
| <b>SHOCK RESISTANCE</b> | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms |
| <b>SWITCHING ANGLE</b>  | 90 °                                                                          |

| Climatic environmental conditions              |                                                                                |
|------------------------------------------------|--------------------------------------------------------------------------------|
| AMBIENT OPERATING TEMPERATURE - MIN            | -25 °C                                                                         |
| AMBIENT OPERATING TEMPERATURE - MAX            | 50 °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<br>Damp heat, cyclic, to IEC 60068-2-30 |

| Terminal capacities |                                                                                                                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TERMINAL CAPACITY   | 1 x (1 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228<br>2 x (1 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228<br>1 x 10 mm <sup>2</sup> with fork terminal<br>2 x 10 mm <sup>2</sup> 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                      | 15 kW  |

| Short-circuit rating                         |                                      |
|----------------------------------------------|--------------------------------------|
| RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ) | 80 kA                                |
| RATED SHORT-TIME WITHSTAND CURRENT (ICW)     | 0.64 kA<br>640 A, Contacts, 1 second |
| SHORT-CIRCUIT PROTECTION RATING              | 50 A gG/gL, Fuse, Contacts           |

|                                                            |                                                                        |
|------------------------------------------------------------|------------------------------------------------------------------------|
| <b>V, 50 HZ</b>                                            |                                                                        |
| <b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>       | 15 kW                                                                  |
| <b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>       | 15 kW                                                                  |
| <b>RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ</b> | 11 kW                                                                  |
| <b>RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ</b>     | 22 kW                                                                  |
| <b>RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ</b>     | 18.5 kW                                                                |
| <b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>          | 690 V                                                                  |
| <b>RATED UNINTERRUPTED CURRENT (IU)</b>                    | 40 A                                                                   |
| <b>UNINTERRUPTED CURRENT</b>                               | Rated uninterrupted current $I_u$ is specified for max. cross-section. |

| Switching capacity |                                                                      |
|--------------------|----------------------------------------------------------------------|
| LOAD RATING        | 1.3 x $I_e$ (with intermittent operation class 12, 60 % duty factor) |
|                    | 1.6 x $I_e$ (with intermittent operation class 12, 40 % duty factor) |
|                    | 2 x $I_e$ (with intermittent operation class 12, 25 % duty factor)   |

| Actuator              |                            |
|-----------------------|----------------------------|
| <b>ACTUATOR COLOR</b> | Red                        |
| <b>ACTUATOR TYPE</b>  | Door coupling rotary drive |

| Contacts                                                       |                                                                                         |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>CONTROL CIRCUIT RELIABILITY</b>                             | 1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA) |
| <b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>     | 0                                                                                       |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b> | 0                                                                                       |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>   | 0                                                                                       |

| Design verification                                                  |       |
|----------------------------------------------------------------------|-------|
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 0 W   |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W   |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 1.9 W |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 40 A  |
| <b>STATIC HEAT</b>                                                   | 0 W   |

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>                                           |                                                                                                                                  |
| <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 AND CONNECTIONS</b>                                | Is the panel builder's responsibility.                                                                                           |
| <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>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<br/>ELECTROMAGNETIC<br/>COMPATIBILITY</b> | Is the panel builder's responsibility. The specifications for the switchgear must be observed.           |
| <b>10.13 MECHANICAL<br/>FUNCTION</b>               | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. |

## Zdroje

|                                       |                                    |
|---------------------------------------|------------------------------------|
| <b>DECLARATIONS OF<br/>CONFORMITY</b> | <a href="#">DA-DC-00005061.pdf</a> |
|                                       | <a href="#">DA-DC-00005059.pdf</a> |
| <b>ECAD MODEL</b>                     | <a href="#">ETN.199896.edz</a>     |
| <b>INSTALAČNÍ NÁVODY</b>              | <a href="#">IL03802003Z</a>        |

**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATUM:**



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