

**Main switch, P1, 40 A, surface mounting, 3 pole, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position, hard knockout version, with assembly sheet screen**



**Part no.** P1-40/I2H/MBS/SVB  
**199917**  
**EL Number** 1403721  
**(Norway)**

| <b>General specifications</b>                  |  |
|--|--|
| Product name                                   | Eaton Moeller® series P1 Main switch   |
| Part no.                                       | P1-40/I2H/MBS/SVB  |
| EAN  | 4015082953430  |
| Product Length/Depth                           | 116 millimetre   |
| Product height                                 | 181 millimetre   |
| Product width                                  | 100 millimetre   |
| Product weight                                 | 0.656 kilogram   |
| Compliances                                    | UKCA<br>CE   |
| Certifications                                 | IEC/EN 60204<br>IEC/EN 60947<br>IEC/EN 60947-3   |
| Product Tradename                              | P1   |
| Product Type                                   | Main switch  |
| Product Sub Type                               | None   |
| Catalog Notes                                  | Rated Short-time Withstand Current (Icw) for a time of 1 second  |
| <b>Features &amp; Functions</b>                |  |
| Enclosure material                             | Polycarbonate  |
| 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>Assembly sheet screen<br>Auxiliary contact                    |
| Functions                                      | Emergency switching off function<br>Interlockable  |
| Locking facility                               | Lockable in the 0 (Off) position   |
| Number of poles                                | 3  |
| <b>General information</b>                     |  |
| Degree of protection                           | IP65   |
| Degree of protection (front side)              | IP65   |
| Lifespan, mechanical                           | 300,000 Operations   |
| Mounting method                                | Surface mounting   |
| Mounting position                              | As required  |
| Operating frequency                            | 50 Operations/h  |
| Overvoltage category                           | III  |
| Pollution degree                               | 3  |
| Rated impulse withstand voltage (Uimp)         | 6000 V AC  |
| Safe isolation                                 | 440 V AC, Between the contacts, According to EN 61140  |
| Shock resistance                               | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms                              |
| Switching angle                                | 90 °   |
| <b>Climatic environmental conditions</b>       |  |
| Ambient operating temperature - min            | -25 °C   |
| Ambient operating temperature - max            | 40 °C  |
| Ambient operating temperature (enclosed) - min | -20 °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                             |

| <b>Terminal capacities</b>   |  |  |
|--|--|--|
| 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  |
| <b>Electrical rating</b>   |  |  |
| 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 V, 50 Hz                                |  | 15 kW  |
| Rated operational power at AC-3, 415 V, 50 Hz                                    |  | 15 kW  |
| Rated operational power at AC-3, 690 V, 50 Hz                                    |  | 15 kW  |
| Rated operational power at AC-23A, 220/230 V, 50 Hz                              |  | 11 kW  |
| Rated operational power at AC-23A, 400 V, 50 Hz                                  |  | 22 kW  |
| Rated operational power at AC-23A, 690 V, 50 Hz                                  |  | 18.5 kW  |
| Rated operational voltage (Ue) at AC - min                                       |  | 690 V  |
| Rated operational voltage (Ue) at AC - max                                       |  | 690 V  |
| Rated uninterrupted current (Iu)   |  | 40 A   |
| Uninterrupted current  |  | Rated uninterrupted current Iu is specified for max. cross-section.  |
| <b>Short-circuit rating</b>  |  |  |
| 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>Switching capacity</b>  |  |  |
| Load rating  |  | 1.3 x I# (with intermittent operation class 12, 60 % duty factor)<br>1.6 x I# (with intermittent operation class 12, 40 % duty factor)<br>2 x I# (with intermittent operation class 12, 25 % duty factor)                        |
| <b>Contacts</b>  |  |  |
| 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  |
| <b>Actuator</b>  |  |  |
| Actuator color   |  | Red  |
| Actuator type  |  | Door coupling rotary drive   |
| <b>Design verification</b>   |  |  |
| Equipment heat dissipation, current-dependent Pvid                               |  | 0 W  |
| Heat dissipation capacity Pdis   |  | 0 W  |
| Heat dissipation per pole, current-dependent Pvid                                |  | 3.5 W  |
| Rated operational current for specified heat dissipation (In)                    |  | 40 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.   |

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|--|--|--|
| 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 8.0

Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss10.0.1-27-37-14-03 [AKF060013])

|   |    |                            |
|---|----|----------------------------|
| Version as main switch                                  |    | Yes                        |
| Version as maintenance-/service switch                  |    | Yes                        |
| Version as safety switch                                |    | No                         |
| Version as emergency stop installation                  |    | Yes                        |
| Version as reversing switch                             |    | No                         |
| Number of switches                                      |    | 1                          |
| Max. rated operation voltage Ue AC                      | V  | 690                        |
| Rated operating voltage                                 | V  | 690 - 690                  |
| Rated permanent current Iu                              | A  | 40                         |
| Rated permanent current at AC-23, 400 V                 | A  | 40                         |
| Rated permanent current at AC-21, 400 V                 | A  | 40                         |
| Rated operation power at AC-3, 400 V                    | kW | 15                         |
| Rated short-time withstand current Icw                  | kA | 0.64                       |
| Rated operation power at AC-23, 400 V                   | kW | 22                         |
| Switching power at 400 V                                | kW | 22                         |
| Conditioned rated short-circuit current Iq              | kA | 80                         |
| Number of poles   |    | 3                          |
| 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                          |
| Motor drive optional                                    |    | No                         |
| Motor drive integrated                                  |    | No                         |
| Voltage release optional                                |    | No                         |
| Device construction                                     |    | Complete device in housing |
| Suitable for floor mounting                             |    | No                         |
| Suitable for front mounting 4-hole                      |    | No                         |
| Suitable for front mounting centre                      |    | No                         |
| Suitable for distribution board installation            |    | No                         |
| Suitable for intermediate mounting                      |    | No                         |
| Colour control element                                  |    | Red                        |
| Type of control element                                 |    | Door coupling rotary drive |
| Interlockable   |    | Yes                        |
| Type of electrical connection of main circuit           |    | Screw connection           |

|                                       |  |  |      |
|---------------------------------------|--|--|------|
| Degree of protection (IP), front side |  |  | IP65 |
| Degree of protection (NEMA)           |  |  |      |