

# Specifications



Photo is representative



## Eaton 120934

Eaton Moeller® series P-SOL Switch-disconnector, DC current, 20 A at 1000 V DC

### General specifications

|                      |                                                 |
|----------------------|-------------------------------------------------|
| PRODUCT NAME         | Eaton Moeller® series P-SOL Switch-disconnector |
| CATALOG NUMBER       | 120934                                          |
| MODEL CODE           | P-SOL20                                         |
| EAN                  | 4015081187645                                   |
| PRODUCT LENGTH/DEPTH | 93 mm                                           |
| PRODUCT HEIGHT       | 76 mm                                           |
| PRODUCT WIDTH        | 58 mm                                           |
| PRODUCT WEIGHT       | 0.286 kg                                        |
| CERTIFICATIONS       | IEC/EN 60947-3<br>CE                            |



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## Climatic environmental conditions

|                                            |       |
|--------------------------------------------|-------|
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b> | 60 °C |
|--------------------------------------------|-------|

|                                            |        |
|--------------------------------------------|--------|
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b> | -25 °C |
|--------------------------------------------|--------|

|                          |                                                                                |
|--------------------------|--------------------------------------------------------------------------------|
| <b>CLIMATIC PROOFING</b> | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
|--------------------------|--------------------------------------------------------------------------------|

## Contacts

|                                                            |   |
|------------------------------------------------------------|---|
| <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

### 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

Meets the product standard's requirements.

### 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

Does not apply, since the

## Electrical rating

### RATED UNINTERRUPTED CURRENT (IU)

20 A

### RESISTANCE

6 mΩ (internal)

|                                                                      |                                                                    |
|----------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>AGAINST ELECTRIC SHOCK</b>                                        | 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>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>            | 0.8 W                                                              |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                               | 0 W                                                                |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>             | 0 W                                                                |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 20 A                                                               |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>            | 0 W                                                                |

| Features & functions    |                           |
|-------------------------|---------------------------|
| <b>ACTUATOR COLOR</b>   | Black                     |
| <b>ACTUATOR TYPE</b>    | Turn button               |
| <b>DESIGN</b>           | Open                      |
| <b>FEATURES</b>         | Isolating characteristics |
| <b>FITTED WITH:</b>     | Voltage release optional  |
| <b>LOCKING FACILITY</b> | Yes, optional             |
| <b>NUMBER OF POLES</b>  | Two-pole                  |

| General information                      |                                                        |
|------------------------------------------|--------------------------------------------------------|
| <b>DEGREE OF PROTECTION</b>              | NEMA Other                                             |
| <b>DEGREE OF PROTECTION (FRONT SIDE)</b> | IP20                                                   |
| <b>LIFESPAN, ELECTRICAL</b>              | 1,500 Operations                                       |
| <b>LIFESPAN, MECHANICAL</b>              | 100,000 Operations                                     |
| <b>MOUNTING METHOD</b>                   | Top-hat rail fixing (according to IEC/EN 60715, 35 mm) |
| <b>MOUNTING POSITION</b>                 | As required                                            |
| <b>OPERATING FREQUENCY</b>               | 120 Operations/h                                       |
| <b>PRODUCT CATEGORY</b>                  | Switchgear for photovoltaic systems                    |
| <b>PROTECTION CLASS</b>                  | 2                                                      |
| <b>SUITABLE FOR</b>                      | Ground mounting                                        |

|  |                                                                                                                         |
|--|-------------------------------------------------------------------------------------------------------------------------|
|  | Distribution board<br>installation<br>Floor mounting<br>Main switch<br>Maintenance / service<br>switch<br>Safety switch |
|--|-------------------------------------------------------------------------------------------------------------------------|

### Short-circuit rating

**RATED SHORT-CIRCUIT  
MAKING CAPACITY (ICM)** 0.32 kA (up to 1000 V DC)

**RATED SHORT-TIME  
WITHSTAND CURRENT  
(ICW)** 0.36 kA

### Terminal capacities

**TERMINAL CAPACITY** 18 - 14 AWG, solid or  
stranded  
1 x (1 - 6) mm<sup>2</sup>, flexible  
with ferrule to DIN 46228  
2 x (1 - 6) mm<sup>2</sup>, flexible  
with ferrule to DIN 46228

## Resources

|                            |                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BROCHURES                  | <a href="#">eaton-xstorage-home-range-brochure-for-installers-en-gb.pdf</a>                                                                                                                                                                                                                                                                          |
| CATALOGUES                 | <a href="#">Brochure - SOL30-Safety. How to use renewables in a meaningful and efficient manner</a>                                                                                                                                                                                                                                                  |
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-switch-disconnector-declaration-of-conformity-eu250781en.pdf</a><br><a href="#">eaton-switch-disconnector-declaration-of-conformity-uk251264en.pdf</a>                                                                                                                                                                             |
| DRAWINGS                   | <a href="#">eaton-contactors-mounting-pkz-sol-string-circuit-breaker-dimensions.eps</a><br><a href="#">eaton-manual-motor-starters-pkz-sol-string-circuit-breaker-dimensions.eps</a><br><a href="#">eaton-manual-motor-starters-pkzm0-dimensions-003.eps</a><br><a href="#">eaton-manual-motor-starters-p-sol-switch-disconnector-3d-drawing.eps</a> |
| ECAD MODEL                 | <a href="#">ETN,P-SOL20</a>                                                                                                                                                                                                                                                                                                                          |
| INSTALLATION INSTRUCTIONS  | <a href="#">IL03402020Z</a>                                                                                                                                                                                                                                                                                                                          |
| MCAD MODEL                 | <a href="#">eaton-cam-switches-mcad-drawings-p-sol20.dwg</a><br><a href="#">DA-CS-p_sol20</a>                                                                                                                                                                                                                                                        |

|                 |
|-----------------|
| PROJECT NAME:   |
| PROJECT NUMBER: |
| PREPARED BY:    |
| DATE:           |



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