

# Specifications

## Eaton 255907

Eaton Moeller® series P3 Main switch, P3, 100 A, surface mounting, 3 pole, 1 N/O, 1 N/C, Emergency switching off function, With red rotary handle and yellow locking ring, UL/CSA

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series P3 Main switch
<b>CATALOG NUMBER</b>	255907
<b>EAN</b>	4015082559076
<b>PRODUCT LENGTH/DEPTH</b>	169 mm
<b>PRODUCT HEIGHT</b>	280 mm
<b>PRODUCT WIDTH</b>	200 mm
<b>PRODUCT WEIGHT</b>	1.54 kg
<b>CERTIFICATIONS</b>	UL Listed VDE 0660 IEC/EN 60947 CSA File No.: 012528 CSA UL IEC/EN 60947-3 CE UL 60947-4-1 UL Category Control No.: NLRV UL File No.: E36332 CSA Class No.: 3211-05 CSA-C22.2 No. 94 CSA-C22.2 No. 60947-4-1-14 IEC/EN 60204
<b>MODEL CODE</b>	P3-100/I5/SVB/HI11-NA

## Features & Functions

<b>FEATURES</b>	Version as maintenance- /service switch
	Version as main switch
	Version as emergency stop installation
<b>FITTED WITH:</b>	Red rotary handle and yellow locking ring
<b>FUNCTIONS</b>	Interlockable Emergency switching off function
<b>NUMBER OF POLES</b>	3

## General

<b>ACCESSORIES</b>	Auxiliary contact or neutral conductor fitted by user.
<b>DEGREE OF PROTECTION</b>	NEMA 12
<b>DEGREE OF PROTECTION (FRONT SIDE)</b>	IP65
<b>LIFESPAN, MECHANICAL</b>	100,000 Operations
<b>MOUNTING METHOD</b>	Surface mounting
<b>MOUNTING POSITION</b>	As required
<b>OPERATING FREQUENCY</b>	1200 Operations/h
<b>OVERVOLTAGE CATEGORY</b>	III
<b>POLLUTION DEGREE</b>	3
<b>PRODUCT CATEGORY</b>	Main switch
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>SAFE ISOLATION</b>	440 V AC, Between the contacts, According to EN 61140
<b>SAFETY PARAMETER (EN ISO 13849-1)</b>	B10d values as per EN ISO 13849-1, table C.1
<b>SHOCK RESISTANCE</b>	15 g, Mechanical, According to IEC/EN 60068-2-27, Half- sinusoidal shock 20 ms
<b>SUITABLE FOR</b>	Ground mounting Branch circuits, suitable as motor disconnect, (UL/CSA)
<b>TYPE</b>	Main switch

## Climatic environmental conditions

<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
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<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	40 °C
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<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
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<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
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<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
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## Terminal capacities

<b>TERMINAL CAPACITY</b>	1 x (1.5 - 25) mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x (1.5 - 6) mm <sup>2</sup> , flexible with ferrules to DIN 46228 1 x (2.5 - 35) mm <sup>2</sup> , solid or stranded 14 - 2 AWG, solid or flexible with ferrule 2 x (2.5 - 10) mm <sup>2</sup> , solid or stranded
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<b>SCREW SIZE</b>	M5, Terminal screw
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<b>TIGHTENING TORQUE</b>	3 Nm, Screw terminals 26.5 lb-in, Screw terminals
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## Electrical rating

**RATED BREAKING  
CAPACITY AT 220/230 V  
(COS PHI TO IEC 60947-3)** 760 A

**RATED BREAKING  
CAPACITY AT 400/415 V  
(COS PHI TO IEC 60947-3)** 740 A

**RATED BREAKING  
CAPACITY AT 500 V (COS  
PHI TO IEC 60947-3)** 880 A

**RATED BREAKING  
CAPACITY AT 660/690 V  
(COS PHI TO IEC 60947-3)** 520 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-3,  
220 V, 230 V, 240 V** 71 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-3,  
380 V, 400 V, 415 V** 71 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-3,  
500 V** 65 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-3,  
660 V, 690 V** 23.8 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-21,  
440 V** 100 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-23A,  
230 V** 100 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-23A,  
400 V, 415 V** 100 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-23A,  
500 V** 96 A

**RATED OPERATIONAL  
CURRENT (IE) AT AC-23A,  
690 V** 68 A

**RATED OPERATIONAL  
CURRENT (IE) AT DC-1,  
LOAD-BREAK SWITCHES  
L/R = 1 MS** 100 A

**RATED OPERATIONAL  
CURRENT (IE) AT DC-23A,  
24 V** 50 A

**RATED OPERATIONAL  
CURRENT (IE) AT DC-23A,  
48 V** 50 A

## Short-circuit rating

**RATED CONDITIONAL  
SHORT-CIRCUIT CURRENT  
(IQ)** 4 kA (Load side)  
80 kA (Supply side)

**RATED SHORT-TIME  
WITHSTAND CURRENT  
(ICW)** 2 kA

**SHORT-CIRCUIT CURRENT  
RATING (BASIC RATING)** 10 kA, SCCR (UL/CSA)  
150A, max. Fuse, SCCR  
(UL/CSA)

**SHORT-CIRCUIT  
PROTECTION RATING** 100 A gG/gL, Fuse,  
Contacts

<b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V</b>	50 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V</b>	25 A
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	37 kW
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>	37 kW
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	37 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ</b>	30 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ</b>	55 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ</b>	55 kW
<b>RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ</b>	55 kW
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V
<b>RATED UNINTERRUPTED CURRENT (IU)</b>	100 A
<b>UNINTERRUPTED CURRENT</b>	Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section.

## Switching capacity

LOAD RATING	1.3 x I <sub>e</sub> (with intermittent operation class 12, 60 % duty factor)
	1.6 x I <sub>e</sub> (with intermittent operation class 12, 40 % duty factor)
	2 x I <sub>e</sub> (with intermittent operation class 12, 25 % duty factor)

### NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V

1

### NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V

2

### NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V

2

### NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V

3

### SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)

100 A, If used with neutral conductor IU = max. 90 A, Rated uninterrupted current max. (UL/CSA)

### SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)

10A, IU, (UL/CSA)

### SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)

A600 (UL/CSA)  
P600 (UL/CSA)

### RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)

950 A

### VOLTAGE PER CONTACT PAIR IN SERIES

60 V

## Motor rating

### ASSIGNED MOTOR

POWER AT 115/120 V, 60 HZ, 1-PHASE 5 HP

### ASSIGNED MOTOR

POWER AT 200/208 V, 60 HZ, 1-PHASE 10 HP

### ASSIGNED MOTOR

POWER AT 200/208 V, 60 HZ, 3-PHASE 20 HP

### ASSIGNED MOTOR

POWER AT 230/240 V, 60 HZ, 1-PHASE 15 HP

### ASSIGNED MOTOR

POWER AT 230/240 V, 60 HZ, 3-PHASE 25 HP

### ASSIGNED MOTOR

POWER AT 460/480 V, 60 HZ, 3-PHASE 60 HP

### ASSIGNED MOTOR

POWER AT 575/600 V, 60 HZ, 3-PHASE 75 HP

## Contacts

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

<b>ACTUATOR COLOR</b>	Red
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<b>ACTUATOR TYPE</b>	Door coupling rotary drive
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## Design verification

<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	7.5 W
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<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
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<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	7.5 W
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<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	100 A
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<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	0 W
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<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
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<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
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<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
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<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
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<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	UV resistance only in connection with protective shield.
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<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
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<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
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<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
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<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
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<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
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<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
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<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 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Resources

### BROCHURES

[Brochure - T Rotary Cam switch and P Switch-disconnector](#)

### CATALOGUES

[P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN](#)

### DECLARATIONS OF CONFORMITY

[DA-DC-00004924.pdf](#) [DA-DC-00004896.pdf](#)

### DRAWINGS

[eaton-rotary-switches-p3-main-switch-dimensions-010.eps](#)  
[eaton-general-switch-t0-main-switch-symbol.eps](#)

	<a href="#">eaton-rotary-switches-t0-main-switch-symbol.eps</a> <a href="#">eaton-general-totally-insulated-t0-main-switch-symbol.eps</a>
ECAD MODEL	<a href="#">DA-CE-ETN.P3-100 I5 SVB HI11-NA</a>
INSTALLATION INSTRUCTIONS	<a href="#">eaton-rotary-switches-p3-63-p3-80-p3-100-cam-switch-disconnector-p3-instruction-leaflet-il03801010z.pdf</a>
INSTALLATION VIDEOS	<a href="#">Eaton's P Switch-disconnectors used in a factory</a>
MCAD MODEL	<a href="#">DA-CS-bauform15</a> <a href="#">DA-CD-bauform15</a>
PRODUCT NOTIFICATIONS	<a href="#">MZ008006ZU_Orderform_Customized_Switch.pdf</a> <a href="#">MZ008005ZU_Orderform_Customized_Switch.pdf</a>
WIRING DIAGRAMS	<a href="#">eaton-rotary-switches-contact-p1-main-switch-wiring-diagram.eps</a>

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**PROJECT NAME:**

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**PROJECT NUMBER:**

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**PREPARED BY:**

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**DATE:**

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