

Specifications



Eaton 172960

Eaton Moeller® series T3 SUVA safety switches, T3, 32 A, surface mounting, 2 N/O, 2 N/C, STOP function, with warning label „safety switch“, Indicator light 24 V

General specifications

PRODUCT NAME	Eaton Moeller® series T3 SUVA safety switch
CATALOG NUMBER	172960
EAN	4015081695485
PRODUCT LENGTH/DEPTH	185 mm
PRODUCT HEIGHT	124 mm
PRODUCT WIDTH	108 mm
PRODUCT WEIGHT	0.5 kg
CERTIFICATIONS	IEC/EN 60204 IEC/EN 60947 VDE 0660 IEC/EN 60947-3
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second
MODEL CODE	T3-2-2092CH/12/SVB-SW-SI-CHD-24V



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Features & Functions

FEATURES	Version as safety switch Version as main switch
FITTED WITH:	Warning label "Safety switch" Black rotary handle and locking ring
FUNCTIONS	STOP function Interlockable
LOCKING FACILITY	Lockable in the 0 (Off) position (cover interlock)
NUMBER OF POLES	2

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

General

ACCESSORIES	Indicator light 24 V included with supplied equipment.
DEGREE OF PROTECTION	NEMA 12
DEGREE OF PROTECTION (FRONT SIDE)	IP65
LIFESPAN, MECHANICAL	500,000 Operations
MOUNTING METHOD	Surface mounting
MOUNTING POSITION	As required
NUMBER OF CONTACT UNITS	2
OPERATING FREQUENCY	1200 Operations/h
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	SUVA safety switches
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140
SAFETY PARAMETER (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1
SHOCK RESISTANCE	12 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
SUITABLE FOR	Ground mounting

Terminal capacities

TERMINAL CAPACITY	1 x (1 - 6) mm ² , solid or stranded 2 x (1 - 6) mm ² , solid or stranded 2 x (0.75 - 4) mm ² , flexible with ferrules to DIN 46228 1 x (0.75 - 4) mm ² , flexible with ferrules to DIN 46228
SCREW SIZE	M4, Terminal screw
TIGHTENING TORQUE	1.6 Nm, Screw terminals

Electrical rating

**RATED BREAKING
CAPACITY AT 220/230 V** 260 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 400/415 V** 260 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 500 V (COS
PHI TO IEC 60947-3)** 240 A

**RATED BREAKING
CAPACITY AT 660/690 V** 170 A
(COS PHI TO IEC 60947-3)

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 23.7 A
220 V, 230 V, 240 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 23.7 A
380 V, 400 V, 415 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 23.7 A
500 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 14.7 A
660 V, 690 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,** 32 A
440 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 32 A
230 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 32 A
400 V, 415 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 26.4 A
500 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 17 A
690 V

**RATED OPERATIONAL
CURRENT (IE) AT DC-1,
LOAD-BREAK SWITCHES
L/R = 1 MS** 25 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-13,
CONTROL SWITCHES L/R
= 50 MS** 20 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-21,** 1 A

Short-circuit rating

**RATED CONDITIONAL
SHORT-CIRCUIT CURRENT** 1 kA
(IQ)

**RATED SHORT-TIME
WITHSTAND CURRENT** 0.65 kA
(ICW) 650 A, Contacts, 1 second

**SHORT-CIRCUIT
PROTECTION RATING** 35 A gG/gL, Fuse, Contacts

240 V	
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	12 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V	5 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 220/230 V	32 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 380/400 V	32 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 500 V	32 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 690 V	25.5 A
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	15 kW
RATED OPERATIONAL	7.5 kW

POWER STAR-DELTA AT 220/230 V, 50 HZ	
RATED OPERATIONAL POWER STAR-DELTA AT 380/400 V, 50 HZ	15 kW
RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ	18.5 kW
RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ	22 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	32 A
UNINTERRUPTED CURRENT	Rated uninterrupted current Iu is specified for max. cross-section.

Switching capacity

LOAD RATING	2 x I _e (with intermittent operation class 12, 25 % duty factor)
	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)

NUMBER OF CONTACTS IN SERIES AT DC-21A, 240 V

1

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

3

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

3

NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V

5

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

320 A

VOLTAGE PER CONTACT PAIR IN SERIES

60 V

Actuator

ACTUATOR COLOR Black

ACTUATOR TYPE Door coupling rotary drive

Contacts

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)

2

NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)

2

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID 0 W

HEAT DISSIPATION CAPACITY PDISS 0 W

HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID 1.1 W

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) 32 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.
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.

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-00004923.pdf](#) [DA-DC-00004894.pdf](#)

DRAWINGS

[eaton-rotary-switches-padlock-t0-main-switch-dimensions.eps](#)

[eaton-rotary-switches-dimensions-t3-main-switch-dimensions.eps](#)

[eaton-rotary-switches-surface-mounting-t3-main-switch-dimensions.eps](#)

[eaton-general-totally-insulated-t0-main-switch-symbol.eps](#)

[eaton-general-rotary-switch-t0-step-switch-symbol.eps](#)

[eaton-rotary-switches-t0-main-switch-symbol.eps](#)

INSTALLATION INSTRUCTIONS [IL008005ZU](#)

INSTALLATION VIDEOS [Eaton's P Switch-disconnectors used in a factory](#)

PRODUCT NOTIFICATIONS [MZ008006ZU_Orderform_Customized_Switch.pdf](#)
[MZ008005ZU_Orderform_Customized_Switch.pdf](#)

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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