

Specifications



Eaton 222924

Eaton Moeller® series T5B Main switch, T5B, 63 A, surface mounting, 2 contact unit(s), 3 pole, Emergency switching off function, With red rotary handle and yellow locking ring

General specifications

PRODUCT NAME	Eaton Moeller® series T5B Main switch
CATALOG NUMBER	222924
EAN	4015082229245
PRODUCT LENGTH/DEPTH	240 mm
PRODUCT HEIGHT	169 mm
PRODUCT WIDTH	160 mm
PRODUCT WEIGHT	1.226 kg
CERTIFICATIONS	IEC/EN 60947-3 UL 60947-4-1 CSA-C22.2 No. 60947-4-1-14 CE CSA IEC/EN 60947 CSA File No.: 012528 VDE 0660 CSA Class No.: 3211-07 IEC/EN 60204 UL Category Control No.: NLRV UL File No.: E36332 CSA-C22.2 No. 94 UL
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second
MODEL CODE	T5B-2-1/I4/SVB

Features & Functions

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

General

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
OVERTVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	Main switch
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	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
SUITABLE FOR	Branch circuits, suitable as motor disconnect, (UL/CSA) Ground mounting
SWITCHING ANGLE	90 °

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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

Terminal capacities

TERMINAL CAPACITY	12 - 4 AWG, solid or flexible with ferrule 2 x (1.5 - 10) mm ² , flexible with ferrule to DIN 46228 2 x (2.5 - 16) mm ² , solid or stranded 1 x (2.5 - 35) mm ² , solid or stranded 1 x (1 - 25) mm ² , flexible with ferrules to DIN 46228
SCREW SIZE	M6, Terminal screw
TIGHTENING TORQUE	4 Nm, Screw terminals 35.4 lb-in, Screw terminals

Electrical rating

RATED BREAKING

CAPACITY AT 220/230 V 520 A
(COS PHI TO IEC 60947-3)

RATED BREAKING

CAPACITY AT 400/415 V 600 A
(COS PHI TO IEC 60947-3)

RATED BREAKING

CAPACITY AT 500 V (COS PHI TO IEC 60947-3) 480 A

RATED BREAKING

CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3) 340 A

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V 51 A

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V 41 A

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 500 V 33 A

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 660 V, 690 V 17 A

RATED OPERATIONAL

CURRENT (IE) AT AC-21, 440 V 63 A

RATED OPERATIONAL

CURRENT (IE) AT AC-23A, 230 V 63 A

RATED OPERATIONAL

CURRENT (IE) AT AC-23A, 400 V, 415 V 63 A

RATED OPERATIONAL

CURRENT (IE) AT AC-23A, 500 V 33 A

RATED OPERATIONAL

CURRENT (IE) AT AC-23A, 690 V 23.8 A

RATED OPERATIONAL

**CURRENT (IE) AT DC-1, LOAD-BREAK SWITCHES
L/R = 1 MS** 63 A

RATED OPERATIONAL

**CURRENT (IE) AT DC-13, CONTROL SWITCHES L/R
= 50 MS** 25 A

RATED OPERATIONAL

CURRENT (IE) AT DC-23A, 50 A

Short-circuit rating

RATED CONDITIONAL

SHORT-CIRCUIT CURRENT (IQ) 2 kA

RATED SHORT-TIME

WITHSTAND CURRENT (ICW) 1.3 kA
1,3 kA, Contacts, 1 second

SHORT-CIRCUIT CURRENT

RATING (HIGH FAULT) 10 kA, SCCR (UL/CSA)
100 A, Class J, max. Fuse,
SCCR (UL/CSA)

SHORT-CIRCUIT

PROTECTION RATING 80 A gG/gL, Fuse, Contacts

24 V

RATED OPERATIONAL

CURRENT (IE) AT DC-23A, 50 A

48 V

RATED OPERATIONAL

CURRENT (IE) AT DC-23A, 50 A

60 V

RATED OPERATIONAL

CURRENT (IE) AT DC-23A, 25 A

120 V

RATED OPERATIONAL

CURRENT (IE) AT DC-23A, 20 A

240 V

RATED OPERATIONAL

CURRENT (IE) STAR- 63 A

DELTA AT AC-3, 220/230 V

RATED OPERATIONAL

CURRENT (IE) STAR- 63 A

DELTA AT AC-3, 380/400 V

RATED OPERATIONAL

CURRENT (IE) STAR- 57.2 A

DELTA AT AC-3, 500 V

RATED OPERATIONAL

CURRENT (IE) STAR- 29.4 A

DELTA AT AC-3, 690 V

RATED OPERATIONAL

POWER AT AC-3, 380/400 22 kW

V, 50 HZ

RATED OPERATIONAL

POWER AT AC-3, 415 V, 50 22 kW

Hz

RATED OPERATIONAL

POWER AT AC-3, 690 V, 50 15 kW

Hz

RATED OPERATIONAL

POWER AT AC-23A, 18.5 kW

220/230 V, 50 HZ

RATED OPERATIONAL

POWER AT AC-23A, 400 V, 30 kW

50 HZ

RATED OPERATIONAL

POWER AT AC-23A, 500 V, 22 kW

50 HZ

RATED OPERATIONAL

POWER AT AC-23A, 690 V, 22 kW

50 HZ

RATED OPERATIONAL

POWER STAR-DELTA AT 18.5 kW

220/230 V, 50 HZ

RATED OPERATIONAL

30 kW

**POWER STAR-DELTA AT
380/400 V, 50 Hz**

RATED OPERATIONAL

**POWER STAR-DELTA AT
500 V, 50 Hz** 37 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)**

63 A

**UNINTERRUPTED
CURRENT**

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)

**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**

6

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

63 A, Rated uninterrupted
current max. (UL/CSA)

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

800 A

**VOLTAGE PER CONTACT
PAIR IN SERIES**

60 V

Motor rating

ASSIGNED MOTOR

**POWER AT 115/120 V, 60
HZ, 1-PHASE** 3 HP

ASSIGNED MOTOR

**POWER AT 200/208 V, 60
HZ, 1-PHASE** 7.5 HP

ASSIGNED MOTOR

**POWER AT 200/208 V, 60
HZ, 3-PHASE** 15 HP

ASSIGNED MOTOR

**POWER AT 230/240 V, 60
HZ, 1-PHASE** 10 HP

ASSIGNED MOTOR

**POWER AT 230/240 V, 60
HZ, 3-PHASE** 15 HP

ASSIGNED MOTOR

**POWER AT 460/480 V, 60
HZ, 3-PHASE** 40 HP

ASSIGNED MOTOR

**POWER AT 575/600 V, 60
HZ, 3-PHASE** 40 HP

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) 0

NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) 0

Actuator

ACTUATOR COLOR Red

ACTUATOR TYPE Door coupling rotary drive

Design verification

EQUIPMENT HEAT

DISSIPATION, CURRENT-DEPENDENT PVID 4.5 W

HEAT DISSIPATION CAPACITY PDISS

0 W

HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID

4.5 W

RATED OPERATIONAL

CURRENT FOR SPECIFIED 63 A

HEAT DISSIPATION (IN)

STATIC HEAT

DISSIPATION, NON-CURRENT-DEPENDENT 0 W

PVS

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-00004897.pdf](#) [DA-DC-00004925.pdf](#)

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

[eaton-rotary-switches-surface-mounting-t5b-main-switch-dimensions.eps](#)
[eaton-general-totally-insulated-t0-main-switch-symbol.eps](#)
[eaton-rotary-switches-t0-main-switch-symbol.eps](#)
[eaton-general-switch-t0-main-switch-symbol.eps](#)

ECAD MODEL	ETN.222924.edz
INSTALLATION INSTRUCTIONS	IL03801009Z
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-bauform11 DA-CD-bauform11
PRODUCT NOTIFICATIONS	MZ008006ZU_Orderform_Customized_Switch.pdf MZ008005ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-on-off-switch-p3-main-switch-wiring-diagram.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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