

Specifications



Eaton 172790

Eaton DMM Switch-disconnector, DMM, 160 A, 3P + N (solid), with grey knob, in CI-K5 enclosure

General specifications

PRODUCT NAME	Eaton DMM Switch-disconnector
CATALOG NUMBER	172790
MODEL CODE	DMM-160/3N/I5/P-G
EAN	4015081693757
PRODUCT LENGTH/DEPTH	280 mm
PRODUCT HEIGHT	200 mm
PRODUCT WIDTH	200 mm
PRODUCT WEIGHT	2.47 kg
CERTIFICATIONS	IEC/EN 60947 Lloyds CE IEC/EN 60947-3 RoHS VDE 0660 IEC/EN 60204 EAC KEMA

Actuator

ACTUATOR COLOR	Gray
ACTUATOR TYPE	Short thumb-grip

Contacts

NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
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Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	40 °C
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AMBIENT STORAGE TEMPERATURE - MAX	80 °C
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AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
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AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
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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.
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10.11 SHORT-CIRCUIT RATING	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
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10.12 ELECTROMAGNETIC COMPATIBILITY	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
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10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
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10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
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10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
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10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT	Meets the product standard's requirements.
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10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	Meets the product standard's requirements.
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10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	UV resistance only in connection with protective shield.
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10.2.5 LIFTING	Does not apply, since the entire switchgear needs to
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	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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	9.1 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	7.4 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	160 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W

Electrical rating

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

1080 A

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

528 A

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

336 A

**RATED INSULATION
VOLTAGE (UI)**

1000 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,
400 V, 415 V**

160 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,
500 V**

160 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,
690 V**

160 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-22,
380 V, 400 V, 415 V**

160 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-22,
500 V**

160 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-22,
690 V**

160 A

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

140 A

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

66 A

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

42 A

**RATED OPERATIONAL
POWER AT AC-23A, 400 V,
50 HZ**

80 kW

**RATED OPERATIONAL
POWER AT AC-23A, 500 V,
50 HZ**

45 kW

**RATED OPERATIONAL
POWER AT AC-23A, 690 V,
50 HZ**

37 kW

**RATED OPERATIONAL
VOLTAGE (UE) AT AC -
MAX**

690 V

RATED UNINTERRUPTED

160 A

Features & functions

FEATURES

Version as main switch
Version as maintenance-
/service switch

FITTED WITH:

Gray knob

FUNCTIONS

Interlockable

LOCKING FACILITY

Lockable in the 0 (Off)
position

NUMBER OF POLES

Three-pole + N

CURRENT (IU)	
UNINTERRUPTED CURRENT	Rated uninterrupted current Iu is specified for max. cross-section.

General information

ACCESSORIES	Auxiliary contact fitted by user.
DEGREE OF PROTECTION	NEMA 12
DEGREE OF PROTECTION (FRONT SIDE)	IP65
LIFESPAN, MECHANICAL	10,000 Operations
MOUNTING METHOD	Surface mounting
MOUNTING POSITION	As required
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3

PRODUCT CATEGORY	• Main switch • Switch-disconnector
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RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V
SAFETY PARAMETER (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1
SUITABLE FOR	Ground mounting

Terminal capacities

STRIPPING LENGTH (MAIN CABLE)	21 mm
TERMINAL CAPACITY	6 - 70 mm², flexible with ferrules to DIN 46228
TIGHTENING TORQUE	7 Nm, Screw terminals

Short-circuit rating

BREAKING CURRENT	13.5 kA
LET-THROUGH ENERGY	Max. 86,9 kA²s
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	30 kA at 415 V 50 kA
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	2,5 kA, Contacts, 1 second 2.5 kA
SHORT-CIRCUIT PROTECTION RATING	160, Fuse, Contacts

Resources

CATALOGUES	eaton-industrial-switch-disconnectors-catalogue-ca008011en-en-gb.pdf
DECLARATIONS OF CONFORMITY	eaton-switch-disconnector-declaration-of-conformity-uk251109en.pdf eaton-switch-disconnector-declaration-of-conformity-eu250626en.pdf
DRAWINGS	eaton-rotary-switches-dmm-switch-disconnector-dimensions-002.eps eaton-general-switch-t0-main-switch-symbol.eps
ECAD MODEL	DA-CE-ETN.DMM-160_3N_I5_P-G

INSTALLATION INSTRUCTIONS	eaton-switch-disconnector-dmm-i5-il008006zu.pdf
WIRING DIAGRAMS	eaton-rotary-switches-main-switch-dmm-switch-disconnector-wiring-diagram.eps eaton-rotary-switches-dmm-switch-disconnector-wiring-diagram-002.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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