

Specifications



Eaton 277949

Eaton Moeller® series DILM Auxiliary contact module, 4 pole, Ith= 16 A, 3 N/O, 1 NC, Front fixing, Screw terminals, DILM40 - DILM170

General specifications

PRODUCT NAME	Eaton Moeller® series DILM auxiliary contact module
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CATALOG NUMBER	277949
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MODEL CODE	DILM150-XHI31
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EAN	4015082779498
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PRODUCT LENGTH/DEPTH	39 mm
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PRODUCT HEIGHT	46 mm
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PRODUCT WIDTH	45 mm
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PRODUCT WEIGHT	0.055 kg
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CERTIFICATIONS	UL 508 IEC/EN 60947-4-1 VDE 0660 IEC/EN 60947 CSA CSA File No.: 012528 CE CSA Class No.: 3211-03 CSA-C22.2 No. 14-05 UL File No.: E29184 UL UL Category Control No.: NKCR
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Ambient conditions, mechanical

SHOCK RESISTANCE	5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
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Contacts

CONTROL CIRCUIT RELIABILITY	$\lambda < 5 \times 1/10^7$ (1 failure at 2,000,000 operations for $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)
NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	1
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	3

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Conventional thermal current I_{th}

CONVENTIONAL THERMAL CURRENT I_{TH} AT 60°C (3-POLE, OPEN)	16 A
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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.
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 INSULATION VOLTAGE (UI)	690 V
RATED OPERATIONAL CURRENT (IE)	6 A at 60 V, DC L/R $\leq$ 15 ms (with 1 contact in series) 10 A at 24 V, DC L/R $\leq$ 15 ms (with 1 contact in series) 3 A at 110 V, DC L/R $\leq$ 15 ms (with 1 contact in series) 1 A at 220 V, DC L/R $\leq$ 15 ms (with 1 contact in series)
RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V	4 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V	1.5 A
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	500 V

AGAINST ELECTRIC SHOCK	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	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.23 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	4 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W

Features & functions

ELECTRIC CONNECTION TYPE	Screw connection
FEATURES	Interlocked opposing contacts within an auxiliary contact module (according to IEC 60947-5-1 Annex L)
FITTED WITH:	Interlocked opposing contacts
FUNCTIONS	For standard applications
NUMBER OF POLES	Four-pole

General information

CONNECTION	Screw terminals
DEGREE OF PROTECTION	IP20
LIFESPAN, ELECTRICAL	1,300,000 Operations (at 230 V, AC-15, 3 A)
MODEL	Top mounting
MOUNTING METHOD	Front fastening
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
RATED IMPULSE	6000 V AC

Safety

SAFE ISOLATION

440 V AC, Between coil and auxiliary contacts, According to EN 61140
440 V AC, Between auxiliary contacts, According to EN 61140

Switching capacity

SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)

1 A, 250 V DC, (UL/CSA)
15 A, 600 V AC, (UL/CSA)

SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)

A600, AC operated (UL/CSA)
P300, DC operated (UL/CSA)

WITHSTAND VOLTAGE (UIMP)

TYPE

Front mounting auxiliary contact

Short-circuit rating

SHORT-CIRCUIT PROTECTION RATING

Max. 16 A gG/gL, Fuse, Without welding, Auxiliary contacts

SHORT-CIRCUIT PROTECTION RATING WITHOUT WELDING

16 A gG/gL, 500 V, Max. Fuse, Contacts

Terminal capacities

SCREWDRIVER SIZE

2, Terminal screw, Pozidriv screwdriver
0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver

TERMINAL CAPACITY (SOLID)

2 x (0.75 - 2.5) mm²
1 x (0.75 - 2.5) mm²

TIGHTENING TORQUE

1.2 Nm, Screw terminals

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)

2 x (0.75 - 2.5) mm²
1 x (0.75 - 2.5) mm²

TERMINAL CAPACITY (SOLID/STRANDED AWG)

18 - 14

Resources

CATALOGUES

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

[Product Range Catalog](#)
[Switching and protecting motors](#)

[SmartWire-DT Catalog](#)

DECLARATIONS OF CONFORMITY

[eaton-accessory-declaration-of-conformity-uk251276en.pdf](#)

[eaton-accessory-declaration-of-conformity-eu250793en.pdf](#)

DRAWINGS

[eaton-contactors-contact-dilm-accessory-3d-drawing-004.eps](#)

ECAD MODEL

[ETN.277949.edz](#)

INSTALLATION INSTRUCTIONS

[IL03407034Z](#)

INSTALLATION VIDEOS

[WIN-WIN with push-in technology](#)

MCAD MODEL

[eaton-contact-blocks-mcad-drawings-dil-m150-xhi-4.dwg](#)

[dil_m150_xhi_4.stp](#)

WIRING DIAGRAMS

[2100SWI-134](#)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



Eaton Corporation plc Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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