

# Specifications



Photo is representative



## Eaton 277135

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 11 kW, 1 N/O, 415 V 50 Hz, 480 V 60 Hz, AC operation, Screw terminals

### General specifications

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277135
MODEL CODE	DILM25- 10(415V50HZ,480V60HZ)
EAN	4015082771355
PRODUCT LENGTH/DEPTH	97 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.428 kg
CERTIFICATIONS	UL CSA IEC/EN 60947 VDE 0660
CATALOG NOTES	Contacts according to EN 50012
GLOBAL CATALOG	277135

## Product specifications

<b>USED WITH</b>	Can be combined with auxiliary contacts: DILM32-XHI, DILA-XHI(V)
<b>ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT</b>	Screw connection
<b>AMPERAGE RATING</b>	170A
<b>NUMBER OF POLES</b>	Three-pole
<b>TYPE</b>	Full voltage non-reversing small contactor
<b>VOLTAGE RATING</b>	400 V
<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.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the

## Resources

	<a href="#">SmartWire-DT Catalog</a>
	<a href="#">Product Range Catalog</a>
	<a href="#">Switching and protecting motors</a>
CATALOGS	<a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a>
	<a href="#">eaton-contactors-component-dilm-characteristic-curve-003.eps</a>
CHARACTERISTIC CURVE	<a href="#">eaton-contactors-switch-dilm-characteristic-curve-002.eps</a>
	<a href="#">eaton-contactors-switch-dilm-characteristic-curve.eps</a>
	<a href="#">eaton-contactor-declaration-of-conformity-uk251218en.pdf</a>
DECLARATIONS OF CONFORMITY	<a href="#">eaton-contactor-declaration-of-conformity-eu250735en.pdf</a>
	<a href="#">eaton-contactors-mounting-dilm-dimensions.eps</a>
	<a href="#">eaton-contactors-mounting-dilm-dimensions-002.eps</a>
DRAWINGS	<a href="#">eaton-contactors-dimensions-210t014.eps</a>
	<a href="#">eaton-contactors-contact-dimensions-210x202.eps</a>
	<a href="#">eaton-contactors-dilm-3d-drawing-009.eps</a>
	<a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a>
ECAD MODEL	<a href="#">ETN.277135.edz</a>
INSTALLATION INSTRUCTIONS	<a href="#">IL03407014Z2021_09.pdf</a>
INSTALLATION VIDEOS	<a href="#">WIN-WIN with push-in technology</a>
MCAD MODEL	<a href="#">DA-CS-dil_m17_38</a>
	<a href="#">DA-CD-dil_m17_38</a>

	entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<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>FREQUENCY RATING</b>	50-60 Hz
<b>OPERATING FREQUENCY</b>	5000 mechanical Operations/h (AC operated)
<b>POLLUTION DEGREE</b>	3
<b>CLIMATIC PROOFING</b>	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
<b>CONNECTION TO SMARTWIRE-DT</b>	No
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	8000 V AC
<b>UTILIZATION CATEGORY</b>	AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-3: Normal AC induction

PEP ECO-PASSPORT	<a href="#">eaton-iec-contactors-pep-eato-00124-v0101-en.pdf</a>
SPECIFICATIONS AND DATASHEETS	<a href="#">Eaton Specification Sheet - 277135</a>
SYSTEM OVERVIEW	<a href="#">eaton-contactors-dilm-contactor-system-overview.eps</a>
WIRING DIAGRAMS	<a href="#">eaton-contactors-contact-dilm-wiring-diagram.eps</a>

	motors: starting, switch off during running
<b>CONNECTION</b>	Screw terminals
<b>FRAME SIZE</b>	FS2
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)</b>	90 A
<b>CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)</b>	36 A
<b>CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)</b>	42 A
<b>CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)</b>	100 A
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	4.2 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	1.4 W
<b>APPLICATION</b>	Contactors for Motors
<b>PRODUCT CATEGORY</b>	Contactors
<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
<b>TERMINALS</b>	Screw terminals
<b>ARCING TIME</b>	10 ms
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection

<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
<b>VOLTAGE TYPE</b>	AC
<b>DEGREE OF PROTECTION</b>	IP00
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	1
<b>NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT</b>	0
<b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>	1
<b>NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)</b>	3
<b>OPERATING TEMPERATURE - MAX</b>	60 °C
<b>OPERATING TEMPERATURE - MIN</b>	-40 °C
<b>RATED BREAKING CAPACITY AT 220/230 V</b>	250 A
<b>RATED BREAKING CAPACITY AT 380/400 V</b>	250 A
<b>RATED BREAKING CAPACITY AT 500 V</b>	250 A
<b>RATED BREAKING CAPACITY AT 660/690 V</b>	150 A
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	415 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	415 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	480 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	480 V
<b>COIL VOLTAGE</b>	415-480 Vac, 50/60 Hz
<b>CONTACT CONFIGURATION</b>	1 NO
<b>CONTINUOUS AMPERE RATING</b>	170 A

<b>DROP-OUT VOLTAGE</b>	AC operated: 0.6 - 0.3 x UC, AC operated
<b>OVERVOLTAGE CATEGORY</b>	III
<b>DUTY FACTOR</b>	100 %
<b>NUMBER OF CONTACTS</b>	1 NO
<b>EMITTED INTERFERENCE</b>	According to EN 60947-1
<b>OPERATION</b>	Reversing
<b>INTERFERENCE IMMUNITY</b>	According to EN 60947-1
<b>LIFESPAN, MECHANICAL</b>	10,000,000 Operations (AC operated)
<b>PICK-UP VOLTAGE</b>	0.8 - 1.1 V AC x U <sub>c</sub>
<b>POWER CONSUMPTION, PICK-UP, 50 HZ</b>	52 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 50 Hz
<b>SAFE ISOLATION</b>	440 V AC, Between coil and contacts, According to EN 61140 440 V AC, Between the contacts, According to EN 61140
<b>POWER CONSUMPTION, PICK-UP, 60 HZ</b>	67 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 60 Hz
<b>SCREW SIZE</b>	M5, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables
<b>POWER CONSUMPTION, SEALING, 50 HZ</b>	7.1 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 50 Hz 2.1 W, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 50 Hz
<b>POWER CONSUMPTION, SEALING, 60 HZ</b>	2.1 W, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 60 Hz 8.7 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 60 Hz
<b>TERMINAL CAPACITY (STRANDED)</b>	1 x 16 mm <sup>2</sup> , Main cables
<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (0.75 - 10) mm <sup>2</sup> , Main cables 1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (0.75 - 16) mm <sup>2</sup> , Main cables 2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables
<b>SHOCK RESISTANCE</b>	10 g, N/O main contact, Mechanical, according to

	<p>IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 5.3 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 6.9 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms</p>
<b>TERMINAL CAPACITY (SOLID)</b>	<p>2 x (0.75 - 10) mm<sup>2</sup>, Main cables 1 x (0.75 - 4) mm<sup>2</sup>, Control circuit cables 1 x (0.75 - 16) mm<sup>2</sup>, Main cables 2 x (0.75 - 2.5) mm<sup>2</sup>, Control circuit cables</p>
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	<p>Single 18 - 6, double 18 - 8, Main cables 18 - 14, Control circuit cables</p>
<b>POWER CONSUMPTION</b>	11 kW
<b>TIGHTENING TORQUE</b>	<p>1.2 Nm, Screw terminals, Control circuit cables 3.2 Nm, Screw terminals, Main cables</p>
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V
<b>RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)</b>	350 A

<b>RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V</b>	45 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V</b>	25 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>	25 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V</b>	25 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>	25 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>	15 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V</b>	13 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V</b>	13 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V</b>	13 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V</b>	13 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V</b>	10 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V</b>	40 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V</b>	40 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V</b>	40 A
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	25 A
<b>RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ</b>	8.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	11 kW
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50</b>	14.5 kW



<b>HZ</b>	
<b>RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ</b>	3.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ</b>	4 kW
<b>RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ</b>	6 kW
<b>RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ</b>	6.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ</b>	7 kW
<b>RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ</b>	8 kW
<b>RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ</b>	8.5 kW
<b>RATED OPERATIONAL POWER (NEMA)</b>	11 kW
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V
<b>RESISTANCE PER POLE</b>	2.7 mΩ
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	2.1 W
<b>STRIPPING LENGTH (CONTROL CIRCUIT CABLE)</b>	10 mm
<b>STRIPPING LENGTH (MAIN CABLE)</b>	10 mm
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX</b>	22 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN</b>	16 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX</b>	14 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN</b>	8 ms

<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V</b>	100 A gG/gL
<b>SUITABLE FOR</b>	Also motors with efficiency class IE3
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V</b>	50 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V</b>	35 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V</b>	35 A gG/gL
<b>OPERATING TEMPERATURE</b>	-40° to 60°C
<b>CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)</b>	45 A
<b>CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)</b>	43 A
<b>CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)</b>	40 A
<b>RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ</b>	15.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	17.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	14 kW
<b>ACTUATING VOLTAGE</b>	415 V 50 Hz, 480 V 60 Hz
<b>ALTITUDE</b>	Max. 2000 m
<b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>	24 V
<b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>	690 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>	24 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>	690 V

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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

© 2025 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

