



Foto on esinduslik



## Eaton 276852

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 5.5 kW, 1 NC, 24 V 50 Hz, AC operation, Screw terminals

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series DILM contactor
<b>CATALOG NUMBER</b>	276852
<b>EAN</b>	4015082768522
<b>PRODUCT LENGTH/DEPTH</b>	75 mm
<b>PRODUCT HEIGHT</b>	68 mm
<b>PRODUCT WIDTH</b>	45 mm
<b>PRODUCT WEIGHT</b>	0.24 kg
<b>COMPLIANCES</b>	CE Marked

<b>CERTIFICATIONS</b>	IEC 60947-4-1 UL 508 CSA Std. C22.2 No. 14-05 EN 60947-4-1 VDE CE VDE 0660 CSA-C22.2 No. 60947-4-1-14 UL File No.: E29096 UL Category Control No.: NLDX CSA IEC/EN 60947 UL IEC/EN 60947-4-1 UL 60947-4-1 CSA Class No.: 2411-03, 3211-04 CSA File No.: 012528
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<b>CATALOG NOTES</b>	Contacts according to EN 50012
<b>MODEL CODE</b>	DILM12-01(24V50HZ)

## Features Functions

**FITTED WITH:** Mirror contact

**NUMBER OF POLES** Three-pole

## General

**APPLICATION** Contactors for Motors

**DEGREE OF PROTECTION** IP20

**FRAME SIZE** FS1

**LIFESPAN, MECHANICAL** 10,000,000 Operations (AC operated)

**CONNECTION** Screw terminals

**OPERATING FREQUENCY** 9000 mechanical Operations/h (AC operated)

**OVERVOLTAGE CATEGORY** III

**POLLUTION DEGREE** 3

**PRODUCT CATEGORY** Contactors

**PROTECTION** Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)

**RATED IMPULSE WITHSTAND VOLTAGE (UIMP)** 8000 V AC

**RESISTANCE PER POLE** 2.5 mΩ

**SUITABLE FOR** Also motors with efficiency class IE3

**UTILIZATION CATEGORY** AC-1: Non-inductive or slightly inductive loads, resistance furnaces  
AC-4: Normal AC induction motors: starting, plugging, reversing, inching  
AC-3: Normal AC induction motors: starting, switch off during running

**VOLTAGE TYPE** AC

## Ambient conditions, mechanical

<b>SHOCK RESISTANCE</b>	3.4 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
	10 g, N/O main 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
	3.4 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
	5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
	5.7 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms

## Electro magnetic compatibility

<b>EMITTED INTERFERENCE</b>	According to EN 60947-1
<b>INTERFERENCE IMMUNITY</b>	According to EN 60947-1

## Climatic environmental conditions

<b>ALTITUDE</b>	Max. 2000 m
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>CLIMATIC PROOFING</b>	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

## Terminal capacities

<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (0.75 - 2,5) mm <sup>2</sup> 2 x (0.75 - 2.5) mm <sup>2</sup> 1 x (0.75 - 2.5) mm <sup>2</sup>
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.75 - 4) mm <sup>2</sup> 2 x (0.75 - 2.5) mm <sup>2</sup>
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	Single 18 - 10, double 18 - 14
<b>STRIPPING LENGTH (MAIN CABLE)</b>	10 mm
<b>STRIPPING LENGTH (CONTROL CIRCUIT CABLE)</b>	10 mm
<b>SCREW SIZE</b>	M3.5, Terminal screw
<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
<b>TIGHTENING TORQUE</b>	1.2 Nm, Screw terminals



## Electrical rating

**RATED BREAKING CAPACITY AT 220/230 V** 120 A

**RATED BREAKING CAPACITY AT 380/400 V** 120 A

**RATED BREAKING CAPACITY AT 500 V** 100 A

**RATED BREAKING CAPACITY AT 660/690 V** 70 A

**RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V** 22 A

**RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V** 12 A

**RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V** 12 A

**RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V** 12 A

**RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V** 10 A

**RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V** 7 A

**RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V** 7 A

**RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V** 7 A

**RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V** 6 A

**RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V** 5 A

**RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V** 20 A

**RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V** 20 A

**RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V** 15 A

**RATED INSULATION** 690 V

## Short-circuit rating

**SHORT-CIRCUIT CURRENT RATING (BASIC RATING)** 5 kA, 45 A max. fuse, SCCR (UL/CSA)  
5 kA, 45 A max. CB, SCCR (UL/CSA)

**SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)** 100 kA, 45 A CLASS J max. fuse, SCCR (UL/CSA)  
30 kA, 25 A CLASS RK5 max. fuse, SCCR (UL/CSA)

**SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)** 100 kA, 45 A CLASS J max. fuse, SCCR (UL/CSA)  
30 kA, 25 A CLASS RK5 max. fuse, SCCR (UL/CSA)

**SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V** 35 A gG/gL

**SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V** 25 A gG/gL

**SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V** 20 A gG/gL

**SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V** 20 A gG/gL

<b>VOLTAGE (UI)</b>	
<b>RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)</b>	144 A
<b>RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ</b>	4 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	5.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>	7 kW
<b>RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ</b>	7.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	7 kW
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	6.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ</b>	2 kW
<b>RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ</b>	2.2 kW
<b>RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ</b>	3.4 kW
<b>RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ</b>	3.6 kW
<b>RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ</b>	3.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ</b>	4.4 kW
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V

## Conventional thermal current I<sub>th</sub>

<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> (1-POLE, ENCLOSED)</b>	45 A
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<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> (3-POLE, ENCLOSED)</b>	18 A
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<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> AT 55°C (3-POLE, OPEN)</b>	21 A
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<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> OF MAIN CONTACTS (1- POLE, OPEN)</b>	50 A
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## Switching capacity

<b>SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)</b>	20 A, Maximum motor rating (UL/CSA)
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<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)</b>	1 A, 250 V DC, (UL/CSA) 10 A, 600 V AC, (UL/CSA)
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<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)</b>	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
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## Magnet system

<b>ARCING TIME</b>	10 ms
<b>DROP-OUT VOLTAGE</b>	AC operated: 0.6 - 0.3 x UC, AC operated
<b>DUTY FACTOR</b>	100 %
<b>PICK-UP VOLTAGE</b>	0.8 - 1.1 V AC x Uc
<b>POWER CONSUMPTION, PICK-UP, 50 HZ</b>	24 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
<b>POWER CONSUMPTION, PICK-UP, 60 HZ</b>	30 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
<b>POWER CONSUMPTION, SEALING, 50 HZ</b>	1.4 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz 3.4 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
<b>POWER CONSUMPTION, SEALING, 60 HZ</b>	1.4 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 4.4 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	24 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	24 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN</b>	15 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX</b>	21 ms

## Motor rating

<b>ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE</b>	1 HP
<b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE</b>	3 HP
<b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE</b>	2 HP
<b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE</b>	3 HP
<b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>	10 HP
<b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>	10 HP

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<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN</b>	9 ms
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<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX</b>	18 ms
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## Communication

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<b>CONNECTION TO SMARTWIRE-DT</b>	No
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## Safety

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<b>SAFE ISOLATION</b>	400 V AC, Between the contacts, According to EN 61140 400 V AC, Between coil and contacts, According to EN 61140
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## Contacts

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<b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b>	1
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<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	1
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<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	0
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## Special purpose ratings

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<b>SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS</b>	20 A (600V 60Hz 3phase, 347V 60Hz 1phase) 20 A (480V 60Hz 3phase, 277V 60Hz 1phase)
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<b>SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING</b>	12 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 72 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
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<b>SPECIAL PURPOSE RATING OF ELEVATOR CONTROL</b>	6.8 A, 240 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 600 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 480 V 60 Hz 3-ph, (UL/CSA) 2 HP, 240 V 60 Hz 3-ph, (UL/CSA) 9 A, 600 V 60 Hz 3-ph, (UL/CSA) 11 A, 480 V 60 Hz 3-ph, (UL/CSA) 7.8 A, 200 V 60 Hz 3-ph, (UL/CSA) 2 HP, 200 V 60 Hz 3-ph, (UL/CSA)
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<b>SPECIAL PURPOSE RATING OF REFRIGERATION</b>	10 A, FLA 480 V 60 Hz 3phase; (CSA) 60 A, LRA 600 V 60 Hz
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<b>CONTROL (CSA ONLY)</b>	3phase; (CSA) 10 A, FLA 600 V 60 Hz 3phase; (CSA) 60 A, LRA 480 V 60 Hz 3phase; (CSA)
<b>SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING</b>	20 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 20 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
<b>SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS</b>	14 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 14 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)

## Design verification

<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	0 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	0.3 W
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	12 A
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	1.4 W
<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 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.

## Abiinfo

<b>CHARACTERISTIC CURVE</b>	<a href="#">eaton-contactors-switch-dilm-characteristic-curve.eps</a> <a href="#">eaton-contactors-switch-dilm-characteristic-curve-002.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.276852.edz</a>
<b>ELEKTRISKEEMID</b>	<a href="#">2100SWI-117</a>
<b>JOOINISED</b>	<a href="#">eaton-contactors-module-dilm-dimensions-002.eps</a> <a href="#">eaton-contactors-module-dilm-dimensions.eps</a> <a href="#">eaton-contactors-frame-dilm-dimensions.eps</a> <a href="#">eaton-contactors-dilm-3d-drawing-007.eps</a>
<b>MCAD MODEL</b>	<a href="#">DA-CD-dil_m7_15</a> <a href="#">DA-CS-dil_m7_15</a>
<b>PAIGALDUSJUHISED</b>	<a href="#">eaton-contactors-dila-dilm7-15-dilmp20-i103407013z.pdf</a>
<b>VASTAVUSAVALDUSED</b>	<a href="#">eaton-contactor-declaration-of-conformity-eu250726en.pdf</a>

<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>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.

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**KUUPÄEV:**

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**Eaton Corporation plc**

Eaton House  
30 Pembroke Road  
Dublin 4, Iirimaa  
Eaton.com

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