

Spesifikasjoner



Eaton 277753

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 18.5 kW, 24 V 50 Hz, AC operation, Screw terminals

General specifications

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277753
EL NUMBER	4130436
EAN	4015082777531
PRODUCT LENGTH/DEPTH	132.1 mm
PRODUCT HEIGHT	115 mm
PRODUCT WIDTH	55 mm
PRODUCT WEIGHT	0.872 kg
COMPLIANCES	CE Marked
CERTIFICATIONS	CSA Std. C22.2 No. 14-05 EN 60947-4-1 IEC 60947-4-1 UL 508 VDE IEC/EN 60947-4-1 UL 60947-4-1 CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NLDX IEC/EN 60947 VDE 0660 CE CSA UL File No.: E29096 UL CSA File No.: 012528 CSA Class No.: 2411-03, 3211-04
CATALOG NOTES	Contacts according to EN 50012
MODEL CODE	DILM40(24V50HZ)



Powering Business Worldwide

Features & Functions

NUMBER OF POLES Three-pole

NUMBER OF POLES Three-pole

NUMBER OF POLES Three-pole

General information

APPLICATION Contactors for Motors

CONNECTION Screw terminals

FRAME SIZE FS3

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

OPERATING FREQUENCY 5000 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 1.9 mΩ

SUITABLE FOR Also motors with efficiency class IE3

UTILIZATION CATEGORY 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 motors: starting, switch off during running

VOLTAGE TYPE AC

Ambient conditions, mechanical

SHOCK RESISTANCE

10 g, N/O main 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 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
 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, 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 when tabletop-mounted, Half-sinusoidal shock 10 ms

Climatic environmental conditions

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

Electro magnetic compatibility

EMITTED INTERFERENCE According to EN 60947-1

INTERFERENCE IMMUNITY According to EN 60947-1

Terminal capacities

TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 9 x 0.8) mm (Number of segments x width x thickness), Main cables
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 25) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 35) mm ² , Main cables 1 x (0.75 - 2.5) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 16) mm ² , Main cables 2 x (0.75 - 16) mm ² , Main cables 1 x (0.75 - 4) mm ² , Control circuit cables 2 x (0.75 - 2.5) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables Single 14 - 1, double 14 - 2, Main cables
TERMINAL CAPACITY	1 x (16 - 50) mm ² , Main

(STRANDED)	cables 2 x (16 - 35) mm ² , Main cables
STRIPPING LENGTH (MAIN CABLE)	14 mm
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
SCREW SIZE	M6, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver
TIGHTENING TORQUE	3.3 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables

Electrical rating

RATED BREAKING CAPACITY AT 220/230 V 400 A

RATED BREAKING CAPACITY AT 380/400 V 400 A

RATED BREAKING CAPACITY AT 500 V 400 A

RATED BREAKING CAPACITY AT 660/690 V 250 A

RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V 60 A

RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V 40 A

RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V 40 A

RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V 40 A

RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V 40 A

RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V 25 A

RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V 18 A

RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V 18 A

RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V 18 A

RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V 14 A

RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V 50 A

RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V 50 A

RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V 45 A

RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947) 560 A

Short-circuit rating

SHORT-CIRCUIT CURRENT RATING (BASIC RATING) 5 kA, 250 A max. fuse, SCCR (UL/CSA)
5 kA, 250 A max. CB, SCCR (UL/CSA)

SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V) 100 kA, 150 A CLASS J max. fuse, SCCR (UL/CSA)
65 kA, 100 A max. CB, SCCR (UL/CSA)

SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V) 100 kA, 150 A CLASS J max. fuse, SCCR (UL/CSA)

SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V 125 A gG/gL

SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V 80 A gG/gL

SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V 63 A gG/gL

SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V 50 A gG/gL

RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	13.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	18.5 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	24 kW
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	25 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	28 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	23 kW
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	5 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	9.5 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	10 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	12 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED INSULATION VOLTAGE (UI)	690 V

Conventional thermal current I_{th}

CONVENTIONAL THERMAL CURRENT I_{TH} (1-POLE, ENCLOSED)	112 A
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CONVENTIONAL THERMAL CURRENT I_{TH} (3-POLE, ENCLOSED)	45 A
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CONVENTIONAL THERMAL CURRENT I_{TH} AT 55°C (3-POLE, OPEN)	55 A
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CONVENTIONAL THERMAL CURRENT I_{TH} AT 60°C (3-POLE, OPEN)	50 A
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CONVENTIONAL THERMAL CURRENT I_{TH} OF MAIN CONTACTS (1- POLE, OPEN)	125 A
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Switching capacity

SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	63 A, Maximum motor rating (UL/CSA)
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Magnet system

ARCING TIME	10 ms
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.3 x Uc, AC operated
DUTY FACTOR	100 %
PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc
POWER CONSUMPTION, PICK-UP, 50 HZ	149 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
POWER CONSUMPTION, PICK-UP, 60 HZ	178 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
POWER CONSUMPTION, SEALING, 50 HZ	4.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz 16 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
POWER CONSUMPTION, SEALING, 60 HZ	4.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 19 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	24 V
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	12 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	18 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	8 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	13 ms

Communication

CONNECTION TO SMARTWIRE-DT	No
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Motor rating

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	3 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	7.5 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	30 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	40 HP

Contacts

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
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Safety

SAFE ISOLATION

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

NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
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NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
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Special purpose ratings

SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	79 A (480V 60Hz 3phase, 277V 60Hz 1phase) 79 A (600V 60Hz 3phase, 347V 60Hz 1phase)
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SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	32 A, 600 V 60 Hz 3-ph, (UL/CSA) 10 HP, 240 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 200 V 60 Hz 3-ph, (UL/CSA) 25 HP, 480 V 60 Hz 3-ph, (UL/CSA) 30 HP, 600 V 60 Hz 3-ph, (UL/CSA) 28 A, 240 V 60 Hz 3-ph, (UL/CSA) 25.3 A, 200 V 60 Hz 3-ph, (UL/CSA) 34 A, 480 V 60 Hz 3-ph, (UL/CSA)
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SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	79 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 79 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
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SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	74 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 74 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
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Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	6.6 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	2.2 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	40 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	4.1 W
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 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.

Ressurser

CHARACTERISTIC CURVE	eaton-contactors-switch-dilm-characteristic-curve-002.eps eaton-contactors-switch-dilm-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	eaton-contactor-declaration-of-conformity-uk251225en.pdf eaton-contactor-declaration-of-conformity-eu250742en.pdf
ECAD MODEL	ETN.277753.edz
INSTALLERINGSINSTRUKSJONER	IL03407033Z
KATALOGER	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
KOBLINGSSKJEMA	eaton-contactors-contact-dilm-wiring-diagram-003.eps
MCAD MODEL	DA-CS-dil_m40_72 DA-CD-dil_m40_72
PEP ECO-PASSPORT	eaton-iec-contactors-pep-eato-00126-v0101-en.pdf
TEGNINGER	eaton-contactors-dilm-dimensions-002.eps

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.

PROSJEKTNAMN:

PROSJEKTNUMMER:

FORBEREDT AV:

DATO:



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

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