Specifications

Photo is representative

Eaton 276849

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 5.5 kW, 1 N/O, 220 V DC, DC operation, Screw terminals

General specifications	
PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	276849
MODEL CODE	DILM12-10(220VDC)
EAN	4015082768492
PRODUCT LENGTH/DEPTH	75 mm
PRODUCT HEIGHT	68 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.296 kg
CERTIFICATIONS	IEC/EN 60947 IEC/EN 60947-4-1 CE VDE 0660 UL File No.: E29096 UL CSA File No.: 012528 UL Category Control No.: NLDX CSA Class No.: 2411-03, 3211-04 CSA UL 508 CSA-C22.2 No. 14-05
CATALOG NOTES	Contacts according to EN 50012
GLOBAL CATALOG	276849

Powering Business Worldwide

Product specifications

ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT	Screw connection
NUMBER OF POLES	Three-pole
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.

Resources

CATALOGS	SmartWire-DT Catalog Product Range Catalog Switching and protecting motors eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
CHARACTERISTIC CURVE	eaton-contactors-component-dilm-characteristic-curve-003.eps eaton-contactors-switch-dilm-characteristic-curve-002.eps eaton-contactors-switch-dilm-characteristic-curve.eps eaton-contactors-short-time-loading-dilm-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	DA-DC-00004810.pdf DA-DC-00004792.pdf
DRAWINGS	eaton-contactors-module-dilm-dimensions.eps eaton-contactors-module-dilm-dimensions-002.eps eaton-contactors-frame-dilm-dimensions.eps eaton-contactors-mounting-dilm-dimensions.eps eaton-contactors-mounting-dilm-dimensions-002.eps eaton-general-ie-ready-dilm-contactor-standards.eps eaton-contactors-dilm-3d-drawing-007.eps
ECAD MODEL	ETN.276849.edz
INSTALLATION INSTRUCTIONS	eaton-contactors-dila-dilm7-15-dilmp20-instruction-leaflet-il03407013z.pdf

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.
FITTED WITH:	Varistor suppressor circuit
OPERATING FREQUENCY	9000 mechanical Operations/h (DC operated)
POLLUTION DEGREE	3
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
CONNECTION TO SMARTWIRE-DT	No
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
UTILIZATION CATEGORY	AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-3: Normal AC induction motors: starting, switch off during running AC-4: Normal AC induction motors: starting, plugging, reversing, inching
CONNECTION	Screw terminals

INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CS-dil_m7_15 DA-CD-dil_m7_15
SYSTEM OVERVIEW	eaton-contactors-dilm-contactor-system-overview.eps
WIRING DIAGRAMS	eaton-contactors-contact-dilm-wiring-diagram.eps

FRAME SIZE	FS1
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	1 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	3 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	2 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	3 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	10 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	45 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	18 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	21 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	50 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	1.5 W

HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.5 W
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	31 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	12 ms
APPLICATION	Contactors for Motors
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
ARCING TIME	10 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
VOLTAGE TYPE	DC
DEGREE OF PROTECTION	IP20
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3

OPERATING TEMPERATURE - MAX	60 °C
OPERATING TEMPERATURE - MIN	-25 °C
POWER CONSUMPTION (PICK-UP) AT DC	4.5 W
POWER CONSUMPTION (SEALING) AT DC	4.5 W
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 CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 V
CONTACT CONFIGURATION	1 NO
DROP-OUT VOLTAGE	At least smoothed two-phase bridge rectifier or three-phase rectifier 0.6 - 0.15 x UC, DC operated
OVERVOLTAGE CATEGORY	III
DUTY FACTOR	100 %
EMITTED INTERFERENCE	According to EN 60947-1
INTERFERENCE IMMUNITY	According to EN 60947-1
LIFESPAN, MECHANICAL	10,000,000 Operations (DC operated)
PICK-UP VOLTAGE	0.8 - 1.1 V DC x Uc 0.85 - 1.1 V DC x Uc (only with auxiliary contact module with 3 or more N/C contacts)

SAFE ISOLATION	400 V AC, Between the contacts, According to EN 61140 400 V AC, Between coil and contacts, According to EN 61140
SCREW SIZE	M3.5, Terminal screw
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	1 A, 250 V DC, (UL/CSA) 10 A, 600 V AC, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	P300, DC operated (UL/CSA) A600, AC operated (UL/CSA)
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.75 - 2.5) mm^2 2 x (0.75 - 2.5) mm^2
SHOCK RESISTANCE	3.4 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 5.7 g, N/O main 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 5 g, N/C 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
TERMINAL CAPACITY (SOLID)	2 x (0.75 - 2.5) mm^2 1 x (0.75 - 4) mm^2
TERMINAL CAPACITY (SOLID/STRANDED AWG)	Single 18 - 10, double 18 - 14
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	20 A, Maximum motor rating (UL/CSA)

TIGHTENING TORQUE	1.2 Nm, Screw terminals
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	220 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	220 V
RATED INSULATION VOLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	168 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, 400 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, 110 V	20 A
RATED OPERATIONAL	15 A

CURRENT (IE) AT DC-1, 220 V	
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	20 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	12 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	4 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	7 kW
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	2 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	2.2 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	3 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	3.4 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	3.6 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	3.5 kW
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	4.4 kW
RATED OPERATIONAL POWER (NEMA)	7.4 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RESISTANCE PER POLE	4.6 mΩ
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	4.5 W
STRIPPING LENGTH (CONTROL CIRCUIT	10 mm

CABLE)	
STRIPPING LENGTH (MAIN CABLE)	10 mm
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	5 kA, SCCR (UL/CSA) 60 A, max. CB, SCCR (UL/CSA) 45 A, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	30/100 kA, Fuse, SCCR (UL/CSA) 25 A, Class RK5/ 45 A Class J, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	25 A, Class RK5/45 A, Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V	35 A gG/gL
SUITABLE FOR	Also motors with efficiency class IE3
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
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	20 A (480V 60Hz 3phase, 277V 60Hz 1phase) 20 A (600V 60Hz 3phase, 347V 60Hz 1phase)
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	72 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 12 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	11 A, 480 V 60 Hz 3-ph, (UL/CSA) 9 A, 600 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 600 V 60 Hz 3-ph, (UL/CSA)

	6.8 A, 240 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 480 V 60 Hz 3-ph, (UL/CSA) 2 HP, 200 V 60 Hz 3-ph, (UL/CSA) 7.8 A, 200 V 60 Hz 3-ph, (UL/CSA) 2 HP, 240 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	10 A, FLA 480 V 60 Hz 3phase; (CSA) 60 A, LRA 480 V 60 Hz 3phase; (CSA) 60 A, LRA 600 V 60 Hz 3phase; (CSA) 10 A, FLA 600 V 60 Hz 3phase; (CSA)
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	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)
SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	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)
OPERATING TEMPERATURE	-25° to 60°C
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	22 A
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	21 A
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	20 A
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	7 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	6.5 kW
ACTUATING VOLTAGE	220 V DC
ALTITUDE	Max. 2000 m

OPERATING VOLTAGE AT AC, 50 HZ - MIN	24 V
OPERATING VOLTAGE AT AC, 50 HZ - MAX	690 V
OPERATING VOLTAGE AT AC, 60 HZ - MIN	24 V
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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