Specifications



Photo is representative







Powering Business Worldwide

Eaton 277731

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 15 kW, 1 NC, 230 V 50 Hz, 240 V 60 Hz, AC operation, Spring-loaded terminals DILMC32-01(230V50HZ,240V60HZ)

General specifications	
PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277731
MODEL CODE	DILMC32- 01(230V50HZ,240V60HZ)
EAN	4015082777319
PRODUCT LENGTH/DEPTH	97 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.433 kg
COMPLIANCES	CE Marked RoHS Compliant
CERTIFICATIONS	CSA Certified UL Listed IEC 60947-4-1 EN 60947-4-1 UL Category Control No.: NLDX CE CSA File No.: 012528 UL File No.: E29096 CSA Class No.: 2411-03, 3211-04 IEC/EN 60947-4-1 CSA IEC/EN 60947 VDE 0660 UL 60947-4-1 UL CSA-C22.2 No. 60947-4-1-14
CATALOG NOTES	Contacts according to EN 50012
GLOBAL CATALOG	277731

Product specifications	
USED WITH	Can be combined with auxiliary contacts: DILA-XHIC(V)
AMPERAGE RATING	170A
HP RATING - MAX	10,25/40,60,125,125 (1/3PH @120,240/208,240,480,600 V)
NUMBER OF POLES	Three-pole
ТҮРЕ	Full voltage non-reversing small contactor
VOLTAGE RATING	400 V
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)	Meets the product standard's requirements.

Resources	
CATALOGS	IEC contactors and starters
	eaton-product-overview- for-machinery-catalogue- ca08103003zen-en-us.pdf
	SmartWire-DT Catalog
	Product Range Catalog Switching and protecting motors
	eaton-contactors-switch-dilm-characteristic-curve-002.eps
CHARACTERISTIC CURVE	eaton-contactors- component-dilm- characteristic-curve- 003.eps
	eaton-contactors-switch- dilm-characteristic- curve.eps
DECLARATIONS OF	DA-DC-00004816.pdf
CONFORMITY	DA-DC-00004783.pdf
	eaton-contactors- dimensions-210t014.eps
	eaton-contactors-contact- dimensions-210x202.eps
	eaton-contactors- mounting-dilm-
	dimensions-002.eps
DRAWINGS	eaton-contactors- mounting-dilm- dimensions.eps
	eaton-general-ie-ready- dilm-contactor- standards.eps
	eaton-contactors-dilm-3d-drawing-010.eps
ECAD MODEL	ETN.277731.edz
INSTALLATION INSTRUCTIONS	IL03407014Z2021_09.pdf
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CS-dil_mc17_38
	DA-CD-dil mc17_38

RADIATION	
	Does not apply, since the
10.2.5 LIFTING	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.
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	ls the panel builder's responsibility.
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH	ls 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	ls the panel builder's responsibility.
FITTED WITH:	Mirror contact
FREQUENCY RATING	50-60 Hz
OPERATING FREQUENCY	5000 mechanical Operations/h (AC 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

SYSTEM OVERVIEW	eaton-contactors-dilm- contactor-system- overview.eps
WIRING DIAGRAMS	2100SWI-117 eaton-contactors-contact- dilm-wiring-diagram- 002.eps

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	Spring-loaded terminals
FRAME SIZE	FS2
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	2 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	5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	20 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	25 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	90 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	36 A
CONVENTIONAL	42 A

THERMAL CURRENT ITH	
AT 55°C (3-POLE, OPEN)	
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1- POLE, OPEN)	100 A
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
APPLICATION	Contactors for Motors
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
TERMINALS	Spring-cage terminals on auxiliary and control circuit terminals
ARCING TIME	10 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Spring clamp connection
	3.5 mm, Spring-loaded terminals, Control circuit cables 2, Terminal screw, Main
SCREWDRIVER SIZE	cables, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver
SCREWDRIVER SIZE VOLTAGE TYPE	screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard
	screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver
VOLTAGE TYPE	screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver AC
VOLTAGE TYPE DEGREE OF PROTECTION NUMBER OF AUXILIARY CONTACTS (NORMALLY	screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver AC IP00
VOLTAGE TYPE DEGREE OF PROTECTION NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) NUMBER OF AUXILIARY CONTACTS (NORMALLY	screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver AC IP00
VOLTAGE TYPE DEGREE OF PROTECTION NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) NUMBER OF CONTACTS (NORMALLY CLOSED	screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver AC IP00 1

(NORMALLY CLOSED) AS MAIN CONTACT	
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
OPERATING TEMPERATURE - MAX	60 °C
OPERATING TEMPERATURE - MIN	-25 °C
RATED BREAKING CAPACITY AT 220/230 V	320 A
RATED BREAKING CAPACITY AT 380/400 V	320 A
RATED BREAKING CAPACITY AT 500 V	320 A
RATED BREAKING CAPACITY AT 660/690 V	180 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	230 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	230 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	240 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	240 V
COIL VOLTAGE	230-240 Vac, 50/60 Hz
CONTACT CONFIGURATION	1 NC
CONTINUOUS AMPERE RATING	40 A
SERIES	XT IEC
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.3 x UC, AC operated
OVERVOLTAGE CATEGORY	III
DUTY FACTOR	100 %
NUMBER OF CONTACTS	1 NC
EMITTED INTERFERENCE	According to EN 60947-1
OPERATION	Non-reversing
INTERFERENCE IMMUNITY	According to EN 60947-1
LIFESPAN, MECHANICAL	10,000,000 Operations (AC operated)

PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc
POWER CONSUMPTION, PICK-UP, 50 HZ	52 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140 440 V AC, Between coil and contacts, According to EN 61140
POWER CONSUMPTION, PICK-UP, 60 HZ	67 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
SCREW SIZE	M5, Terminal screw, Main cables
POWER CONSUMPTION, SEALING, 50 HZ	2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz 7.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
POWER CONSUMPTION, SEALING, 60 HZ	2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 8.7 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
TERMINAL CAPACITY (STRANDED)	1 x 16 mm², Main cables
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 - 16) mm², Main cables 1 x (0.75 - 1.5) mm², Control circuit cables, Spring-loaded terminals 2 x (0.75 - 10) mm², Main cables 2 x (0.75 - 1.5) mm², Control circuit cables, Spring-loaded terminals
SHOCK RESISTANCE	6.9 g, N/O main 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, Halfsinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Halfsinusoidal shock 10 ms 5.3 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletopmounted, Half-sinusoidal shock 10 ms 3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletopmounted, Half-sinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 16) mm², Main cables 1 x (0.75 - 2.5) mm², Control circuit cables, Spring-loaded terminals 2 x (0.75 - 10) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables, Spring-loaded terminals
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables, Spring-loaded terminals Single 18 - 6, double 18 - 8, Main cables
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	40 A, Maximum motor rating (UL/CSA)
POWER CONSUMPTION	15 kW
TIGHTENING TORQUE	3.2 Nm, Screw terminals, Main cables
TERMINAL CAPACITY (FLEXIBLE)	2 x (0.75 - 2.5) mm², Control circuit cables, Spring-loaded terminals 1 x (0.75 - 2.5) mm², Control circuit cables, Spring-loaded terminals
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 V

RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	0 V
RATED INSULATION VOLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	384 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	45 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	32 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	18 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	15 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	15 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	15 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	15 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	12 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	40 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	40 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60	40 A

V	
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	32 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	19 kW
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	4 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	4.5 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	7 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	8 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	9 kW
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	10 kW
RATED OPERATIONAL POWER (NEMA)	14.9 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RESISTANCE PER POLE	2.7 mΩ
STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS	2.1 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
STRIPPING LENGTH (MAIN CABLE)	10 mm

SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	22 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	16 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	14 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	8 ms
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	125 A, max. Fuse, SCCR (UL/CSA) 125 A, max. CB, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	10/65 kA, CB, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	50/32 A, max. CB, SCCR (UL/CSA) 10/22 kA, CB, SCCR (UL/CSA) 125/125 A, Class J, max. Fuse, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V	125 A gG/gL
SUITABLE FOR	Also motors with efficiency class IE3
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	63 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	63 A gG/gL
SHORT-CIRCUIT	35 A gG/gL

PROTECTION RATING	
(TYPE 2 COORDINATION)	
AT 690 V	

AT 690 V	
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	40 A (480V 60Hz 3phase, 277V 60Hz 1phase) 40 A (600V 60Hz 3phase, 347V 60Hz 1phase)
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	32 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 192 A, LRA 480 V 60 Hz 3- ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	20 HP, 480 V 60 Hz 3-ph, (UL/CSA) 22 A, 240 V 60 Hz 3-ph, (UL/CSA) 20 HP, 600 V 60 Hz 3-ph, (UL/CSA) 22 A, 600 V 60 Hz 3-ph, (UL/CSA) 25.3 A, 200 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 200 V 60 Hz 3-ph, (UL/CSA) 27 A, 480 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 240 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	240 A, LRA 480 V 60 Hz 3phase; (CSA) 180 A, LRA 600 V 60 Hz 3phase; (CSA) 30 A, FLA 600 V 60 Hz 3phase; (CSA) 40 A, FLA 480 V 60 Hz 3phase; (CSA)
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	40 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA) 40 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	40 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 40 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
OPERATING TEMPERATURE	-25° to 60°C
CONVENTIONAL THERMAL CURRENT ITH	45 A

43 A
40 A
20 kW
23 kW
17 kW
230 V 50 Hz, 240 V 60 Hz
Max. 2000 m
24 V
690 V
24 V
690 V

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	



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