Specifications



Photo is representative





Eaton 277128

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 11 kW, 1 N/O, 42 V 50 Hz, 48 V 60 Hz, AC operation, Screw terminals DILM25-10(42V50HZ,48V60HZ)

General specification	ıs
PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277128
MODEL CODE	DILM25- 10(42V50HZ,48V60HZ)
EAN	4015082771287
PRODUCT LENGTH/DEPTH	97 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.428 kg
CERTIFICATIONS	CSA Certified UL Listed IEC 60947-4-1 EN 60947-4-1 CSA-C22.2 No. 60947-4-1- 14 UL IEC/EN 60947 IEC/EN 60947 IEC/EN 60947-4-1 CSA CE UL File No.: E29096 UL Category Control No.: NLDX CSA File No.: 012528 VDE 0660 UL 60947-4-1 CSA Class No.: 2411-03, 3211-04
CATALOG NOTES	Contacts according to EN 50012
GLOBAL CATALOG	277128



Product specification	S
USED WITH	Can be combined with auxiliary contacts: DILM32-XHI, DILA-XHI(V)
ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT	Screw connection
AMPERAGE RATING	170A
HP RATING - MAX	2, 5/ 7.5, 10, 15, 20 hp (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.

Resources	
	Product Range Catalog Switching and protecting motors
CATALOGS	eaton-product-overview- for-machinery-catalogue- ca08103003zen-en-us.pdf
	SmartWire-DT Catalog
	eaton-contactors- component-dilm- characteristic-curve- 003.eps
CHARACTERISTIC CURVE	eaton-contactors-switch-dilm-characteristic-curve-002.eps
	eaton-contactors-switch- dilm-characteristic- curve.eps
DECLARATIONS OF	eaton-contactor- declaration-of-conformity- eu250735en.pdf
CONFORMITY	eaton-contactor- declaration-of-conformity- uk251218en.pdf
	<u>eaton-contactors-contact-dimensions-210x202.eps</u>
	eaton-contactors- dimensions-210t014.eps
	eaton-contactors- mounting-dilm- dimensions-002.eps
DRAWINGS	eaton-contactors- mounting-dilm- dimensions.eps
	eaton-contactors-dilm-3d-drawing-009.eps
	eaton-general-ie-ready- dilm-contactor- standards.eps
ECAD MODEL	ETN.277128.edz
INSTALLATION INSTRUCTIONS	<u>IL03407014Z2021 09.pdf</u>
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CD-dil m17 38
	DA-CS-dil_m17_38

10.2.4 RESISTANCE TO Meets the product	
ULTRA-VIOLET (UV) RADIATION Meets the product standard's requirement	nts.
Does not apply, since to entire switchgear need be evaluated.	
10.2.6 MECHANICAL IMPACT Does not apply, since to entire switchgear need be evaluated.	
10.2.7 INSCRIPTIONS Meets the product standard's requirement	nts.
10.3 DEGREE OF PROTECTION OF ASSEMBLIESDoes not apply, since to entire switchgear need be evaluated.	
10.4 CLEARANCES AND Meets the product standard's requirement	nts.
10.5 PROTECTIONDoes not apply, since to entire switchgear needsAGAINST ELECTRICentire switchgear needsSHOCKbe evaluated.	
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS Does not apply, since to entire switchgear need be evaluated.	
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS Is the panel builder's responsibility.	
10.8 CONNECTIONS FOR Is the panel builder's responsibility.	
10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH Is the panel builder's responsibility.	
10.9.3 IMPULSE Is the panel builder's responsibility.	
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL Is the panel builder's responsibility.	
FREQUENCY RATING 50-60 Hz	
OPERATING FREQUENCY 5000 mechanical Operations/h (AC operated)	
POLLUTION DEGREE 3	
CLIMATIC PROOFING Damp heat, cyclic, to II 60068-2-30 Damp heat, constant, 1 IEC 60068-2-78	
CONNECTION TO No	
RATED IMPULSE WITHSTAND VOLTAGE 8000 V AC (UIMP)	
AC-3: Normal AC induc	tion h off

PEP ECO-PASSPORT	eaton-iec-contactors-pep- eato-00124-v0101-en.pdf
SPECIFICATIONS AND DATASHEETS	<u>Eaton Specification Sheet - 277128</u>
SYSTEM OVERVIEW	eaton-contactors-dilm- contactor-system- overview.eps
WIRING DIAGRAMS	eaton-contactors-contact- dilm-wiring-diagram.eps

	AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-1: Non-inductive or slightly inductive loads, resistance furnaces
CONNECTION	Screw 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	7.5 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	15 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	20 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	90 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	36 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	42 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-	100 A

POLE, OPEN)	
EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID	4.2 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID	1.4 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	Screw terminals
ARCING TIME	10 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
	2, Terminal screw, Pozidriv screwdriver
VOLTAGE TYPE	
VOLTAGE TYPE DEGREE OF PROTECTION	screwdriver
	screwdriver AC
DEGREE OF PROTECTION NUMBER OF AUXILIARY CONTACTS (NORMALLY	screwdriver AC IP00
DEGREE OF PROTECTION NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) NUMBER OF AUXILIARY CONTACTS (NORMALLY	screwdriver AC IP00 0
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DEGREE OF PROTECTION NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS) NUMBER OF MAIN CONTACTS) NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT) OPERATING TEMPERATURE - MAX OPERATING	screwdriver AC IP00 0 1 1 3 60 °C

RATED BREAKING CAPACITY AT 500 V	250 A
RATED BREAKING CAPACITY AT 660/690 V	150 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	42 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	42 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	48 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	48 V
COIL VOLTAGE	28-42 Vac, 50/60 Hz
CONTACT CONFIGURATION	1 NO
CONTINUOUS AMPERE RATING	40 A
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.3 x UC, AC operated
OVERVOLTAGE CATEGORY	III
DUTY FACTOR	100 %
NUMBER OF CONTACTS	1 NO
EMITTED INTERFERENCE	According to EN 60947-1
OPERATION	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	contacts, According to EN 61140 440 V AC, Between coil and contacts, According to
POWER CONSUMPTION,	contacts, According to EN 61140 440 V AC, Between coil and contacts, According to EN 61140 67 VA, Dual-frequency coil in a cold state and 1.0 x
POWER CONSUMPTION, PICK-UP, 60 HZ	contacts, According to EN 61140 440 V AC, Between coil and contacts, According to EN 61140 67 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz M5, Terminal screw, Main cables M3.5, Terminal screw,

FERMINAL CAPACITY SOLID)	1 x (0.75 - 16) mm², Main cables 1 x (0.75 - 4) mm², Control circuit cables 2 x (0.75 - 10) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables
FERMINAL CAPACITY SOLID/STRANDED AWG)	Single 18 - 6, double 18 - 8, Main cables 18 - 14, Control circuit cables
SWITCHING CAPACITY MAIN CONTACTS, GENERAL USE)	40 A, Maximum motor rating (UL/CSA)
POWER CONSUMPTION	11 kW
IGHTENING TORQUE	1.2 Nm, Screw terminals, Control circuit cables 3.2 Nm, Screw terminals, Main cables
RATED CONTROL SUPPLY /OLTAGE (US) AT DC - MAX	0 V
RATED CONTROL SUPPLY /OLTAGE (US) AT DC - MIN	0 V
RATED INSULATION /OLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 690 V COS PHI TO IEC/EN 60947)	350 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 880 V, 400 V, 415 V	45 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 880 V, 400 V, 415 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 140 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	15 A
RATED OPERATIONAL	

RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	13 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	13 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	13 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	10 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 V	40 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	25 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	8.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	14.5 kW
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	3.5 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	4 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	6 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	6.5 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	7 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	8 kW
RATED OPERATIONAL POWER AT AC-4, 660/690	8.5 kW

V, 50 HZ	
RATED OPERATIONAL POWER (NEMA)	11 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)	5 kA, SCCR (UL/CSA) 125 A, max. CB, SCCR (UL/CSA) 125 A, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	10/65 kA, CB, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	10/22 kA, CB, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 125/100 A, Class J, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT	100 A gG/gL

PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V

AT 400 V	
SUITABLE FOR	Also motors with efficiency class IE3
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	50 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	35 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	35 A gG/gL
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	40 A (600V 60Hz 3phase, 347V 60Hz 1phase) 40 A (480V 60Hz 3phase, 277V 60Hz 1phase)
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	25 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 150 A, LRA 480 V 60 Hz 3- ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	15.2 A, 240 V 60 Hz 3-ph, (UL/CSA) 11 A, 200 V 60 Hz 3-ph, (UL/CSA) 5 HP, 240 V 60 Hz 3-ph, (UL/CSA) 10 HP, 480 V 60 Hz 3-ph, (UL/CSA) 3 HP, 200 V 60 Hz 3-ph, (UL/CSA) 15 HP, 600 V 60 Hz 3-ph, (UL/CSA) 17 A, 600 V 60 Hz 3-ph, (UL/CSA) 17 A, 600 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	40 A, FLA 480 V 60 Hz 3phase; (CSA) 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)
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	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)
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 AT 40°C (3-POLE, OPEN)	45 A
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	43 A
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	40 A
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	15.5 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	17.5 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	14 kW
ACTUATING VOLTAGE	42 V 50 Hz, 48 V 60 Hz
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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