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Eaton 277705

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 15 kW, 1 N/O, 24 V 50/60 Hz, AC operation, Spring-loaded terminals

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PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277705
PRODUCT LENGTH/DEPTH	97 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.433 kg
CERTIFICATIONS	IEC/EN 60947 CSA File No.: 012528 CSA CE UL Category Control No.: NLDX UL 60947-4-1 UL File No.: E29096 CSA Class No.: 2411-03, 3211-04 UL IEC/EN 60947-4-1 VDE 0660 CSA-C22.2 No. 60947-4-1- 14
CATALOG NOTES	Contacts according to EN 50012

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.
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.

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-uk251218en.pdf
□□□□□	IL03407014Z2021_09.pdf
□□□	eaton-contactors-contact-dilm-wiring-diagram.eps
□□	eaton-contactors-dimensions-210t014.eps

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.
OPERATING FREQUENCY	5000 mechanical Operations/h (AC operated)
POLLUTION DEGREE	3
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
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
CONNECTION TO SMARTWIRE-DT	No
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
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	-25 °C

(ENCLOSED) - MIN	
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 THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	42 A
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 Screw connection
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Main cables, Standard screwdriver 3.5 mm, Spring-loaded terminals, Control circuit cables 2, Terminal screw, Main cables, Pozidriv screwdriver
VOLTAGE TYPE	AC
DEGREE OF PROTECTION	IP00
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
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	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60	24 V

HZ - MIN	
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.3 x UC, AC operated
OVERVOLTAGE CATEGORY	III
DUTY FACTOR	100 %
EMITTED INTERFERENCE	According to EN 60947-1
INTERFERENCE IMMUNITY	According to EN 60947-1
LIFESPAN, MECHANICAL	7,000,000 Operations (Coil 50/60 Hz) 10,000,000 Operations (AC operated)
PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc
POWER CONSUMPTION, PICK-UP, 50 HZ	58 VA, Dual-frequency coil in a cold state and 1.0 x Us 62 VA, Dual-frequency coil in a cold state and 1.0 x Us
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	58 VA, Dual-frequency coil in a cold state and 1.0 x Us 62 VA, Dual-frequency coil in a cold state and 1.0 x Us
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
POWER CONSUMPTION, SEALING, 60 HZ	6.5 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 9.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 2.1 W, Dual-frequency coil in a cold state and 1.0 x Us
TERMINAL CAPACITY (STRANDED)	1 x 16 mm ² , Main cables
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	10 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
TERMINAL CAPACITY (FLEXIBLE WITH	1 x (0.75 - 1.5) mm ² , Control circuit cables,

FERRULE)	Spring-loaded terminals 2 x (0.75 - 10) mm², Main cables 2 x (0.75 - 1.5) mm², Control circuit cables, Spring-loaded terminals 1 x (0.75 - 16) mm², Main cables
SHOCK RESISTANCE	7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 6.9 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 5.3 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 5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 2.5) mm², Control circuit cables, Spring-loaded terminals 2 x (0.75 - 10) mm², Main cables 1 x (0.75 - 16) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables, Spring-loaded terminals
TERMINAL CAPACITY (SOLID/STRANDED AWG)	Single 18 - 6, double 18 - 8, Main cables 18 - 14, Control circuit cables, Spring-loaded terminals
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	40 A, Maximum motor rating (UL/CSA)
TIGHTENING TORQUE	3.2 Nm, Screw terminals, Main cables

TERMINAL CAPACITY (FLEXIBLE)	2 x (0.75 - 2.5) mm ² , Control circuit cables, Spring-loaded terminals 1 x (0.75 - 2.5) mm ² , 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,	40 A

110 V	
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)	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)	10 mm

CABLE)	
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) 5 kA, SCCR (UL/CSA) 125 A, max. CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	10/100 kA, Fuse, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA) 10/65 kA, CB, 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) 125/125 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 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 PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	35 A gG/gL
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	192 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 32 A, FLA 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) 20 HP, 600 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 200 V 60 Hz 3-ph, (UL/CSA) 22 A, 240 V 60 Hz 3-ph, (UL/CSA) 27 A, 480 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, 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) 30 A, FLA 600 V 60 Hz 3phase; (CSA) 40 A, FLA 480 V 60 Hz 3phase; (CSA) 180 A, LRA 600 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, 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)
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	20 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	23 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	17 kW
ACTUATING VOLTAGE	24 V 50/60 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

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