

Specifications

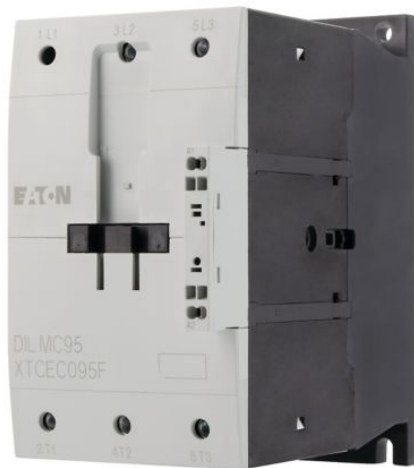


Photo is representative



Eaton 239685

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 45 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation, Spring-loaded terminals DILMC95(230V50HZ,240V60HZ)

General specifications

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	239685
MODEL CODE	DILMC95(230V50HZ,240V60HZ)
EAN	4015082396855
PRODUCT LENGTH/DEPTH	160 mm
PRODUCT HEIGHT	170 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	2.154 kg
CERTIFICATIONS	CE UL 60947-4-1 IEC/EN 60947 CSA Class No.: 2411-03, 3211-04 UL UL File No.: E29096 CSA CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14 VDE 0660 UL Category Control No.: NLDX IEC/EN 60947-4-1
CATALOG NOTES	Contacts according to EN 50012
GLOBAL CATALOG	239685

Product specifications

ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT

Spring clamp 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

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

CATALOGS

[SmartWire-DT Catalog](#)

[Product Range Catalog Switching and protecting motors](#)

CHARACTERISTIC CURVE

[eaton-contactors-component-dilm-characteristic-curve-003.eps](#)

[eaton-contactors-short-time-loading-dilm-characteristic-curve-002.eps](#)

[eaton-contactors-switch-dilm-characteristic-curve.eps](#)

[eaton-contactors-switch-dilm-characteristic-curve-002.eps](#)

DECLARATIONS OF CONFORMITY

[DA-DC-00004818.pdf](#)

[DA-DC-00004781.pdf](#)

DRAWINGS

[eaton-contactors-dilm-dimensions-003.eps](#)

[eaton-contactors-mounting-dilm-dimensions.eps](#)

[eaton-contactors-mounting-dilm-dimensions-002.eps](#)

[eaton-contactors-dilm-dimensions-011.eps](#)

[eaton-contactors-frame-dilm-3d-drawing.eps](#)

[eaton-general-ie-ready-dilm-contactor-standards.eps](#)

[eaton-contactors-dilm-3d-drawing.eps](#)

ECAD MODEL

[ETN.239685.edz](#)

INSTALLATION INSTRUCTIONS

[eaton-dil-contactors-instruction-leaflet-il03407039z.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.
OPERATING FREQUENCY	3600 mechanical Operations/h (AC operated)
POLLUTION DEGREE	3
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
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
CONNECTION	Spring-loaded terminals Screw terminals

INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CD-dil mc80 170 DA-CS-dil mc80 170
SYSTEM OVERVIEW	eaton-contactors-dilm-contactor-system-overview.eps
WIRING DIAGRAMS	eaton-contactors-contact-dilm-wiring-diagram-003.eps

FRAME SIZE	FS4
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	7.5 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	30 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	15 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	40 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	75 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	100 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	250 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	100 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	115 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	275 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	12.6 W

HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	4.2 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	15 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	3.5 mm, Spring-loaded terminals, Control circuit cables
VOLTAGE TYPE	AC
DEGREE OF PROTECTION	IP00
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
RATED BREAKING CAPACITY AT 220/230 V	950 A
RATED BREAKING CAPACITY AT 380/400 V	950 A
RATED BREAKING CAPACITY AT 500 V	950 A
RATED BREAKING CAPACITY AT 660/690 V	800 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	230 V
RATED CONTROL SUPPLY	230 V

VOLTAGE (US) AT AC, 50 HZ - MIN	
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	240 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	240 V
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	10,000,000 Operations (AC operated)
PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc
POWER CONSUMPTION, PICK-UP, 50 HZ	310 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
SAFE ISOLATION	690 V AC, Between coil and contacts, According to EN 61140 690 V AC, Between the contacts, According to EN 61140
POWER CONSUMPTION, PICK-UP, 60 HZ	345 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
RESIDUAL CURRENT	1 mA (with actuation of A1 - A2 by the electronics with "0" signal)
SCREW SIZE	5 mm AF, Hexagon socket-head spanner, Terminal screw, Main cables M10, Terminal screw, Main cables
POWER CONSUMPTION, SEALING, 50 HZ	5.8 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz 26 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
POWER CONSUMPTION, SEALING, 60 HZ	5.8 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 30 VA, Dual-frequency coil in a cold state and 1.0 x

	Us, at 60 Hz
TERMINAL CAPACITY (STRANDED)	2 x (16 - 50) mm ² , Main cables 1 x (16 - 70) mm ² , Main cables
TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 16 x 0.8) mm (Number of segments x width x thickness), Main cables
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (10 - 70) mm ² , Main cables 2 x (0.75 - 1.5) mm ² , Control circuit cables, Spring-loaded terminals 1 x (0.75 - 1.5) mm ² , Control circuit cables, Spring-loaded terminals 2 x (10 - 50) mm ² , Main cables
SHOCK RESISTANCE	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 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 7 g, N/O 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 when tabletop-mounted, Half-sinusoidal shock 10 ms
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 2.5) mm ² , Control circuit cables, Spring-loaded terminals 2 x (0.75 - 2.5) mm ² , Control circuit cables, Spring-loaded terminals
TERMINAL CAPACITY (SOLID/STRANDED AWG)	Single 8...3/0, double 8...2/0, Main cables

	18 - 14, Control circuit cables, Spring-loaded terminals
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	125 A, Maximum motor rating (UL/CSA)
TIGHTENING TORQUE	14 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)	1330 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	130 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	95 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	95 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	95 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	95 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	80 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	50 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	50 A

RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	50 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	50 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	37 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	110 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	70 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	110 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	95 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	32 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	45 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	57 kW
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	16 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	17 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	26 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	30 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	32 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	36 kW
RATED OPERATIONAL POWER AT AC-4, 660/690	35 kW

V, 50 HZ	
RATED OPERATIONAL POWER (NEMA)	55 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RESISTANCE PER POLE	0.6 mΩ
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	5.8 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
STRIPPING LENGTH (MAIN CABLE)	24 mm
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	20 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	14 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	14 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	9 ms
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	600 A, max. CB, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA) 600 A, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	65 kA, CB, SCCR (UL/CSA) 250 A, max. CB, SCCR (UL/CSA) 300/300 A, Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	30 kA, CB, SCCR (UL/CSA) 350 A, max. CB, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 300/300 A, Class J, max. Fuse, SCCR (UL/CSA)

SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V	250 A gG/gL
SUITABLE FOR	Also motors with efficiency class IE3
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	200 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	160 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	160 A gG/gL
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	100 A (480V 60Hz 3phase, 277V 60Hz 1phase) 100 A (600V 60Hz 3phase, 347V 60Hz 1phase)
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	570 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 95 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	62.1 A, 200 V 60 Hz 3-ph, (UL/CSA) 77 A, 480 V 60 Hz 3-ph, (UL/CSA) 75 HP, 600 V 60 Hz 3-ph, (UL/CSA) 30 HP, 240 V 60 Hz 3-ph, (UL/CSA) 80 A, 240 V 60 Hz 3-ph, (UL/CSA) 60 HP, 480 V 60 Hz 3-ph, (UL/CSA) 77 A, 600 V 60 Hz 3-ph, (UL/CSA) 20 HP, 200 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	90 A, FLA 480 V 60 Hz 3phase; (CSA) 540 A, LRA 480 V 60 Hz 3phase; (CSA) 70 A, FLA 600 V 60 Hz 3phase; (CSA) 420 A, LRA 600 V 60 Hz 3phase; (CSA)
SPECIAL PURPOSE	100 A, 600 V 60 Hz 3phase,

RATING OF RESISTANCE AIR HEATING	347 V 60 Hz 1phase, (UL/CSA) 100 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	100 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA) 100 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	130 A
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	125 A
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	110 A
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	60 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	70 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	75 kW
ACTUATING VOLTAGE	230 V 50 Hz, 240 V 60 Hz
ALTITUDE	Max. 2000 m
OPERATING VOLTAGE AT AC, 50 HZ - MIN	230 V
OPERATING VOLTAGE AT AC, 50 HZ - MAX	690 V
OPERATING VOLTAGE AT AC, 60 HZ - MIN	230 V
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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