

# Eaton 139549

Eaton Moeller® series DILM Contactor, 380 V 400 V 110 kW, 2 N/O, 2 NC, RAC 500: 480 - 500 V 50/60 Hz, AC operation, Screw connection

<b>PRODUCT NAME</b>	Eaton Moeller® series DILM Contactor
<b>CATALOG NUMBER</b>	139549
<b>PRODUCT LENGTH/DEPTH</b>	158 mm
<b>PRODUCT HEIGHT</b>	190 mm
<b>PRODUCT WIDTH</b>	140 mm
<b>PRODUCT WEIGHT</b>	3.54 kg
<b>CERTIFICATIONS</b>	IEC/EN 60947 CE IEC/EN 60947-4-1 VDE 0660 CSA Class No.: 3211-04 UL 60947-4-1 CSA File No.: 2389068 UL Category Control No.: NLDX UL CSA-C22.2 No. 60947-4-1-14 UL File No.: E29096 CSA
<b>CATALOG NOTES</b>	<ul style="list-style-type: none"><li>• Contacts according to EN 50012</li><li>• Also tested according to AC-3e up to 500 V.</li><li>• Also suitable for motors with efficiency class IE3.</li><li>• Conventional thermal current I<sub>th</sub> of main contacts (1-pole, open) at 60°</li></ul>

<b>ACCESSORIES</b>	Fitting options auxiliary contacts: on the side: 2 x DILM1000-XHI(V)11-SI; 2 x DILM1000-XHI11-SA
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.

<b>CHARACTERISTIC CURVE</b>	<a href="#">eaton-contactors-component-dilm-characteristic-curve.eps</a>
	<a href="#">eaton-contactors-component-dilm-characteristic-curve-002.eps</a>
	<a href="#">IL03406001Z</a>
	<a href="#">eaton-contactors-contact-dilm-wiring-diagram-004.eps</a>
	<a href="#">eaton-contactors-dilm-dimensions-006.eps</a>
	<a href="#">eaton-contactors-dilm-3d-drawing.eps</a>

<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>FITTED WITH:</b>	Suppressor circuit in actuating electronics
<b>OPERATING FREQUENCY</b>	3000 mechanical Operations/h (AC operated) 200 Operations/h
<b>POLLUTION DEGREE</b>	3
<b>CLIMATIC PROOFING</b>	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	8000 V AC
<b>UTILIZATION CATEGORY</b>	AC-3: Normal AC induction motors: starting, switch off during running AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-1: Non-inductive or slightly inductive loads, resistance furnaces
<b>CONNECTION</b>	Screw terminals
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C

<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE</b>	60 HP
<b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE</b>	75 HP
<b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>	150 HP
<b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>	200 HP
<b>CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)</b>	688 A
<b>CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)</b>	275 A
<b>CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)</b>	329 A
<b>CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)</b>	788 A
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	0 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	7.67 W
<b>APPLICATION</b>	Contactors for Motors
<b>PRODUCT CATEGORY</b>	Contactors
<b>PROTECTION</b>	Finger and back-of-hand proof with terminal

	shroud or terminal block, Protection against direct contact when actuated from front (EN 50274)
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Rail connection
<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Control circuit cables, Pozidriv screwdriver
<b>VOLTAGE TYPE</b>	AC
<b>DEGREE OF PROTECTION</b>	IP00
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	2
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	2
<b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b>	2
<b>NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT</b>	0
<b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>	2
<b>NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)</b>	3
<b>RATED BREAKING CAPACITY AT 1000 V</b>	760 A
<b>RATED BREAKING CAPACITY AT 220/230 V</b>	2250 A
<b>RATED BREAKING CAPACITY AT 380/400 V</b>	2250 A
<b>RATED BREAKING CAPACITY AT 500 V</b>	2250 A
<b>RATED BREAKING CAPACITY AT 660/690 V</b>	2250 A
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	500 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	480 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	500 V

<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	480 V
<b>DROP-OUT VOLTAGE</b>	AC operated: 0.25 x US max - 0.6 x US min, AC operated AC operated: 0.2 x US max - 0.4 x US min, AC operated
<b>OVERVOLTAGE CATEGORY</b>	III
<b>DUTY FACTOR</b>	100 %
<b>ELECTROMAGNETIC COMPATIBILITY</b>	Designed for operation in industrial environments. Its use in residential environments may cause radio-frequency interference, requiring additional noise suppression.
<b>LIFESPAN, MECHANICAL</b>	10,000,000 Operations (AC operated)
<b>PICK-UP VOLTAGE</b>	0.8 - 1.15 V AC x Us
<b>POWER CONSUMPTION, PICK-UP, 50 HZ</b>	180 W, Pull-in power, Coil in a cold state and 1.0 x Us 210 VA, Pull-in power, Coil in a cold state and 1.0 x Us
<b>SAFE ISOLATION</b>	1000 V AC, Between coil and contacts, According to EN 61140
<b>POWER CONSUMPTION, PICK-UP, 60 HZ</b>	210 VA, Pull-in power, Coil in a cold state and 1.0 x Us 180 W, Pull-in power, Coil in a cold state and 1.0 x Us
<b>SCREW SIZE</b>	M3.5, Terminal screw, Control circuit cables M10, Terminal screw, Main connections
<b>POWER CONSUMPTION, SEALING, 50 HZ</b>	2.6 VA, Coil in a cold state and 1.0 x Us 2.1 W, Coil in a cold state and 1.0 x Us
<b>POWER CONSUMPTION, SEALING, 60 HZ</b>	2.6 VA, Coil in a cold state and 1.0 x Us 2.1 W, Coil in a cold state and 1.0 x Us
<b>RATED OPERATIONAL CURRENT (IE)</b>	133 A at 690 V (Individual compensation, three-phase capacitors, open)

	220 A at up to 525 V (Individual compensation, three-phase capacitors, open)
<b>INRUSH CURRENT</b>	Max. 30 x I <sub>e</sub> (peak)
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)</b>	15 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
<b>SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)</b>	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
<b>LIFESPAN, ELECTRICAL</b>	100,000 Operations (at Condensor operation)
<b>TERMINAL CAPACITY (COPPER BAND)</b>	Fixing with flat cable terminal or cable terminal blocks; See terminal capacity for cable terminal blocks
<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables
<b>SHOCK RESISTANCE</b>	10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms 10 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms 8 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	18 - 14, Control circuit cables 2/0 - 250 MCM, Main cables
<b>TERMINAL CAPACITY (BUSBAR)</b>	32 mm width, Main connection
<b>TERMINAL CAPACITY (FLEXIBLE WITH CABLE LUG)</b>	50 - 185 mm <sup>2</sup>
<b>SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)</b>	250 A, Maximum motor rating (UL/CSA)

<b>TERMINAL CAPACITY (STRANDED WITH CABLE LUG)</b>	70 - 185 mm <sup>2</sup>
<b>TIGHTENING TORQUE</b>	1.2 Nm, Screw terminals, Control circuit cables 24 Nm, Main cable connection screw/bolt
<b>WIDTH ACROSS FLATS</b>	16 mm
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED INSULATION VOLTAGE (UI)</b>	1000 V
<b>RATED MAKING CAPACITY (COS PHI TO IEC/EN 60947)</b>	2700 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 1000 V</b>	76 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V</b>	225 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>	225 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V</b>	225 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>	225 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>	160 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 1000 V</b>	55 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V</b>	164 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V</b>	164 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V</b>	164 A
<b>RATED OPERATIONAL</b>	164 A



<b>CURRENT (IE) AT AC-4, 500 V</b>	
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V</b>	120 A
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	225 A
<b>RATED OPERATIONAL POWER AT AC-3, 1000 V, 50 HZ</b>	108 kW
<b>RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ</b>	75 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	110 kW
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>	132 kW
<b>RATED OPERATIONAL POWER AT AC-4, 1000 V, 50 HZ</b>	77 kW
<b>RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ</b>	51 kW
<b>RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ</b>	54 kW
<b>RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ</b>	90 kW
<b>RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ</b>	96 kW
<b>RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ</b>	102 kW
<b>RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ</b>	116 kW
<b>RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ</b>	110 kW
<b>RATED OPERATIONAL POWER (NEMA)</b>	111 kW
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	1000 V
<b>RESISTANCE PER POLE</b>	0.15 mΩ

<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	2.1 W
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX</b>	60 ms
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX</b>	40 ms
<b>SHORT-CIRCUIT CURRENT RATING (BASIC RATING)</b>	600 A, max. CB, SCCR (UL/CSA) 700 A, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
<b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)</b>	600 A, Class J, max. Fuse, SCCR (UL/CSA) 100 kA, Fuse, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA) 350 A, max. CB, SCCR (UL/CSA)
<b>SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)</b>	350 A, max. CB, SCCR (UL/CSA) 600 A, Class J, max. Fuse, SCCR (UL/CSA) 50 kA, CB, SCCR (UL/CSA) 100 kA, Fuse, SCCR (UL/CSA)
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 1000 V</b>	200 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V</b>	400 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V</b>	315 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 1000 V</b>	160 A gG/gL
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V</b>	315 A gG/gL
<b>SHORT-CIRCUIT</b>	250 A gG/gL

<b>PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V</b>	
<b>SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING</b>	336 A, FLA 480 V 60 Hz 3- ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 2016 A, LRA 480 V 60 Hz 3- ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 1680 A, LRA 600 V 60 Hz 3- ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 280 A, FLA 600 V 60 Hz 3- ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
<b>CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)</b>	386 A
<b>CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)</b>	345 A
<b>CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)</b>	315 A
<b>RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ</b>	138 kW
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	160 kW
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	150 kW
<b>ACTUATING VOLTAGE</b>	RAC 500: 480 - 500 V 50/60 Hz
<b>ALTITUDE</b>	Max. 2000 m
<b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>	480 V
<b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>	500 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>	480 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>	500 V

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
:



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