

Specifications



Photo is representative



Eaton 199673

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 18.5 kW, 1 N/O, 1 NC, 220 V 50/60 Hz, AC operation, Push in terminals

General specifications

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	199673
MODEL CODE	DILM38-11(220V50/60HZ)-PI
EAN	4015081983742
PRODUCT LENGTH/DEPTH	115 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.441 kg
CERTIFICATIONS	VDE 0660 IEC/EN 60947

Ambient conditions, mechanical

SHOCK RESISTANCE

7 g, N/O auxiliary 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
10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
6.5 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
8 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
2 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MAX 60 °C

AMBIENT STORAGE TEMPERATURE - MAX 80 °C

AMBIENT OPERATING TEMPERATURE - MIN -25 °C

AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX 40 °C

AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN -25 °C

AMBIENT STORAGE TEMPERATURE - MIN -40 °C

CLIMATIC PROOFING Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30

Communication

CONNECTION TO SMARTWIRE-DT No

Contacts

NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT) 3

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) 1

NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) 1

NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS) 1

NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS) 1

NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT 0

Conventional thermal current I_{th}

**CONVENTIONAL
THERMAL CURRENT I_{TH}
(1-POLE, ENCLOSED)** 90 A

**CONVENTIONAL
THERMAL CURRENT I_{TH}
(3-POLE, ENCLOSED)** 36 A

**CONVENTIONAL
THERMAL CURRENT I_{TH}
AT 55°C (3-POLE, OPEN)** 42 A

**CONVENTIONAL
THERMAL CURRENT I_{TH}
OF MAIN CONTACTS (1-
POLE, OPEN)** 100 A

Electrical rating

**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 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** 38 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
380 V, 400 V, 415 V** 38 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
440 V** 38 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
500 V** 38 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
660 V, 690 V** 22.5 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-4,
220 V, 230 V, 240 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 V	40 A
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RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	12 kW
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RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	18.5 kW
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RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	20 kW
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RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	4 kW
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RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	4.5 kW
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RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	7.5 kW
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RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	8 kW
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RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	9 kW
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RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	10 kW
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RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
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Electro magnetic compatibility

EMITTED INTERFERENCE	According to EN 60947-1
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INTERFERENCE IMMUNITY	According to EN 60947-1
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Features & functions

FITTED WITH:	Mirror contact
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NUMBER OF POLES	Three-pole
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General information

APPLICATION	Contactors for Motors
CONNECTION	Push in terminals
DEGREE OF PROTECTION	IP20
LIFESPAN, MECHANICAL	10,000,000 Operations (AC operated)
OPERATING FREQUENCY	5000 mechanical Operations/h (AC operated)
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
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
VOLTAGE TYPE	AC
FRAME SIZE	FS2

Magnet system

ARCING TIME	10 ms
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.3 x Us UC, AC operated
DUTY FACTOR	100 %
PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc
POWER CONSUMPTION, PICK-UP, 50 HZ	62 VA, Dual-frequency coil in a cold state and 1.0 x Us 58 VA, Dual-frequency coil in a cold state and 1.0 x Us
POWER CONSUMPTION, PICK-UP, 60 HZ	62 VA, Dual-frequency coil in a cold state and 1.0 x Us 58 VA, Dual-frequency coil in a cold state and 1.0 x Us
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	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 6.5 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	220 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	220 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	220 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	220 V
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	8 ms

Safety

SAFE ISOLATION

400 V AC, Between coil and contacts, According to EN 61140
400 V AC, Between the contacts, According to EN 61140

CONTACTS, OPENING DELAY) - MIN

Short-circuit rating

SHORT-CIRCUIT CURRENT RATING (BASIC RATING)

5 kA, 125 A max. fuse
CLASS RK5, SCCR (UL/CSA)
5 kA, 125 A max. CB, SCCR
(UL/CSA)

SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)

100 kA, 70 A CLASS J max.
fuse, SCCR (UL/CSA)
30 kA, 30 A CLASS RK5,
SCCR (UL/CSA)
65 kA, 32 A max. CB, SCCR
(UL/CSA)

SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)

100 kA, 70 A CLASS J max.
fuse, SCCR (UL/CSA)
30 kA, 30 A CLASS RK5,
SCCR (UL/CSA)

SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V

125 A gG/gL

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

Terminal capacities

SCREWDRIVER SIZE	3 x 0.5 mm, Terminal screw 3.0 x 0.5 mm, Terminal screw
TERMINAL CAPACITY (FLEXIBLE WITH UNISOLATED FERRULE)	1 x (0.75 - 2.5) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Main cables 1 x (0.75 - 2.5) mm ² , Control circuit cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.5 - 2.5) mm ² , Control circuit cables 2 x (0.5 - 2.5) mm ² , Control circuit cables 1 x (1 - 6) mm ² , Main cables 2 x (1 - 6) mm ² , Main cables
TERMINAL CAPACITY (FLEXIBLE)	2 x (0.5 - 2.5) mm ² 2 x (1-6) mm ² 1 x (0.5 - 2.5) mm ² 1 x (1 - 10) mm ²
TERMINAL CAPACITY (FLEXIBLE WITH ULTRASONIC WELDED CABLE END)	1 x (0.75 - 2.5) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Main cables 1 x (0.75 - 2.5) mm ² , Control circuit cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.5 - 2.5) mm ² , Control circuit cables 2 x (0.5 - 2.5) mm ² , Control circuit cables 1 x (1 - 10) mm ² , Main cables 2 x (1 - 6) mm ² , Main cables
TERMINAL CAPACITY (SOLID)	1 x (1 - 6) mm ² 1 x (0.5 - 0.25) mm ² 2 x (1 - 6) mm ² 2 x (0.5 - 2.5) mm ² , Control circuit cables
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (1 - 6) mm ² 2 x (1 - 4) mm ² 1 x (0.5 - 1.5) mm ² , Control circuit cables 2 x (0.5 - 1.5) mm ² , Main cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	20 - 14 18 - 8, Main cables

Resources

CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-contactor-declaration-of-conformity-uk251218en.pdf eaton-contactor-declaration-of-conformity-eu250735en.pdf
DRAWINGS	eaton-contactors-dimensions-008.eps
ECAD MODEL	ETN.199673.edz
INSTALLATION INSTRUCTIONS	IL034094ZU
INSTALLATION VIDEOS	WIN-WIN with push-in technology eaton-iec-contactors-mcad-drawings-dil-m8-38-pi.dwg eaton-iec-contactors-mcad-3d-models-dil-m8-38-pi.stp
WIRING DIAGRAMS	eaton-contactors-wiring-diagram-2100swi-123.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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