



Eaton 021417

Eaton Moeller® series DILEM Contactor, 24 V 50/60 Hz, 3 pole, 380 V 400 V, 4 kW, Contacts N/O = Normally open= 1 N/O, Screw terminals, AC operation

Zdjęcie jest reprezentatywne



General specifications

PRODUCT NAME	Eaton Moeller® series DILEM Mini contactor
CATALOG NUMBER	021417
EAN	4015080214175
PRODUCT LENGTH/DEPTH	52 mm
PRODUCT HEIGHT	58 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.17 kg
CERTIFICATIONS	UL 508 UL Category Control No.: NLDX CSA File No.: 012528 IEC/EN 60947 UL File No.: E29096 IEC/EN 60947-4-1 CSA Class No.: 3211-04 UL CE CSA-C22.2 No. 14-05 VDE 0660 CSA
CATALOG NOTES	Also tested according to AC-3e.
MODEL CODE	DILEM-10(24V50/60HZ)

Cechy i funkcje

FEATURES	Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module
FITTED WITH:	Auxiliary contact
NUMBER OF POLES	Three-pole

Parametry ogólne

APPLICATION	Mini Contactors for Motors and Resistive Loads
LIFESPAN, MECHANICAL	10,000,000 Operations 200,000 Operations (at 240 V, AC-15) 150,000 Operations (at 240 V, DC, L/R = 50 ms: 2 contacts in series 0.5 A) 7,000,000 Operations (Coil 50/60 Hz)
MOUNTING POSITION	As required (except vertical with terminals A1/A2 at the bottom)
OPERATING FREQUENCY	9000 mechanical Operations/h
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)	6000 V AC
SHOCK RESISTANCE	10 g, N/O main contact, Basic unit without auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 20 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 10 g, N/O main contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 8 g, N/O auxiliary contact, Basic unit without auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 20 g, N/C auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
SUITABLE FOR	Also motors with efficiency class IE3
UTILIZATION CATEGORY	AC-3: Normal AC induction motors: starting, switch off during running AC-4: Normal AC induction motors: starting, plugging,

Klimatyczne warunki otoczenia

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

reversing, inching
AC-1: Non-inductive or slightly inductive loads, resistance furnaces

VOLTAGE TYPE AC

Pojemność zacisków

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 1.5) mm ² 1 x (0.75 - 1.5) mm ²
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 2.5) mm ² 2 x (0.75 - 2.5) mm ²
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14
STRIPPING LENGTH (MAIN CABLE)	8 mm
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
TIGHTENING TORQUE	1.2 Nm, Screw terminals

Elektryczna moc znamionowa

RATED BREAKING CAPACITY AT 220/230 V 90 A

RATED BREAKING CAPACITY AT 380/400 V 90 A

RATED BREAKING CAPACITY AT 500 V 64 A

RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ 2.5 kW

RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ 4 kW

RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ 4.3 kW

RATED BREAKING CAPACITY AT 660/690 V 42 A

RATED MAKING CAPACITY UP TO 440 V (COS PHI TO IEC/EN 60947) 110 A

RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ 1.5 kW

RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ 1.8 kW

RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ 3.1 kW

RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ 3.3 kW

RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ 3 kW

RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ 3 kW

RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX 690 V

RATED INSULATION VOLTAGE (UI) 690 V

RATED OPERATIONAL CURRENT (IE) 2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series)
0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series)
1.5 A at 100 V, DC L/R ≤ 15 ms (with 3 contacts in series)
2.5 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series)

RATED OPERATIONAL CURRENT (IE) AT AC-1, 22 A

Wytrzymałość zwarciowa

SHORT-CIRCUIT CURRENT RATING (BASIC RATING) 45 A, max. Fuse, SCCR (UL/CSA)
5 kA, SCCR (UL/CSA)

SHORT-CIRCUIT PROTECTION 10 A fast, Max. Fuse 500V, Auxiliary contacts, Short-circuit rating without welding 6 A gG/gL, Max. Fuse 500V, Auxiliary contacts, Short-circuit rating without welding PKZM0-4, Maximum overcurrent protective device, Short-circuit protection only, Auxiliary contacts, Short-circuit rating without welding

SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 500 V 20 A gG/gL

SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 500 V 10 A gG/gL

380 V, 400 V, 415 V	
RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V	3 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V	1.5 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	9 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	9 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	9 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	6.4 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	4.8 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	6.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	6.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	5 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	3.4 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	20 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 12 V	20 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	20 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 24 V	20 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	20 A
SAFE ISOLATION	300 V AC, Between coil and contacts, According to EN 61140 300 V AC, Between auxiliary contacts, According to EN 61140 300 V AC, Between the contacts, According to EN 61140 300 V AC, Between coil and

auxiliary contacts, According
to EN 61140

Prąd cieplny umowny I_{th}

CONVENTIONAL
THERMAL CURRENT I_{TH} 40 A
(1-POLE, ENCLOSED)

CONVENTIONAL
THERMAL CURRENT I_{TH} 16 A
(3-POLE, ENCLOSED)

CONVENTIONAL
THERMAL CURRENT I_{TH} 19 A
AT 55°C (3-POLE, OPEN)

CONVENTIONAL
THERMAL CURRENT I_{TH} 10 A
OF AUXILIARY
CONTACTS (1-POLE,
OPEN)

CONVENTIONAL
THERMAL CURRENT I_{TH} 50 A
OF MAIN CONTACTS (1-
POLE, OPEN)

Zdolność przełączania

SWITCHING CAPACITY
(MAIN CONTACTS,
GENERAL USE) 15 A, Maximum motor rating
(UL/CSA)

SWITCHING CAPACITY
(AUXILIARY CONTACTS,
GENERAL USE) 0.5 A, 250 V DC, (UL/CSA)
10 A, 600 V AC, (UL/CSA)

SWITCHING CAPACITY
(AUXILIARY CONTACTS,
PILOT DUTY) A600, AC operated (UL/CSA)
P300, DC operated (UL/CSA)

System elektromagnetyczny

ARCING TIME	12 ms at 690 V AC
CHANGEOVER TIME	16 - 21 ms
DUTY FACTOR	100 %
PICK-UP VOLTAGE	0.85 - 1.1 V AC x U _c (voltage tolerance - dual frequency coil 50/60 Hz)
POWER CONSUMPTION, PICK-UP, 50 HZ	26 W, AC, Dual-frequency coil at 50 Hz 30 VA, AC, Dual-frequency coil at 50 Hz
POWER CONSUMPTION, PICK-UP, 60 HZ	29 VA, AC, Dual-frequency coil at 60 Hz 24 W, AC, Dual-frequency coil at 60 Hz
POWER CONSUMPTION, SEALING, 50 HZ	1.8 W, Coil in a cold state and 1.0 x U _s 5.4 VA, Coil in a cold state and 1.0 x U _s
POWER CONSUMPTION, SEALING, 60 HZ	3.9 VA, AC, Dual-frequency coil at 60 Hz 1.8 W, AC, Dual-frequency coil at 60 Hz 1.8 W, Coil in a cold state and 1.0 x U _s 5.4 VA, Coil in a cold state and 1.0 x U _s
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 V
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	14 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	21 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	8 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	18 ms

Moc znamionowa silnika

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	0.5 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	2 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	1.5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	3 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	5 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	5 HP

SWITCHING TIME (AC OPERATED, N/O, WITH AUXILIARY CONTACT MODULE, CLOSING DELAY)	45 ms
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Styki

CONTROL CIRCUIT RELIABILITY	< 2 λ , < 1 failure at 100,000,000 Operations (at $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)
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NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
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Weryfikacja projektu

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	1.2 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.4 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	9 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1.8 W
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.
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.
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.

Zasoby

CHARACTERISTIC CURVE	eaton-contactors-switch-dilm-characteristic-curve.eps eaton-contactors-switch-dilm-characteristic-curve-002.eps
DEKLARACJE ZGODNOŚCI	DA-DC-00004812.pdf DA-DC-00004788.pdf
ECAD MODEL	eaton-dilem-mini-contactor-eplan-021417.edz
INSTRUKCJE MONTAŻU	IL03407009Z
MCAD MODEL	DA-CD-dil_em DA-CS-dil_em
SCHEMATY POŁĄCZEŃ	eaton-contactors-contact-dilm-wiring-diagram.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATA:



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