

DILE MINI CONTACTOR RELAY
051796



Overview



Specifications



Resources

How to buy

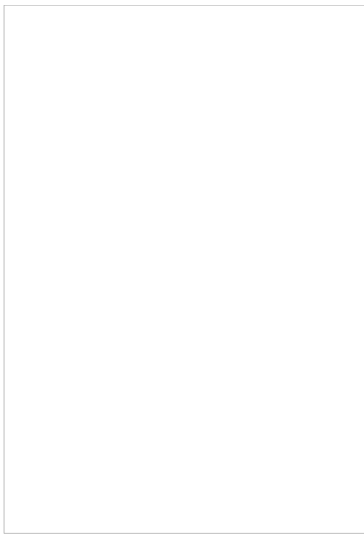


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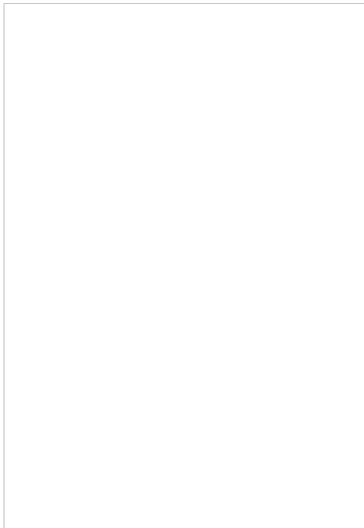


Photo is representative

051796

Eaton Moeller® series DILEM Contactor, 380 V 50
V 400 V, 4 kW, Contacts N/C = Normally closed = 1
operation

How to buy

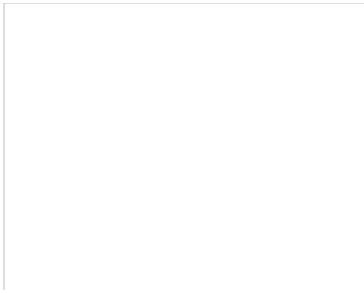


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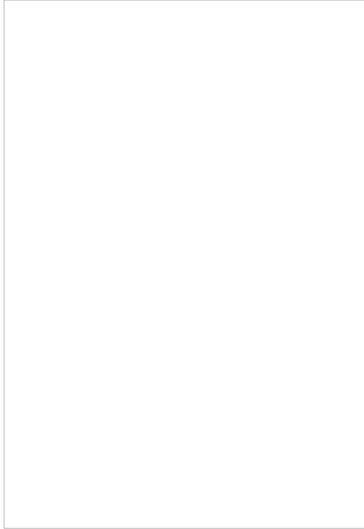


Photo is representative



Designed to work together

Discover other Eaton products and accessories built to enhance this product.

014518

Eaton Moeller® series ZE Overload relay,
I_r= 2.4 - 4 A, 1 N/O, 1 N/C, Direct
mounting

014479

Eaton Moeller® series ZE Overload relay,
I_r= 1.6 - 2.4 A, 1 N/O, 1 N/C, Direct
mounting

014565

Eaton Moeller® series ZE Overload relay,
I_r= 4 - 6 A, 1 N/O, 1 N/C, Direct mounting

010288

Eaton Moeller® series DILE Au
contact module, 4 pole, 2 N/O, 2
fixing, Screw terminals, DILE(E

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GENERAL SPECIFICATIONS

General specifications

>

PRODUCT NAME Eaton Moeller® series DILEM Mini contactor**CATALOG NUMBER** 051796

Product specifications

>

MODEL CODE DILEM-01(380V50HZ,440V60HZ)**EAN** 4015080517962**PRODUCT LENGTH/DEPTH** 52 mm**PRODUCT HEIGHT** 58 mm**PRODUCT WIDTH** 45 mm**PRODUCT WEIGHT** 0.17 kg

CERTIFICATIONS

CSA-C22.2 No. 14-05
UL Category Control No.: NLDX
VDE 0660
CE
CSA File No.: 012528
UL File No.: E29096
IEC/EN 60947
UL 508
CSA
IEC/EN 60947-4-1
CSA Class No.: 3211-04
UL

CATALOG NOTES

Also tested according to AC-3e.

PRODUCT SPECIFICATIONS

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) 1 x (0.75 - 1.5) mm²
2 x (0.75 - 1.5) mm²**RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)** 9 A

10.11 SHORT-CIRCUIT RATING

Is the panel builder's responsibility. The specifications must be observed.

RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ 4 kW**CONVENTIONAL THERMAL CURRENT I_{TH} (3-POLE, ENCLOSED)** 16 A**RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ** 3 kW**RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V** 6.6 A

RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	380 V
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
CONVENTIONAL THERMAL CURRENT I_{TH} AT 55°C (3-POLE, OPEN)	19 A
RATED OPERATIONAL POWER (NEMA)	3.7 kW
10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
FITTED WITH:	Auxiliary contact
RATED BREAKING CAPACITY AT 380/400 V	90 A
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	45 A, max. Fuse, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA)
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	380 V
RATED BREAKING CAPACITY AT 660/690 V	42 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 24 V	20 A
CHANGEOVER TIME	16 - 21 ms
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	20 A
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	0.5 HP
FEATURES	Positive operating contacts to EN 60947-5-1 appendix auxiliary contact module
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	3.3 kW
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
NUMBER OF POLES	Three-pole
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to
10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to
APPLICATION	Mini Contactors for Motors and Resistive Loads
RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V,	3 A

400 V, 415 V

OPERATING FREQUENCY	9000 mechanical Operations/h
VOLTAGE TYPE	AC
PRODUCT CATEGORY	Contactors
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	6.6 A
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	4 kW
POWER CONSUMPTION, PICK-UP, 50 HZ	22 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz 25 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz
HEAT DISSIPATION CAPACITY PDISS	0 W
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	5 HP
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	8 ms
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	5 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	2.5 kW
CONVENTIONAL THERMAL CURRENT I_{TH} OF AUXILIARY CONTACTS (1-POLE, OPEN)	10 A
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
DEGREE OF PROTECTION	IP20
OVERVOLTAGE CATEGORY	III
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	18 ms
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
POLLUTION DEGREE	3
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	22 A
POWER CONSUMPTION, PICK-UP, 60 HZ	25 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz 22 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	21 ms
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
CONNECTION	Screw terminals

OPERATING VOLTAGE AT AC, 60 HZ - MIN	24 V
TIGHTENING TORQUE	1.2 Nm, Screw terminals
SWITCHING TIME (AC OPERATED, N/O, WITH AUXILIARY CONTACT MODULE, CLOSING DELAY)	45 ms
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	3 kW
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	40 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	4.8 A
10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	Meets the product standard's requirements.
10.2.7 INSCRIPTIONS	Meets the product standard's requirements.
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	9 A
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	14 ms
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	4 kW
SHOCK RESISTANCE	10 g, N/C auxiliary contact, Basic unit without auxiliary contact Mechanical, according to IEC/EN 60068-2-27, Half sine wave ms 10 g, N/O main contact, Basic unit without auxiliary contact Mechanical, according to IEC/EN 60068-2-27, Half sine wave ms 20 g, N/O auxiliary contact, Basic unit with auxiliary contact Mechanical, according to IEC/EN 60068-2-27, Half sine wave ms 20 g, N/C auxiliary contact, Basic unit with auxiliary contact Mechanical, according to IEC/EN 60068-2-27, Half sine wave ms 10 g, N/O main contact, Basic unit with auxiliary contact Mechanical, according to IEC/EN 60068-2-27, Half sine wave ms
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	20 A
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	3 HP
RATED OPERATIONAL CURRENT (IE) AT DC-1, 12 V	20 A
POWER CONSUMPTION, SEALING, 60 HZ	1.8 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz
RESISTANCE PER POLE	9.18 mΩ
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C

MIN	20 °C
OPERATING VOLTAGE AT AC, 50 HZ - MAX	690 V
10.12 ELECTROMAGNETIC COMPATIBILITY	Is the panel builder's responsibility. The specifications must be observed.
10.2.5 LIFTING	Does not apply, since the entire switchgear needs to be lifted.
STRIPPING LENGTH (MAIN CABLE)	8 mm
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	0 V
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
RATED BREAKING CAPACITY AT 220/230 V	90 A
SCREW SIZE	M3.5, Terminal screw
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	6.6 A
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	5 HP
PROTECTION	Finger and back-of-hand proof Protection against direct contact actuated from front (EN 50274)
POWER CONSUMPTION, SEALING, 50 HZ	4.6 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz 1.8 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50 Hz
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	4.6 kW
RATED BREAKING CAPACITY AT 500 V	64 A
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	4.3 kW
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1.8 W
RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V	1.5 A
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 V
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	AC-3: Normal AC induction motors: starting, switching AC-1: Non-inductive or slightly inductive loads, resistive AC-4: Normal AC induction motors: starting, plugging, inching
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	9 A

10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to
SAFE ISOLATION	300 V AC, Between coil and contacts, According to 300 V AC, Between coil and auxiliary contacts, According to 300 V AC, Between the contacts, According to EN 300 V AC, Between auxiliary contacts, According to
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 500 V	10 A gG/gL
MOUNTING POSITION	As required (except vertical with terminals A1/A2 at
OPERATING VOLTAGE AT AC, 50 HZ - MIN	24 V
RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V	6 A
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the inf instruction leaflet (IL) is observed.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	Is the panel builder's responsibility.
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	1
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.4 W
ACTUATING VOLTAGE	380 V 50 Hz, 440 V 60 Hz
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	0.5 A, 250 V DC, (UL/CSA) 10 A, 600 V AC, (UL/CSA)
SHORT-CIRCUIT PROTECTION	6 A gG/gL, Max. Fuse 500V, Auxiliary contacts, S without welding 10 A fast, Max. Fuse 500V, Auxiliary contacts, S without welding PKZM0-4, Maximum overcurrent protective device, protection only, Auxiliary contacts, Short-circuit rat
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	3.4 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	1.2 W
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	2 HP
RATED OPERATIONAL CURRENT (IE)	0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts i 2.5 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in 1.5 A at 100 V, DC L/R ≤ 15 ms (with 3 contacts i 2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in
PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc (voltage tolerance - single-volt dual-voltage coil 50 Hz, 60 Hz) 1.1 V AC x Uc (voltage tolerance - dual frequency c
SUITABLE FOR	Also motors with efficiency class IE3
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	22 A

TERMINAL CAPACITY (SOLID)	2 x (0.75 - 2.5) mm ² 1 x (0.75 - 2.5) mm ²
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	1
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.
LIFESPAN, MECHANICAL	150,000 Operations (at 240 V, DC, L/R = 50 ms: 20 A) 0.5 A) 200,000 Operations (at 240 V, AC-15) 10,000,000 Operations 7,000,000 Operations (Coil 50/60 Hz)
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	1.8 kW
RATED MAKING CAPACITY UP TO 440 V (COS PHI TO IEC/EN 60947)	110 A
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	3 kW
CONTROL CIRCUIT RELIABILITY	< 2 λ, < 1 failure at 100,000,000 Operations (at U _c = 17 V, I _{min} = 5.4 mA)
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	20 A
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	1.5 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	440 V
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
10.10 TEMPERATURE RISE	The panel builder is responsible for the temperature rise. Eaton will provide heat dissipation data for the device.
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	15 A, Maximum motor rating (UL/CSA)
CONVENTIONAL THERMAL CURRENT I_{TH} AT 50°C (3-POLE, OPEN)	20 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	6.4 A
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	1.5 HP
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 500 V	20 A gG/gL
DUTY FACTOR	100 %
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V,	9 A

230 V, 240 V	230 V
CONVENTIONAL THERMAL CURRENT RATING OF MAIN CONTACTS (1-POLE, OPEN)	50 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	440 V
ARCING TIME	12 ms at 690 V AC
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	3.1 kW
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	P300, DC operated (UL/CSA) A600, AC operated (UL/CSA)
RATED INSULATION VOLTAGE (UI)	690 V
ALTITUDE	Max. 2000 m

Catalogs

Characteristic curve

Declarations of conformity

Drawings

eCAD model

Installation instructions

mCAD model

System overview

Wiring diagrams



Eaton is an intelligent power management company dedicated to improving the quality of life and protecting the environment for people everywhere. We are guided by our commitment to do business right, to operate sustainably and to help our customers manage power — today and well into the future. By capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy and helping to solve the world's most urgent power management challenges.