

Specifications

Photo is representative

Eaton 199207

Eaton Moeller® series DILA Contactor relay,
42 V 50 Hz, 48 V 60 Hz, 4 N/O, Push in
terminals, AC operation

General specifications

PRODUCT NAME	Eaton Moeller® series DILA Control relay
CATALOG NUMBER	199207
MODEL CODE	DILA- 40(42V50HZ,48V60HZ)-PI
EAN	4015081972913
PRODUCT LENGTH/DEPTH	75 mm
PRODUCT HEIGHT	68 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.227 kg
CERTIFICATIONS	IEC/EN 60947 EN 60947-5-1 VDE 0660 CSA File No.: 012528 CSA Class No.: 3211-03 UL File No.: E29184 UL 508 CSA-C22.2 No. 14-05 CE marking UL Category Control No.: NKKR UL CSA

Features & Functions

FEATURES

Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module

FITTED WITH:

Positive operation contacts

General

APPLICATION

Contactors relays

DEGREE OF PROTECTION

IP20

SHOCK RESISTANCE

7 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
5 g, N/C auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms

LIFESPAN, MECHANICAL

20,000,000 Operations (AC operated)

MOUNTING METHOD

DIN-rail/screw

CONNECTION

Push in terminals

OPERATING FREQUENCY

9000 Operations/h

OVERVOLTAGE CATEGORY

III

POLLUTION DEGREE

3

PRODUCT CATEGORY

DILA relays

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

VOLTAGE TYPE

AC

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE - MAX	60 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	25 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
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AMBIENT STORAGE TEMPERATURE - MIN	40 °C
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AMBIENT STORAGE TEMPERATURE - MAX	80 °C
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CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
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Terminal capacities

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.5 - 1.5) mm ² 1 x (0.5 - 2.5) mm ²
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TERMINAL CAPACITY (SOLID)	1 x (0.5 - 2.5) mm ² 2 x (0.5 - 2.5) mm ²
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TERMINAL CAPACITY (SOLID/STRANDED AWG)	20 - 14
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STRIPPING LENGTH (MAIN CABLE)	10 mm
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SCREWDRIVER SIZE	3.0 x 0.5 mm, Terminal screw
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Electrical rating

RATED OPERATIONAL CURRENT (IE)	10 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series)
	4 A at 60 V, DC L/R ≤ 50 ms (with 3 contacts in series)
	2 A at 110 V, DC L/R ≤ 50 ms (with 3 contacts in series)
	1 A at 220 V, DC L/R ≤ 50 ms (with 3 contacts in series)
	6 A at 60 V, DC L/R ≤ 15 ms (with 1 contact in series)
	6 A at 110 V, DC L/R ≤ 15 ms (with 3 contacts in series)
	3 A at 110 V, DC L/R ≤ 15 ms (with 1 contact in series)
	1 A at 220 V, DC L/R ≤ 15 ms (with 1 contact in series)
	10 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series)
	5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series)
	4 A at 24 V, DC L/R ≤ 50 ms (with 3 contacts in series)
	16 A

RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V

4 A

RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V

4 A

RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V

1.5 A

RATED INSULATION VOLTAGE (UI)

690 V

RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX

690 V

SHORT-CIRCUIT PROTECTION RATING WITHOUT WELDING

10 A gG/gL, 500 V, Max. Fuse, Contacts

SAFE ISOLATION

400 V AC, Between auxiliary contacts, According to EN 61140
400 V AC, Between coil

Magnet system

DUTY FACTOR

100 %

PICK-UP VOLTAGE

0.8 - 1.1 V AC x U_c (voltage tolerance - single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz)

POWER CONSUMPTION, PICK-UP, 50 HZ

24 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz

POWER CONSUMPTION, PICK-UP, 60 HZ

24 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz

POWER CONSUMPTION, SEALING, 50 HZ

3.4 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz
1.4 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz

POWER CONSUMPTION, SEALING, 60 HZ

1.4 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz

RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN

42 V

RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX

42 V

RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN

48 V

RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX

48 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

15 ms

SWITCHING TIME (AC OPERATED, MAKE

21 ms

	and auxiliary contacts, According to EN 61140
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	15 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)

Communication	
CONNECTION TO SMARTWIRE-DT	No

CONTACTS, CLOSING DELAY) - MAX	
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	9 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	18 ms

Contacts	
CODE NUMBER	40E
CONTROL CIRCUIT RELIABILITY	$\lambda < 5 \times 10^{-7}$ (1 failure at 2,000,000 operations for $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA) $\lambda < 5 \times 1/10^7$ (1 failure at 2,000,000 operations for $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)
NUMBER OF AUXILIARY CONTACTS (CHANGE- OVER CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	4
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	4

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
HEAT DISSIPATION CAPACITY PDISS	0 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	Is the panel builder's responsibility.

Resources

CATALOGUES	Product Range Catalog Switching and protecting motors eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	DA-DC-00004789.pdf DA-DC-00004811.pdf
DRAWINGS	eaton-contactors-dimensions-007.eps
ECAD MODEL	ETN.199207.edz
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	dil_m7_15_pi.dwg dil_m7_15_pi.stp

STRENGTH	
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.

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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