Specifications

Eaton 109905

Eaton Moeller® series DILMP Contactor, 4 pole, 125 A, RAC 240: 190 - 240 V 50/60 Hz, AC operation

General specifications	
PRODUCT NAME	Eaton Moeller® series DILMP 4-pole contactor
CATALOG NUMBER	109905
MODEL CODE	DILMP125(RAC240)
EAN	4015081094714
PRODUCT LENGTH/DEPTH	160 mm
PRODUCT HEIGHT	170 mm
PRODUCT WIDTH	122 mm
PRODUCT WEIGHT	2.73 kg
CERTIFICATIONS	CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14 CE CSA UL File No.: E29096 UL VDE 0660 UL 60947-4-1 UL Category Control No.: NLDX IEC/EN 60947 IEC/EN 60947-4-1 CSA Class No.: 2411-03, 3211-04
CATALOG NOTES	Contacts according to EN 50012
GLOBAL CATALOG	109905

Powering Business Worldwide

Product specifications

NUMBER OF POLES	Four-pole
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.
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	Does not apply, since the entire switchgear needs to

Resources

BROCHURES	eaton-nas-network-and-system-protection-brochure-br01301001zen-en-us.pdf
CATALOGS	SmartWire-DT Catalog eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf Product Range Catalog Switching and protecting motors
DECLARATIONS OF CONFORMITY	DA-DC-00004781.pdf DA-DC-00004818.pdf
DRAWINGS	eaton-contactors-characteristic-curve-2110dia-3.eps eaton-contactors-mounting-dilm-dimensions-002.eps eaton-contactors-mounting-dilm-dimensions.eps eaton-contactors-dilmp-dimensions-003.eps eaton-contactors-dilmp-dimensions-004.eps
ECAD MODEL	ETN.109905.edz
INSTALLATION INSTRUCTIONS	IL03407049Z
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CD-dil_mp125_200 DA-CS-dil_mp125_200
PEP ECO-PASSPORT	EATO-00020-V01.01-EN
WIRING DIAGRAMS	eaton-contactors-contact-dilem-wiring-diagram.eps

ASSEMBLIES	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.
FITTED WITH:	Suppressor circuit in actuating electronics
OPERATING FREQUENCY	3600 mechanical Operations/h (AC operated) 3600 mechanical Operations/h (DC operated)
POLLUTION DEGREE	3
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-3 Damp heat, cyclic, to IEC 60068-2-30
CONNECTION TO SMARTWIRE-DT	No
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
UTILIZATION CATEGORY	AC-3: Normal AC induction motors: starting, switch off during running AC-1: Non-inductive or slightly inductive loads, resistance furnaces
CONNECTION	Screw terminals
AMBIENT OPERATING TEMPERATURE - MAX	60 °C

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	25 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	7.5 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	25 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	15 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	30 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	60 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	75 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	292 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	100 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	110 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	325 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	22.2 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-	7.4 W

DEPENDENT PVID	
APPLICATION	Contactors for 4 pole electric consumers
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver 2, Terminal screw, Control circuit cables, Pozidriv screwdriver
VOLTAGE TYPE	AC
DEGREE OF PROTECTION	IP00
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	4
RATED BREAKING CAPACITY AT 220/230 V	800 A
RATED BREAKING CAPACITY AT 380/400 V	800 A
RATED BREAKING CAPACITY AT 500 V	800 A
RATED BREAKING CAPACITY AT 660/690 V	650 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	240 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	190 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60	240 V

HZ - MAX	
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	190 V
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.25 x UC, AC operated
OVERVOLTAGE CATEGORY	III
DUTY FACTOR	100 %
INTERFERENCE IMMUNITY	According to EN 60947-1
LIFESPAN, MECHANICAL	10,000,000 Operations (AC operated) 10,000,000 Operations (DC operated)
PICK-UP VOLTAGE	0.8 - 1.15 V AC/DC x Us 0.8 - 1.15 V AC x Uc
POWER CONSUMPTION, PICK-UP, 50 HZ	180 VA, Dual-frequency coil in a cold state and 1.0 x Us
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140 440 V AC, Between coil and contacts, According to EN 61140
POWER CONSUMPTION, PICK-UP, 60 HZ	150 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 180 VA, Dual-frequency coil in a cold state and 1.0 x Us
RESIDUAL CURRENT	1 mA (with actuation of A1 - A2 by the electronics with "0" signal)
SCREW SIZE	M10, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables 5 mm AF, Hexagon socket-head spanner, Terminal screw, Main cables
POWER CONSUMPTION, SEALING, 50 HZ	2.3 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
POWER CONSUMPTION, SEALING, 60 HZ	2.3 W, Dual-frequency coil in a cold state and 1.0 x Us 3.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz

TERMINAL CAPACITY (STRANDED)	2 x (16 - 95) mm^2, Main cables 1 x (16 - 120) mm^2, Main cables
TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 16 x 0.8) mm (Number of segments x width x thickness), Main cables
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.75 - 1.5) mm^2 2 x (0.75 - 1.5) mm^2
SHOCK RESISTANCE	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 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
TERMINAL CAPACITY (SOLID)	2 x (0.75 - 4) mm^2, Control circuit cables 1 x (0.75 - 4) mm^2, Control circuit cables 1 x (0.75 - 2.5) mm^2
TERMINAL CAPACITY (SOLID/STRANDED AWG)	8 - 3/0, Main cables 18 - 14, Control circuit cables
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	125 A, Maximum motor rating (UL/CSA)
TIGHTENING TORQUE	14 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables
TERMINAL CAPACITY (FLEXIBLE)	1 x (0.75 - 2.5) mm^2 2 x (0.75 - 2.5) mm^2
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	0 V
RATED INSULATION VOLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	1120 A

RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	125 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	80 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	80 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	80 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	80 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	65 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	115 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	125 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	125 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	125 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	125 A
RATED OPERATIONAL POWER AT AC-1, 220/230 V, 50 HZ	45 kW
RATED OPERATIONAL POWER AT AC-1, 240 V, 50 HZ	49 kW
RATED OPERATIONAL POWER AT AC-1, 380/400 V, 50 HZ	78 kW
RATED OPERATIONAL POWER AT AC-1, 415 V, 50 HZ	85 kW
RATED OPERATIONAL POWER AT AC-1, 440 V, 50 HZ	90 kW
RATED OPERATIONAL POWER AT AC-1, 500 V, 50	103 kW

HZ	
RATED OPERATIONAL POWER AT AC-1, 690 V, 50 HZ	136 kW
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	27.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	37 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	48 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	28 kW
RATED OPERATIONAL POWER (NEMA)	44.7 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RESISTANCE PER POLE	0.6 mΩ
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	2.3 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
STRIPPING LENGTH (MAIN CABLE)	15 mm
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	33 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	28 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	41 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	35 ms
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	600 A, max. CB, SCCR (UL/CSA) 600 A, max. Fuse, SCCR

	(UL/CSA) 10 kA, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	250 A, max. CB, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 300/300 A, Class J, max. Fuse, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	30 kA, CB, SCCR (UL/CSA) 300/300 A, Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 350 A, max. CB, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V	250 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	200 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	160 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	160 A gG/gL
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	100 A (600V 60Hz 3phase, 347V 60Hz 1phase) 100 A (480V 60Hz 3phase, 277V 60Hz 1phase)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	68 A, 240 V 60 Hz 3-ph, (UL/CSA) 62.1 A, 200 V 60 Hz 3-ph, (UL/CSA) 25 HP, 240 V 60 Hz 3-ph, (UL/CSA) 50 HP, 480 V 60 Hz 3-ph, (UL/CSA) 60 HP, 600 V 60 Hz 3-ph, (UL/CSA) 20 HP, 200 V 60 Hz 3-ph, (UL/CSA) 62 A, 600 V 60 Hz 3-ph, (UL/CSA) 65 A, 480 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE	420 A, LRA 600 V 60 Hz

RATING OF REFRIGERATION CONTROL (CSA ONLY)	3phase; (CSA) 90 A, FLA 480 V 60 Hz 3phase; (CSA) 70 A, FLA 600 V 60 Hz 3phase; (CSA) 540 A, LRA 480 V 60 Hz 3phase; (CSA)
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	100 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 110 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	100 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA) 100 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	125 A
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	116 A
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	108 A
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	51 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	58 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	63 kW
ACTUATING VOLTAGE	RAC 240: 190 - 240 V 50/60 Hz
ALTITUDE	Max. 2000 m
OPERATING VOLTAGE AT AC, 50 HZ - MIN	230 V
OPERATING VOLTAGE AT AC, 50 HZ - MAX	690 V
OPERATING VOLTAGE AT AC, 60 HZ - MIN	230 V
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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