Eaton 051645

Eaton Moeller® series DILEEM Contactor, 220 V DC, 3 pole, 380 V 400 V, 3 kW, Contacts N/C = Normally closed= 1 NC, Screw terminals, DC operation

PRODUCT NAME	Eaton Moeller® series DILEEM Mini contactor
CATALOG NUMBER	051645
PRODUCT LENGTH/DEPTH	54 mm
PRODUCT HEIGHT	58 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.206 kg
CERTIFICATIONS	CSA-C22.2 No. 14-05 CSA File No.: 012528 CE CSA CSA Class No.: 3211-04 UL Category Control No.: NLDX UL 508 IEC/EN 60947-4-1 UL File No.: E29096 IEC/EN 60947 VDE 0660 UL
CATALOG NOTES	Also tested according to AC-3e.

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

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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.
FITTED WITH:	Auxiliary contact
OPERATING FREQUENCY	9000 mechanical Operations/h
POLLUTION DEGREE	3
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 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
CONNECTION	Screw terminals
AMBIENT OPERATING TEMPERATURE - MAX	50 °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	0.25 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	1.5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	1 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	2 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	3 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	3 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	40 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	16 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	19 A
CONVENTIONAL THERMAL CURRENT ITH OF AUXILIARY CONTACTS (1-POLE, OPEN)	10 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	50 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0.6 W

HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.2 W
SWITCHING TIME (AC OPERATED, N/O, WITH AUXILIARY CONTACT MODULE, CLOSING DELAY)	70 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	35 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	26 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	25 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	15 ms
APPLICATION	Mini Contactors for Motors and Resistive Loads
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
ARCING TIME	12 ms at 690 V AC
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
VOLTAGE TYPE	DC
DEGREE OF PROTECTION	IP20
MOUNTING POSITION	As required (except vertical with terminals A1/A2 at the bottom)
NUMBER OF AUXILIARY	1

CONTACTS (NORMALLY CLOSED CONTACTS)	
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
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 BREAKING CAPACITY AT 660/690 V	42 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 V
OVERVOLTAGE CATEGORY	III
CONTROL CIRCUIT RELIABILITY	< 2 λ, < 1 failure at 100,000,000 Operations (at U_e = 24 V DC, Umin = 17 V, Imin = 5.4 mA)
DUTY FACTOR	100 %
CHANGEOVER TIME	40 - 50 ms
LIFESPAN, MECHANICAL	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) 20,000,000 Operations
PICK-UP VOLTAGE	0.8 - 1.1 V DC x Uc
SAFE ISOLATION	300 V AC, Between auxiliary contacts, According to EN 61140

	300 V AC, Between coil and auxiliary contacts, According to EN 61140 300 V AC, Between the contacts, According to EN 61140 300 V AC, Between coil and contacts, According to EN 61140
SCREW SIZE	M3.5, Terminal screw
RATED OPERATIONAL CURRENT (IE)	2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact 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) 0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series)
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)	P300, DC operated (UL/CSA) A600, AC operated (UL/CSA)
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 1.5) mm^2 1 x (0.75 - 1.5) mm^2
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/C 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 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/C auxiliary contact, Basic unit without auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
TERMINAL CAPACITY (SOLID)	2 x (0.75 - 2.5) mm^2 1 x (0.75 - 2.5) mm^2
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	15 A, Maximum motor rating (UL/CSA)
POWER CONSUMPTION	2.3 VA/W at DC (Pick-up/Sealing power) Smoothed DC voltage or three-phase bridge rectifier
TIGHTENING TORQUE	1.2 Nm, Screw terminals
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	220 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	220 V
RATED INSULATION VOLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 440 V (COS PHI TO IEC/EN 60947)	110 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	22 A
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	6.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-3,	6.6 A

380 V, 400 V, 415 V	
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	6.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	5 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	3.5 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	5 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	5 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	5 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	3.7 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	2.9 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
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	6.6 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	1.8 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	3 kW
RATED OPERATIONAL	3.1 kW

POWER AT AC-3, 415 V, 50 HZ	
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	1.1 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	1.3 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	2.2 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	2.3 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	2.4 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	2.2 kW
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	2.2 kW
RATED OPERATIONAL POWER (NEMA)	2.2 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RESISTANCE PER POLE	7.86 mΩ
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	2.3 W
STRIPPING LENGTH (MAIN CABLE)	8 mm
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	5 kA, SCCR (UL/CSA) 45 A, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION	10 A fast, 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 6 A gG/gL, Max. Fuse 500V, Auxiliary contacts, Short-circuit rating without

	welding
SUITABLE FOR	Also motors with efficiency class IE3
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
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	22 A
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	20 A
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	3.3 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	3 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	3 kW
ACTUATING VOLTAGE	220 V DC
ALTITUDE	Max. 2000 m
OPERATING VOLTAGE AT AC, 50 HZ - MIN	24 V
OPERATING VOLTAGE AT AC, 50 HZ - MAX	690 V
OPERATING VOLTAGE AT AC, 60 HZ - MIN	24 V
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
:	

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