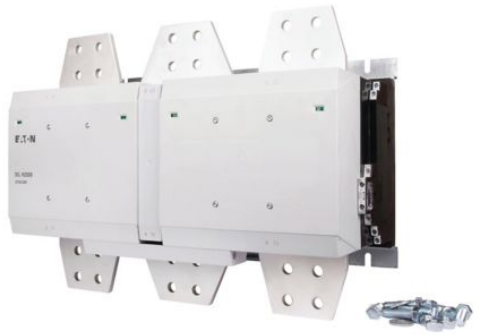
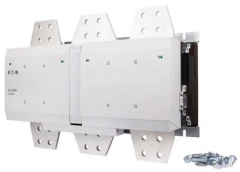
Specifications





Eaton 272442

Eaton Moeller® series DILH Contactor, Ith =Ie: 2450 A, RAW 250: 230 - 250 V 50 - 60 Hz/230 - 350 V DC, AC and DC operation, Screw connection

General specifications	
PRODUCT NAME	Eaton Moeller® series DILH contactor
CATALOG NUMBER	272442
MODEL CODE	DILH2000/22(RAW250)
EAN	4015082724429
PRODUCT LENGTH/DEPTH	252 mm
PRODUCT HEIGHT	392 mm
PRODUCT WIDTH	515 mm
PRODUCT WEIGHT	32 kg
CERTIFICATIONS	UL File No.: E29096 IEC/EN 60947 CSA-C22.2 No. 60947-4-1-14 UL CSA UL 60947-4-1 CSA File No.: 012528 CCC UL Category Control No.: NLDX CE IEC/EN 60947-4-1 VDE 0660 CSA Class No.: 3211-04
CATALOG NOTES	• Contacts according to EN 50012 • Conventional thermal current Ith of main contacts (1-pole, open) at 60°
GLOBAL CATALOG	272442

Powering Business Worldwide

Product specifications

ACCESSORIES	Fitting options auxiliary contacts: on the side: 2 x DILM820-XHI11(V)-SI; 2 x DILM820-XHI11-SA
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.

Resources

CATALOGS	Product Range Catalog Switching and protecting motors
CHARACTERISTIC CURVE	eaton-contactors-dilh-characteristic-curve.eps eaton-contactors-short-time-loading-dilm-characteristic-curve-002.eps
DECLARATIONS OF CONFORMITY	DA-DC-00005043.pdf DA-DC-00005052.pdf
DRAWINGS	eaton-contactors-dilh-dimensions-003.eps eaton-contactors-dilh-dimensions-002.eps eaton-contactors-mounting-dilm-dimensions-002.eps eaton-contactors-mounting-dilm-dimensions.eps eaton-contactors-mounting-dilm-3d-drawing-002.eps eaton-contactors-dilm-3d-drawing-003.eps
ECAD MODEL	DA-CE-ETN.DILH2000_22(RAW250)
INSTALLATION INSTRUCTIONS	IL03406004Z
MCAD MODEL	eaton-iec-contactors-mcad-drawings-dil-h2000-2200.dwg eaton-iec-contactors-mcad-3d-models-dil-h2000-2200.stp
WIRING DIAGRAMS	eaton-contactors-contact-dilm-wiring-diagram-004.eps

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:	Suppressor circuit in actuating electronics
OPERATING FREQUENCY	1000 mechanical Operations/h (AC operated) 1000 mechanical Operations/h (DC operated)
POLLUTION DEGREE	3
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
UTILIZATION CATEGORY	AC-1: Non-inductive or slightly inductive loads, resistance furnaces
CONNECTION	Screw terminals
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
AMBIENT OPERATING TEMPERATURE - MIN	-40 °C
AMBIENT STORAGE	80 °C

TEMPERATURE - MAX	
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	2089 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	5000 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	64 W
APPLICATION	Mains contactors for resistive loads from 1000 A
PRODUCT CATEGORY	Contactors
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Rail connection
SCREWDRIVER SIZE	2, Terminal screw, Control circuit cables, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver
VOLTAGE TYPE	AC/DC
DEGREE OF PROTECTION	IP00
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	2
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	2
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
RATED BREAKING CAPACITY AT 1000 V	5800 A
RATED BREAKING	8200 A

CAPACITY AT 220/230 V	
RATED BREAKING CAPACITY AT 380/400 V	8200 A
RATED BREAKING CAPACITY AT 500 V	8200 A
RATED BREAKING CAPACITY AT 660/690 V	8200 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	250 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	230 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	250 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	230 V
DROP-OUT VOLTAGE	0.2 x US max - 0.6 x US min, DC operated AC operated: 0.2 x US max - 0.6 x US min, AC operated
OVERVOLTAGE CATEGORY	III
BEHAVIOR IN MARGINAL AND TRANSITIONAL CONDITIONS	Sealing - Voltage drops (0.2 - 0.6 x Uc min) > 12 ms: Drop-out of the contactor Sealing - Voltage interruptions (0 - 0.2 x Uc min ≤ 10 ms: Time is bridged successfully Sealing - Excess voltage (1.15 - 1.3 x Uc max): Contactor remains switched on Sealing - Pick-up phase (0.7 x Uc min - 1.15 x Uc max): Contactor switches on with certainty Sealing - Voltage drops (0.2 - 0.6 x Uc min ≤12 ms: Time is bridged successfully Sealing - Pick-up phase (0 - 0.7 x Uc min: Contactor does not switch on Sealing - Voltage interruptions 0 - 0.2 x Uc min) > 10 ms: Drop-out of the contactor

	Sealing - Voltage drops (0.6 - 0.7 x Uc min: Contactor remains switched on
DUTY FACTOR	100 %
ELECTROMAGNETIC COMPATIBILITY	Designed for operation in industrial environments. Its use in residential environments may cause radio-frequency interference, requiring additional noise suppression.
LIFESPAN, MECHANICAL	5,000,000 Operations (AC operated) 5,000,000 Operations (DC operated)
PICK-UP VOLTAGE	0.7 - 1.15 V DC x Us 0.7 - 1.15 V AC x Us
POWER CONSUMPTION, PICK-UP, 50 HZ	1400 W, Pull-in power, Coil in a cold state and 1.0 x Us 1600 VA, Pull-in power, Coil in a cold state and 1.0 x Us
SAFE ISOLATION	1000 V AC, Between coil and contacts, According to EN 61140
POWER CONSUMPTION, PICK-UP, 60 HZ	1600 VA, Pull-in power, Coil in a cold state and 1.0 x Us 1400 W, Pull-in power, Coil in a cold state and 1.0 x Us
SCREW SIZE	M12, Terminal screw, Main connections M3.5, Terminal screw, Control circuit cables
POWER CONSUMPTION, SEALING, 50 HZ	17.3 W, Coil in a cold state and 1.0 x Us 36.5 VA, Coil in a cold state and 1.0 x Us
POWER CONSUMPTION, SEALING, 60 HZ	17.3 W, Coil in a cold state and 1.0 x Us 36.5 VA, Coil in a cold state and 1.0 x Us
RESISTANCE	500 mΩ (Admissible transitional contact resistance - of the external control circuit device when actuating A11)
SWITCHING CAPACITY (AUXILIARY CONTACTS,	15 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)

GENERAL USE)	
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 2.5) mm^2, Control circuit cables 1 x (0.75 - 2.5) mm^2, Control circuit cables
SHOCK RESISTANCE	10 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 8 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
TERMINAL CAPACITY (SOLID)	2 x (0.75 - 2.5) mm^2, Control circuit cables 1 x (0.75 - 2.5) mm^2, Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables
SIGNAL LEVEL	5 V - 15 V, PLC signal level (A3 - A4) to IEC/EN 61131-2 (type 2), Magnet systems
TERMINAL CAPACITY (BUSBAR)	100 mm width, Main connection
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	2000 A, Maximum motor rating (UL/CSA)
POWER CONSUMPTION	Control transformer with uk ≤ 7%
TIGHTENING TORQUE	1.2 Nm, Screw terminals, Control circuit cables 35 Nm, Main cable connection screw/bolt
WIDTH ACROSS FLATS	18 mm
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	250 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	230 V
RATED INSULATION VOLTAGE (UI)	1000 V

RATED MAKING CAPACITY (COS PHI TO IEC/EN 60947)	9840 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	0 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	0 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	2000 A
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	0 kW
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	0 kW
RATED OPERATIONAL POWER (NEMA)	0 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	1000 V
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	13 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	70 ms
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	40 ms
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	2000 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA) 2000 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	2450 A
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	2190 A

CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	2000 A
ACTUATING VOLTAGE	RAW 250: 230 - 250 V 50 - 60 Hz/230 - 350 V DC
ALTITUDE	Max. 2000 m
OPERATING VOLTAGE AT AC, 50 HZ - MIN	230 V
OPERATING VOLTAGE AT AC, 50 HZ - MAX	250 V
OPERATING VOLTAGE AT AC, 60 HZ - MIN	230 V
OPERATING VOLTAGE AT AC, 60 HZ - MAX	250 V

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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