

DIL CONTACTORS

277896



Overview



Specifications



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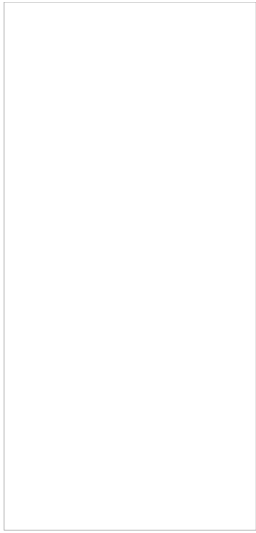
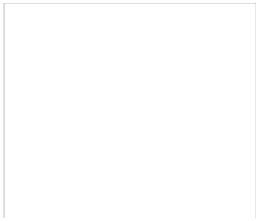
# 277896

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 50 Hz, 440 V 60 Hz, AC operation, Screw terminals



[WIN-WIN with Push-in Terminals](#)

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### 277950

Eaton Moeller® series DILM Auxiliary contact module, 4 pole, Ith= 16 A, 2 N/O, 2 NC, Front fixing, Screw terminals, DILM40 - DILM170

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### 278458

Eaton Moeller® series ZB Overload relay, ZB65, Ir= 24 - 40 A, 1 N/O, 1 N/C, Direct mounting, IP00

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### 278459

Eaton Moeller® series ZB Overload relay, ZB65, Ir= 40 - 57 A, 1 N/O, 1 N/C, Direct mounting, IP00

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### 277946

Eaton Moeller® series DILM Auxiliary contact module, 2 pole, Ith= 16 A, 1 N/O, 1 NC, Front fixing, Screw terminals, DILM40 - DILM170

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## GENERAL SPECIFICATIONS

General specifications	>	<b>PRODUCT NAME</b>	Eaton Moeller® series DILM contactor
		<b>CATALOG NUMBER</b>	277896
Product specifications	>	<b>MODEL CODE</b>	DILM65(400V50HZ,440V60HZ)
		<b>EAN</b>	4015082778965
		<b>PRODUCT LENGTH/DEPTH</b>	132.1 mm
		<b>PRODUCT HEIGHT</b>	115 mm
		<b>PRODUCT WIDTH</b>	55 mm
		<b>PRODUCT WEIGHT</b>	0.872 kg
		<b>CERTIFICATIONS</b>	IEC/EN 60947 CSA VDE 0660 UL
		<b>CATALOG NOTES</b>	Contacts according to EN 50012

## PRODUCT SPECIFICATIONS

<b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>	2 x (0.75 - 25) mm <sup>2</sup> , Main cables 1 x (0.75 - 35) mm <sup>2</sup> , Main cables 1 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	65 A
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications must be observed.
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	30 kW
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> (3-POLE, ENCLOSED)</b>	72 A
<b>RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ</b>	12 kW
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V</b>	25 A
<b>TERMINAL CAPACITY (COPPER BAND)</b>	2 x (6 x 9 x 0.8) mm (Number of segments x width of cables)
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	400 V
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> AT 60°C (3-POLE, OPEN)</b>	80 A

<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT</b>	0
<b>CONVENTIONAL THERMAL CURRENT I<sub>TH</sub> AT 55°C (3-POLE, OPEN)</b>	83 A
<b>RATED OPERATIONAL POWER (NEMA)</b>	37 kW
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>RATED BREAKING CAPACITY AT 380/400 V</b>	650 A
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	400 V
<b>RATED BREAKING CAPACITY AT 660/690 V</b>	370 A
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V</b>	65 A
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C
<b>RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ</b>	14 kW
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>NUMBER OF POLES</b>	Three-pole
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to
<b>APPLICATION</b>	Contactors for Motors
<b>OPERATING FREQUENCY</b>	5000 mechanical Operations/h (AC operated)
<b>VOLTAGE TYPE</b>	AC
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V</b>	250 A gG/gL
<b>PRODUCT CATEGORY</b>	Contactors
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V</b>	25 A
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	35 kW
<b>POWER CONSUMPTION, PICK-UP, 50 HZ</b>	149 VA, Dual-frequency coil in a cold state and 1.0
<b>HEAT DISSIPATION CAPACITY P<sub>DISS</sub></b>	0 W
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN</b>	8 ms

<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V</b>	25 A
<b>RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ</b>	22 kW
<b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>	690 V
<b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>	18 - 14, Control circuit cables Single 14 - 1, double 14 - 2, Main cables
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>DEGREE OF PROTECTION</b>	IP00
<b>OVERVOLTAGE CATEGORY</b>	III
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX</b>	13 ms
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>POLLUTION DEGREE</b>	3
<b>RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V</b>	98 A
<b>POWER CONSUMPTION, PICK-UP, 60 HZ</b>	178 VA, Dual-frequency coil in a cold state and 1.0
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX</b>	18 ms
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	8000 V AC
<b>CONNECTION</b>	Screw terminals
<b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>	230 V
<b>TIGHTENING TORQUE</b>	1.2 Nm, Screw terminals, Control circuit cables 3.3 Nm, Screw terminals, Main cables
<b>RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ</b>	17 kW
<b>FRAME SIZE</b>	FS3
<b>CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)</b>	180 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>	37 A
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>	65 A
<b>SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN</b>	12 ms

<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V</b>	125 A gG/gL
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	0
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	47 kW
<b>SHOCK RESISTANCE</b>	7 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms when tabletop-mounted, Halfsinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms when tabletop-mounted, Halfsinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms when tabletop-mounted, Halfsinusoidal shock 10 ms
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V</b>	72 A
<b>DROP-OUT VOLTAGE</b>	AC operated: 0.6 - 0.3 x UC, AC operated
<b>POWER CONSUMPTION, SEALING, 60 HZ</b>	19 VA, Dual-frequency coil in a cold state and 1.0 x UC 4.1 W, Dual-frequency coil in a cold state and 1.0 x UC
<b>RESISTANCE PER POLE</b>	1.9 mΩ
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>STRIPPING LENGTH (CONTROL CIRCUIT CABLE)</b>	10 mm
<b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>	690 V
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications must be observed.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be lifted.
<b>STRIPPING LENGTH (MAIN CABLE)</b>	14 mm
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)</b>	3
<b>RATED BREAKING CAPACITY AT 220/230 V</b>	650 A
<b>SCREW SIZE</b>	M6, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V</b>	25 A
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V</b>	80 A gG/gL

<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against direct contact, Protection against indirect contact, Protection against electric shock, Protection against electric shock, actuated from front (EN 50274)
<b>POWER CONSUMPTION, SEALING, 50 HZ</b>	4.1 W, Dual-frequency coil in a cold state and 1.0 x 16 VA, Dual-frequency coil in a cold state and 1.0 x 16 VA
<b>RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ</b>	41 kW
<b>TERMINAL CAPACITY (STRANDED)</b>	2 x (16 - 35) mm <sup>2</sup> , Main cables 1 x (16 - 50) mm <sup>2</sup> , Main cables
<b>RATED BREAKING CAPACITY AT 500 V</b>	650 A
<b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>	39 kW
<b>CLIMATIC PROOFING</b>	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
<b>EMITTED INTERFERENCE</b>	According to EN 60947-1
<b>CONNECTION TO SMARTWIRE-DT</b>	No
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	4.1 W
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>UTILIZATION CATEGORY</b>	AC-3: Normal AC induction motors: starting, switching AC-4: Normal AC induction motors: starting, plugging, inching AC-1: Non-inductive or slightly inductive loads, resistive
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V</b>	65 A
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be protected
<b>SAFE ISOLATION</b>	440 V AC, Between the contacts, According to EN 60947-1 440 V AC, Between coil and contacts, According to EN 60947-1
<b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>	230 V
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the instructions in the instruction leaflet (IL) is observed.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	5.7 W
<b>ACTUATING VOLTAGE</b>	400 V 50 Hz, 440 V 60 Hz
<b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V</b>	20 A
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	17.1 W
<b>PICK-UP VOLTAGE</b>	0.8 - 1.1 V AC x U <sub>c</sub>
<b>SUITABLE FOR</b>	Also motors with efficiency class IE3

<b>CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)</b>	98 A
<b>TERMINAL CAPACITY (SOLID)</b>	1 x (0.75 - 16) mm <sup>2</sup> , Main cables 2 x (0.75 - 16) mm <sup>2</sup> , Main cables 2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables 1 x (0.75 - 4) mm <sup>2</sup> , Control circuit cables
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	0
<b>INTERFERENCE IMMUNITY</b>	According to EN 60947-1
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>LIFESPAN, MECHANICAL</b>	10,000,000 Operations (AC operated)
<b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V</b>	100 A gG/gL
<b>RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)</b>	910 A
<b>RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ</b>	7.5 kW
<b>RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ</b>	16 kW
<b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V</b>	72 A
<b>RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ</b>	7 kW
<b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>	690 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	440 V
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature Eaton will provide heat dissipation data for the device
<b>CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)</b>	88 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V</b>	65 A
<b>SCREWDRIVER SIZE</b>	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
<b>DUTY FACTOR</b>	100 %
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V</b>	65 A
<b>CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)</b>	200 A



<b>RATED CONTROL SUPPLY VOLTAGE(US) AT AC, 60 HZ - MAX</b>	440 V
<b>ARCING TIME</b>	10 ms
<b>RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ</b>	13 kW
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V
<b>ALTITUDE</b>	Max. 2000 m

Catalogs

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Certification reports

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Characteristic curve

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Declarations of conformity

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Drawings

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eCAD model

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Installation instructions

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Installation videos

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mCAD model

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System overview

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Wiring diagrams

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