

# Especificaciones



La foto es representativa



## Eaton 277135

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 11 kW, 1 N/O, 415 V 50 Hz, 480 V 60 Hz, AC operation, Screw terminals

### General specifications

|                             |                                       |
|-----------------------------|---------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton Moeller® series DILM contactor  |
| <b>CATALOG NUMBER</b>       | 277135                                |
| <b>EAN</b>                  | 4015082771355                         |
| <b>PRODUCT LENGTH/DEPTH</b> | 97 mm                                 |
| <b>PRODUCT HEIGHT</b>       | 85 mm                                 |
| <b>PRODUCT WIDTH</b>        | 45 mm                                 |
| <b>PRODUCT WEIGHT</b>       | 0.428 kg                              |
| <b>CERTIFICATIONS</b>       | UL<br>CSA<br>IEC/EN 60947<br>VDE 0660 |
| <b>CATALOG NOTES</b>        | Contacts according to EN 50012        |

## Especificaciones del producto

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| <b>USED WITH</b>  | Can be combined with auxiliary contacts: DILM32-XHI, DILA-XHI(V)   |
| <b>ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT</b>            | Screw connection   |
| <b>AMPERAGE RATING</b>  | 170A   |
| <b>NUMBER OF POLES</b>  | Three-pole   |
| <b>TYPE</b>   | Full voltage non-reversing small contactor   |
| <b>VOLTAGE RATING</b>   | 400 V  |
| <b>10.10 TEMPERATURE RISE</b>   | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>   | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>  | Meets the product standard's requirements.   |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.   |
| <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>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.   |
| <b>10.2.5 LIFTING</b>   | Does not apply, since the  |

## Recursos

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| <b>CHARACTERISTIC CURVE</b>                  | <a href="#">eaton-contactors-switch-dilm-characteristic-curve-002.eps</a>  |
| <b>DECLARATIONS OF CONFORMITY</b>            | <a href="#">eaton-contactor-declaration-of-conformity-uk251218en.pdf</a><br><a href="#">eaton-contactor-declaration-of-conformity-eu250735en.pdf</a> |
| <b>DIAGRAMAS DE CABLEADO</b>                 | <a href="#">eaton-contactors-contact-dilm-wiring-diagram.eps</a>   |
| <b>DIBUJOS</b>                               | <a href="#">eaton-contactors-dimensions-210t014.eps</a>  |
| <b>ECAD MODEL</b>                            | <a href="#">ETN.277135.edz</a>   |
| <b>GUÍAS DE ESPECIFICACIONES DE PRODUCTO</b> | <a href="#">Eaton Specification Sheet - 277135</a>   |
| <b>INSTRUCCIONES DE INSTALACIÓN</b>          | <a href="#">IL03407014Z2021_09.pdf</a>   |
| <b>MCAD MODEL</b>                            | <a href="#">DA-CS-dil_m17_38</a><br><a href="#">DA-CD-dil_m17_38</a>   |
| <b>PEP ECO-PASSPORT</b>                      | <a href="#">eaton-iec-contactors-pep-eato-00124-v0101-en.pdf</a>   |

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|   | entire switchgear needs to be evaluated.  |
| <b>10.2.6 MECHANICAL IMPACT</b>                                 | Does not apply, since the entire switchgear needs to be evaluated.  |
| <b>10.2.7 INSCRIPTIONS</b>                                      | Meets the product standard's requirements.  |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                  | Does not apply, since the entire switchgear needs to be evaluated.  |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.  |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated.  |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated.  |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.  |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.  |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.  |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.  |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.  |
| <b>FREQUENCY RATING</b>   | 50-60 Hz  |
| <b>OPERATING FREQUENCY</b>                                      | 5000 mechanical Operations/h (AC operated)  |
| <b>POLLUTION DEGREE</b>   | 3   |
| <b>CLIMATIC PROOFING</b>  | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30  |
| <b>CONNECTION TO SMARTWIRE-DT</b>                               | No  |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 8000 V AC   |
| <b>UTILIZATION CATEGORY</b>                                     | AC-4: Normal AC induction motors: starting, plugging, reversing, inching<br>AC-1: Non-inductive or slightly inductive loads, resistance furnaces<br>AC-3: Normal AC induction |

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|   | motors: starting, switch off during running  |
| <b>CONNECTION</b>   | Screw terminals  |
| <b>FRAME SIZE</b>   | FS2  |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                              | 60 °C  |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                              | -25 °C   |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>                   | 40 °C  |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>                   | -25 °C   |
| <b>AMBIENT STORAGE TEMPERATURE - MAX</b>                                | 80 °C  |
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>                                | -40 °C   |
| <b>CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)</b>              | 90 A   |
| <b>CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)</b>              | 36 A   |
| <b>CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)</b>          | 42 A   |
| <b>CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)</b> | 100 A  |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>               | 4.2 W  |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                                  | 0 W  |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>                | 1.4 W  |
| <b>APPLICATION</b>  | Contactors for Motors  |
| <b>PRODUCT CATEGORY</b>   | Contactors   |
| <b>PROTECTION</b>   | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274) |
| <b>TERMINALS</b>  | Screw terminals  |
| <b>ARCING TIME</b>  | 10 ms  |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>                       | Screw connection   |

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| <b>SCREWDRIVER SIZE</b>  | 2, Terminal screw, Pozidriv<br>screwdriver<br>0.8 x 5.5/1 x 6 mm,<br>Terminal screw, Standard<br>screwdriver |
| <b>VOLTAGE TYPE</b>  | AC   |
| <b>DEGREE OF PROTECTION</b>  | IP00   |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>CLOSED CONTACTS)</b> | 0  |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>OPEN CONTACTS)</b>   | 1  |
| <b>NUMBER OF CONTACTS<br/>(NORMALLY CLOSED) AS<br/>MAIN CONTACT</b>    | 0  |
| <b>NUMBER OF CONTACTS<br/>(NORMALLY OPEN<br/>CONTACTS)</b>             | 1  |
| <b>NUMBER OF MAIN<br/>CONTACTS (NORMALLY<br/>OPEN CONTACT)</b>         | 3  |
| <b>OPERATING<br/>TEMPERATURE - MAX</b>                                 | 60 °C  |
| <b>OPERATING<br/>TEMPERATURE - MIN</b>                                 | -40 °C   |
| <b>RATED BREAKING<br/>CAPACITY AT 220/230 V</b>                        | 250 A  |
| <b>RATED BREAKING<br/>CAPACITY AT 380/400 V</b>                        | 250 A  |
| <b>RATED BREAKING<br/>CAPACITY AT 500 V</b>                            | 250 A  |
| <b>RATED BREAKING<br/>CAPACITY AT 660/690 V</b>                        | 150 A  |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT AC, 50<br/>HZ - MAX</b>    | 415 V  |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT AC, 50<br/>HZ - MIN</b>    | 415 V  |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT AC, 60<br/>HZ - MAX</b>    | 480 V  |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT AC, 60<br/>HZ - MIN</b>    | 480 V  |
| <b>COIL VOLTAGE</b>  | 415-480 Vac, 50/60 Hz  |
| <b>CONTACT<br/>CONFIGURATION</b>                                       | 1 NO   |
| <b>CONTINUOUS AMPERE<br/>RATING</b>                                    | 170 A  |

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| <b>DROP-OUT VOLTAGE</b>                                  | AC operated: 0.6 - 0.3 x<br>UC, AC operated  |
| <b>OVERTOWTAGE<br/>CATEGORY</b>                          | III  |
| <b>DUTY FACTOR</b>                                       | 100 %  |
| <b>NUMBER OF CONTACTS</b>                                | 1 NO   |
| <b>EMITTED INTERFERENCE</b>                              | According to EN 60947-1  |
| <b>OPERATION</b>   | Reversing  |
| <b>INTERFERENCE<br/>IMMUNITY</b>                         | According to EN 60947-1  |
| <b>LIFESPAN, MECHANICAL</b>                              | 10,000,000 Operations (AC<br>operated)   |
| <b>PICK-UP VOLTAGE</b>                                   | 0.8 - 1.1 V AC x Uc  |
| <b>POWER CONSUMPTION,<br/>PICK-UP, 50 HZ</b>             | 52 VA, Dual-frequency coil<br>in a cold state and 1.0 x<br>Us, at 50 Hz  |
| <b>SAFE ISOLATION</b>                                    | 440 V AC, Between coil<br>and contacts, According to<br>EN 61140<br>440 V AC, Between the<br>contacts, According to EN<br>61140  |
| <b>POWER CONSUMPTION,<br/>PICK-UP, 60 HZ</b>             | 67 VA, Dual-frequency coil<br>in a cold state and 1.0 x<br>Us, at 60 Hz  |
| <b>SCREW SIZE</b>  | M5, Terminal screw, Main<br>cables<br>M3.5, Terminal screw,<br>Control circuit cables  |
| <b>POWER CONSUMPTION,<br/>SEALING, 50 HZ</b>             | 7.1 VA, Dual-frequency coil<br>in a cold state and 1.0 x<br>Us, at 50 Hz<br>2.1 W, Dual-frequency coil<br>in a cold state and 1.0 x<br>Us, at 50 Hz  |
| <b>POWER CONSUMPTION,<br/>SEALING, 60 HZ</b>             | 2.1 W, Dual-frequency coil<br>in a cold state and 1.0 x<br>Us, at 60 Hz<br>8.7 VA, Dual-frequency coil<br>in a cold state and 1.0 x<br>Us, at 60 Hz  |
| <b>TERMINAL CAPACITY<br/>(STRANDED)</b>                  | 1 x 16 mm <sup>2</sup> , Main cables   |
| <b>TERMINAL CAPACITY<br/>(FLEXIBLE WITH<br/>FERRULE)</b> | 2 x (0.75 - 10) mm <sup>2</sup> , Main<br>cables<br>1 x (0.75 - 2.5) mm <sup>2</sup> ,<br>Control circuit cables<br>1 x (0.75 - 16) mm <sup>2</sup> , Main<br>cables<br>2 x (0.75 - 2.5) mm <sup>2</sup> ,<br>Control circuit cables |
| <b>SHOCK RESISTANCE</b>                                  | 10 g, N/O main contact,<br>Mechanical, according to  |

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|  | IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>5.3 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms<br>7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>6.9 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms<br>3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms |
| <b>TERMINAL CAPACITY (SOLID)</b>                                   | 2 x (0.75 - 10) mm <sup>2</sup> , Main cables<br>1 x (0.75 - 4) mm <sup>2</sup> , Control circuit cables<br>1 x (0.75 - 16) mm <sup>2</sup> , Main cables<br>2 x (0.75 - 2.5) mm <sup>2</sup> , Control circuit cables   |
| <b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>                      | Single 18 - 6, double 18 - 8, Main cables<br>18 - 14, Control circuit cables   |
| <b>POWER CONSUMPTION</b>   | 11 kW  |
| <b>TIGHTENING TORQUE</b>   | 1.2 Nm, Screw terminals, Control circuit cables<br>3.2 Nm, Screw terminals, Main cables  |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>               | 0 V  |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>               | 0 V  |
| <b>RATED INSULATION VOLTAGE (UI)</b>                               | 690 V  |
| <b>RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)</b> | 350 A  |

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| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-1,<br/>380 V, 400 V, 415 V</b>   | 45 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>220 V, 230 V, 240 V</b>   | 25 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>380 V, 400 V, 415 V</b>   | 25 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>440 V</b>                 | 25 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>500 V</b>                 | 25 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>660 V, 690 V</b>          | 15 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-4,<br/>220 V, 230 V, 240 V</b>   | 13 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-4,<br/>400 V</b>                 | 13 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-4,<br/>440 V</b>                 | 13 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-4,<br/>500 V</b>                 | 13 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-4,<br/>660 V, 690 V</b>          | 10 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-1,<br/>110 V</b>                 | 40 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-1,<br/>220 V</b>                 | 40 A    |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-1, 60<br/>V</b>                  | 40 A    |
| <b>RATED OPERATIONAL<br/>CURRENT FOR SPECIFIED<br/>HEAT DISSIPATION (IN)</b> | 25 A    |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 240 V, 50<br/>HZ</b>                 | 8.5 kW  |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 380/400<br/>V, 50 HZ</b>             | 11 kW   |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 415 V, 50</b>                        | 14.5 kW |

**Hz****RATED OPERATIONAL**

**POWER AT AC-4, 220/230 V, 50 Hz** 3.5 kW

**RATED OPERATIONAL**

**POWER AT AC-4, 240 V, 50 Hz** 4 kW

**RATED OPERATIONAL**

**POWER AT AC-4, 380/400 V, 50 Hz** 6 kW

**RATED OPERATIONAL**

**POWER AT AC-4, 415 V, 50 Hz** 6.5 kW

**RATED OPERATIONAL**

**POWER AT AC-4, 440 V, 50 Hz** 7 kW

**RATED OPERATIONAL**

**POWER AT AC-4, 500 V, 50 Hz** 8 kW

**RATED OPERATIONAL**

**POWER AT AC-4, 660/690 V, 50 Hz** 8.5 kW

**RATED OPERATIONAL**

**POWER (NEMA)** 11 kW

**RATED OPERATIONAL**

**VOLTAGE (UE) AT AC - MAX** 690 V

**RESISTANCE PER POLE**

2.7 mΩ

**STATIC HEAT**

**DISSIPATION, NON-CURRENT-DEPENDENT PVS** 2.1 W

**STRIPPING LENGTH**

**(CONTROL CIRCUIT CABLE)** 10 mm

**STRIPPING LENGTH**

**(MAIN CABLE)** 10 mm

**SWITCHING TIME (AC**

**OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX** 22 ms

**SWITCHING TIME (AC**

**OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN** 16 ms

**SWITCHING TIME (AC**

**OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX** 14 ms

**SWITCHING TIME (AC**

**OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN** 8 ms

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| <b>SHORT-CIRCUIT<br/>PROTECTION RATING<br/>(TYPE 1 COORDINATION)<br/>AT 400 V</b> | 100 A gG/gL                           |
| <b>SUITABLE FOR</b>   | Also motors with efficiency class IE3 |
| <b>SHORT-CIRCUIT<br/>PROTECTION RATING<br/>(TYPE 1 COORDINATION)<br/>AT 690 V</b> | 50 A gG/gL                            |
| <b>SHORT-CIRCUIT<br/>PROTECTION RATING<br/>(TYPE 2 COORDINATION)<br/>AT 400 V</b> | 35 A gG/gL                            |
| <b>SHORT-CIRCUIT<br/>PROTECTION RATING<br/>(TYPE 2 COORDINATION)<br/>AT 690 V</b> | 35 A gG/gL                            |
| <b>OPERATING<br/>TEMPERATURE</b>  | -40° to 60°C                          |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>AT 40°C (3-POLE, OPEN)</b>            | 45 A                                  |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>AT 50°C (3-POLE, OPEN)</b>            | 43 A                                  |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>AT 60°C (3-POLE, OPEN)</b>            | 40 A                                  |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 440 V, 50<br/>HZ</b>                      | 15.5 kW                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 500 V, 50<br/>HZ</b>                      | 17.5 kW                               |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3, 690 V, 50<br/>HZ</b>                      | 14 kW                                 |
| <b>ACTUATING VOLTAGE</b>  | 415 V 50 Hz, 480 V 60 Hz              |
| <b>ALTITUDE</b>   | Max. 2000 m                           |
| <b>OPERATING VOLTAGE AT<br/>AC, 50 HZ - MIN</b>                                   | 24 V                                  |
| <b>OPERATING VOLTAGE AT<br/>AC, 50 HZ - MAX</b>                                   | 690 V                                 |
| <b>OPERATING VOLTAGE AT<br/>AC, 60 HZ - MIN</b>                                   | 24 V                                  |
| <b>OPERATING VOLTAGE AT<br/>AC, 60 HZ - MAX</b>                                   | 690 V                                 |

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**FECHA:**

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