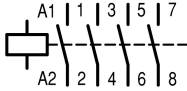




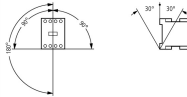
Contactor, 4p, 63A/AC1

Part no. DILMP63(RDC24)
Article no. 109869
Catalog No. XTCF063D00TD

Delivery programme

| | | | |
|---|----------------|---|--|
| Product range | | | Contactors |
| Application | | | Contactors for 4 pole electric consumers |
| Subrange | | | Contactors up to 200 A, 4 pole |
| Utilization category | | | AC-1: Non-inductive or slightly inductive loads, resistance furnaces NAC-3: Normal AC induction motors: starting, switch off during running |
| Connection technique | | | Screw terminals |
| Pole | | | 4 pole |
| Rated operational current | | | |
| AC-1 | | | |
| Conventional free air thermal current, 3 pole, 50 - 60 Hz | | | |
| at 40 °C | $I_{th} = I_e$ | A | 63 |
| at 50 °C | $I_{th} = I_e$ | A | 60 |
| at 60 °C | $I_{th} = I_e$ | A | 54 |
| Contact sequence | | |  |
| For use with | | | DILM150-XHI(A)(V)... or DILM1000-XHI11-SA or DILM1000-XHI(V)11-SI |
| Actuating voltage | | | RDC 24: 24 - 27 V DC |
| Voltage AC/DC | | | DC operation |
| Instructions | | | Contacts to EN 50012. integrated suppressor circuit in actuating electronics |

Technical data

| | | | |
|---|--------------|---------------|--|
| General | | | |
| Standards | | | IEC/EN 60947, VDE 0660, UL, CSA |
| Lifespan, mechanical | | | |
| AC operated | Operations | $\times 10^6$ | 10 |
| DC operated | Operations | $\times 10^6$ | 10 |
| Operating frequency, mechanical | | | |
| AC operated | Operations/h | | 5000 |
| DC operated | Operations/h | | 5000 |
| Climatic proofing | | | Damp heat, constant, to IEC 60068-2-3 Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature | | °C | |
| Open | | °C | -25 - +60 |
| Enclosed | | °C | - 25 - 40 |
| Storage | | °C | - 40 - 80 |
| Mounting position | | | |
| Mounting position | | |  |
| Mechanical shock resistance (IEC/EN 60068-2-27) | | | |
| Half-sinusoidal shock, 10 ms | | | |
| Main contacts | | | |
| N/O contact | | g | 10 |

| | | | |
|---|-------------------------------------|-----------------|--------------------------------------|
| Auxiliary contacts | | | |
| N/O contact | | g | 7 |
| N/C contact | | g | 5 |
| Degree of Protection | | | IP00 |
| Protection against direct contact when actuated from front (EN 50274) | | | Finger and back-of-hand proof |
| Terminal capacity main cable | | | |
| Solid | | mm ² | 1 x (2.5 - 16) 2 x (2.5 - 16) |
| Flexible with ferrule | | mm ² | 1 x (2.5 - 35) 2 x (2.5 - 25) |
| Stranded | | mm ² | 1 x (16 - 50) 2 x (16 - 35) |
| Solid or stranded | | AWG | 12 - 2 |
| Flat conductor | Lamellenzahl x Breite x Dicke | mm | 2 x (6 x 9 x 0.8) |
| Terminal capacity control circuit cables | | | |
| Solid | | mm ² | 1 x (0.75 - 4) 2 x (0.75 - 4) |
| Flexible with ferrule | | mm ² | 1 x (0.75 - 2.5) 2 x (0.75 - 2.5) |
| Solid or stranded | | AWG | 18 - 14 |
| Main cable connection screw/bolt | | | M6 |
| Tightening torque | | | Nm 3.3 |
| Control circuit cable connection screw/bolt | | | M3.5 |
| Tightening torque | | | Nm 1.2 |
| Tool | | | |
| Main cable | | | |
| Pozidriv screwdriver | | Size | 2 |
| Standard screwdriver | | mm | 0.8 x 5.5 1 x 6 |
| Control circuit cables | | | |
| Pozidriv screwdriver | | Size | 2 |
| Standard screwdriver | | mm | 0.8 x 5.5 1 x 6 |

Main conducting paths

| | | | |
|---------------------------------------|------------------|------|----------------------------------|
| Rated impulse withstand voltage | U _{imp} | V AC | 8000 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated insulation voltage | U _i | V AC | 690 |
| Rated operational voltage | U _e | V AC | 690 |
| Safe isolation to EN 61140 | | | |
| between coil and contacts | | V AC | 440 |
| between the contacts | | V AC | 440 |
| Making capacity (cos φ) | Up to 690 V | A | 560 According to IEC/EN 60947 |
| Breaking capacity | | | |
| 220 V 230 V | | A | 400 |
| 380 V 400 V | | A | 400 |
| 500 V | | A | 400 |
| 660 V 690 V | | A | 250 |
| Short-circuit rating | | | |
| Short-circuit protection maximum fuse | | | |
| Type "2" coordination | | | |
| 400 V | gG/gL 500 V | A | 63 |
| 690 V | gG/gL 690 V | A | 50 |
| Type "1" coordination | | | |
| 400 V | gG/gL 500 V | A | 125 |
| 690 V | gG/gL 690 V | A | 80 |

AC

| | | | |
|------|--|--|--|
| AC-1 | | | |
|------|--|--|--|

| | | | |
|---|----------------|-----|------|
| Rated operational current | | | |
| Conventional free air thermal current, 3 pole, 50 - 60 Hz | | | |
| Open | | | |
| at 40 °C | $I_{th} = I_e$ | A | 63 |
| at 50 °C | $I_{th} = I_e$ | A | 60 |
| at 60 °C | $I_{th} = I_e$ | A | 54 |
| enclosed | I_{th} | A | 50 |
| Conventional free air thermal current, 1 pole | | | |
| open | I_{th} | A | 162 |
| enclosed | I_{th} | A | 146 |
| AC-3 | | | |
| Rated operational current | | | |
| Open, 3-pole: 50 – 60 Hz | | | |
| 220 V 230 V | I_e | A | 40 |
| 240 V | I_e | A | 40 |
| 380 V 400 V | I_e | A | 40 |
| 415 V | I_e | A | 40 |
| 440V | I_e | A | 40 |
| 500 V | I_e | A | 40 |
| 660 V 690 V | I_e | A | 25 |
| Motor rating | P | kWh | |
| 220 V 230 V | P | kW | 12.5 |
| 240V | P | kW | 13.5 |
| 380 V 400 V | P | kW | 18.5 |
| 415 V | P | kW | 24 |
| 440 V | P | kW | 25 |
| 500 V | P | kW | 28 |
| 660 V 690 V | P | kW | 23 |

DC

| | | | |
|---------------------------------|-------|---|----|
| Rated operational current, open | | | |
| DC-1 | | | |
| 60 V | I_e | A | 63 |
| 110 V | I_e | A | 63 |
| 220 V | I_e | A | 63 |
| 440 V | I_e | A | 5 |
| DC-3 | | | |
| 60 V | I_e | A | 63 |
| 110 V | I_e | A | 63 |
| 220 V | I_e | A | 63 |
| 440 V | I_e | A | 5 |
| DC-5 | | | |
| 60 V | I_e | A | 63 |
| 110 V | I_e | A | 50 |
| 220 V | I_e | A | 38 |
| 440 V | I_e | A | 5 |

Current heat loss

| | | | |
|--------------------|--|----|----|
| 3-pole at I_{th} | | W | 16 |
| Impedance per pole | | mΩ | 1 |

Magnet systems

| | | | |
|------------------------------|----------|---------|------------|
| Voltage tolerance | | $x U_c$ | |
| AC operated 50 Hz | Pick-up | $x U_c$ | 0.8 - 1.1 |
| AC operated 50/60 Hz | | $x U_c$ | 0.85 - 1.1 |
| Drop-out voltage AC operated | Drop-out | $x U_c$ | 0.4 - 0.6 |

| | | | |
|--|----------|---------|--|
| DC operated | Pick-up | $x U_c$ | At least double-pulse bridge rectifier - 0.7 - 1.2 |
| DC operated | Drop-out | $x U_c$ | At least double-pulse bridge rectifier - 0.2 - 0.6 |
| Power consumption of the coil in a cold state and $1.0 \times U_c$ | | | |
| AC operated 50/60 Hz | Pick-up | VA | 150 |
| AC operated 50/60 Hz | Pick-up | W | 95 |
| AC operated 50/60 Hz | Sealing | VA | 16 |
| AC operated 50/60 Hz | Sealing | W | 5.3 4.3 |
| Notes on DC actuation | | | At least double-pulse bridge rectifier |
| DC operated | Pick-up | W | 24 |
| DC operated | Sealing | W | 0.5 |
| Duty factor | | % DF | 100 |
| Switching times at 100 % U_c (approximate values) | | | |
| Main contacts | | | |
| AC operated | | | |
| Closing delay | | ms | 12 - 18 |
| Opening delay | | ms | 8 - 13 |
| DC operated | | | |
| Notes on DC actuation | | | At least double-pulse bridge rectifier |
| Closing delay | | ms | 54 |
| Opening delay | | ms | 24 |
| Arcing time | | ms | 10 |
| Permissible residual current with actuation of A1 - A2 by the electronics (with 0 signal). | | mA | ≤ 1 |

Design verification as per IEC/EN 61439

| | | | |
|--|------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I_n | A | 63 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 5.5 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 16.5 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 1 |
| Heat dissipation capacity | P_{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 60 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | |
| 10.2.2.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.2.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| 10.2.2.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 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 Insulation properties | | | |
| 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. |

| | | |
|-------------------------------------|--|--|
| 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. |

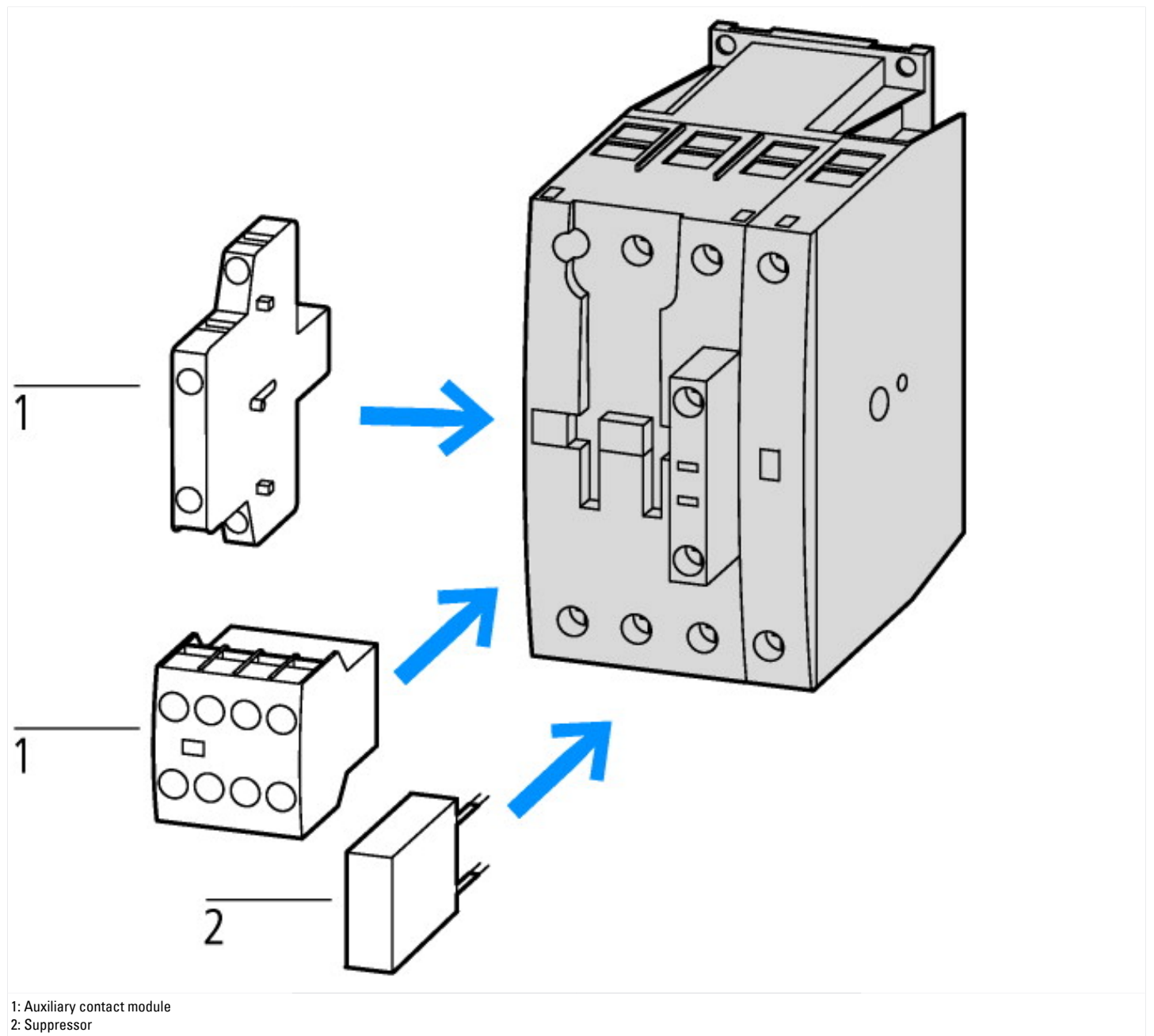
Technical data ETIM 5.0

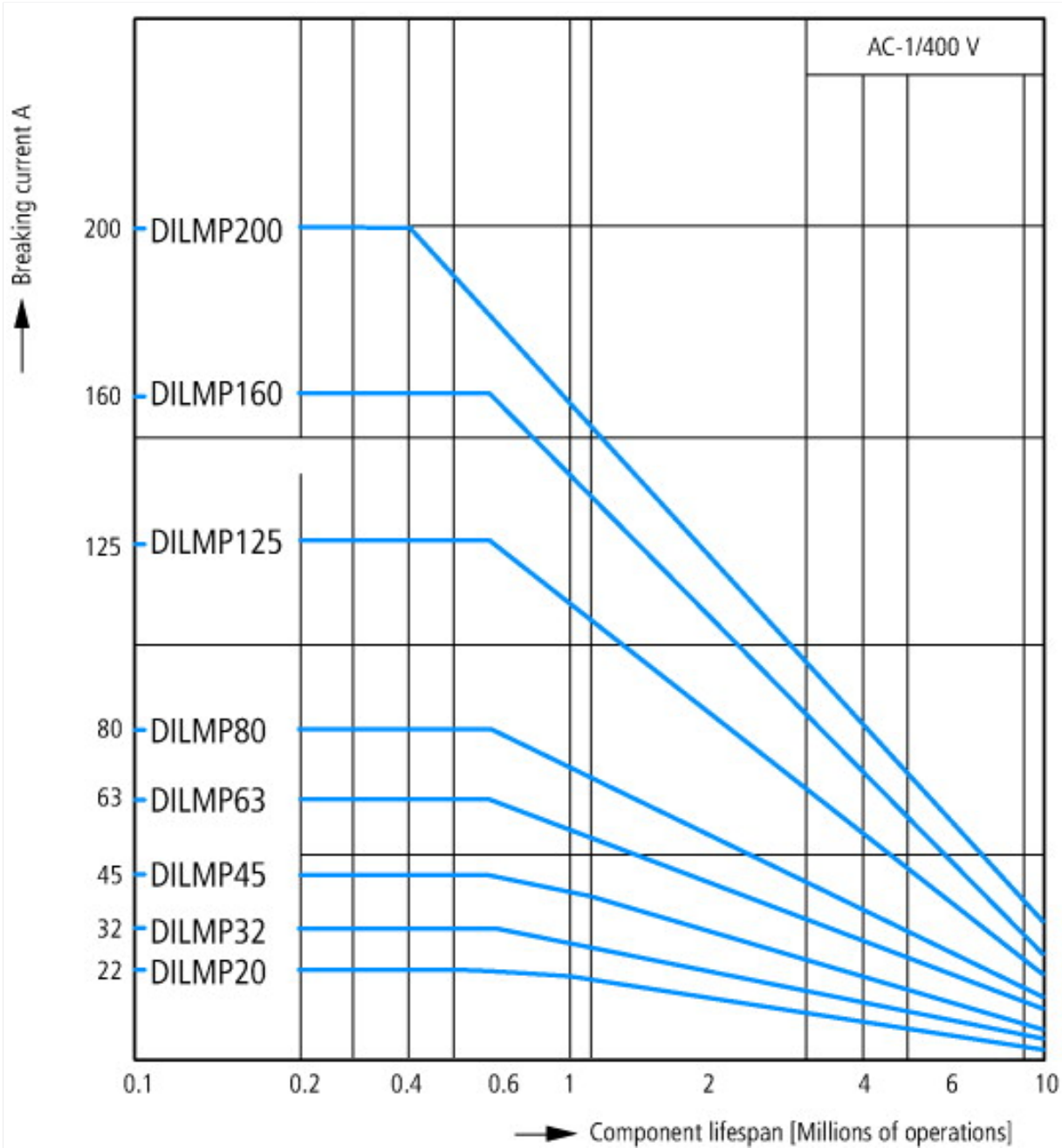
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|--|----|------------------|
| Low-voltage industrial components (EG000017) / Magnet contactor, AC-switching (EC000066) | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss8-27-37-10-03 [AAB718011]) | | |
| Rated control supply voltage Us at AC 50HZ | V | 0 - 0 |
| Rated control supply voltage Us at AC 60HZ | V | 0 - 0 |
| Rated control supply voltage Us at DC | V | 24 - 27 |
| Voltage type for actuating | | DC |
| Rated operation current Ie at AC-1, 400 V | A | 63 |
| Rated operation current Ie at AC-3, 400 V | A | 40 |
| Rated operation power at AC-3, 400 V | kW | 18.5 |
| Rated operation current Ie at AC-4, 400 V | A | 25 |
| Rated operation power Ie at AC-4, 400 V | kW | 12 |
| Modular version | | No |
| Number of auxiliary contacts as normally open contact | | 0 |
| Number of auxiliary contacts as normally closed contact | | 0 |
| Connection type main current circuit | | Screw connection |
| Number of normally closed contacts as main contact | | 0 |
| Number of main contacts as normally open contact | | 4 |

Approvals

| | | |
|--------------------------------------|--|---|
| Product Standards | | IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking |
| UL File No. | | E29096 |
| UL Category Control No. | | NLDX |
| CSA File No. | | 012528 |
| CSA Class No. | | 2411-03, 3211-04 |
| North America Certification | | UL listed, CSA certified |
| Specially designed for North America | | No |

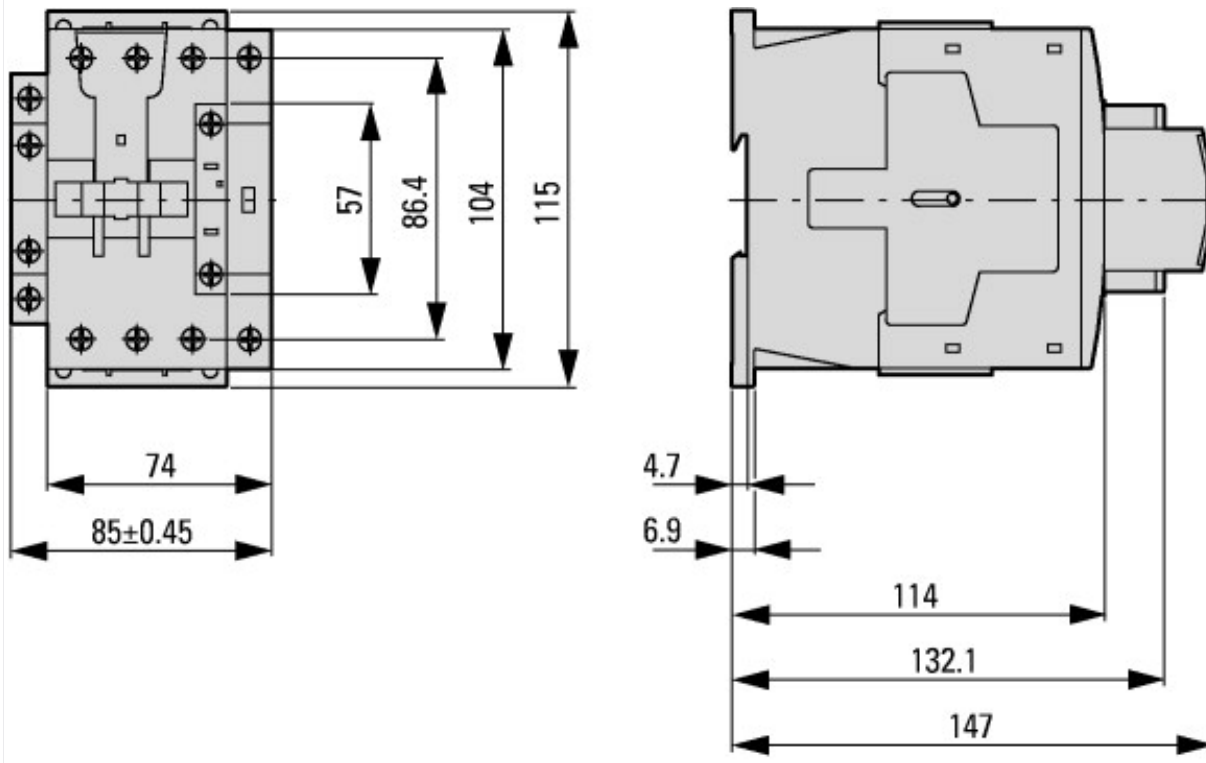
Characteristics



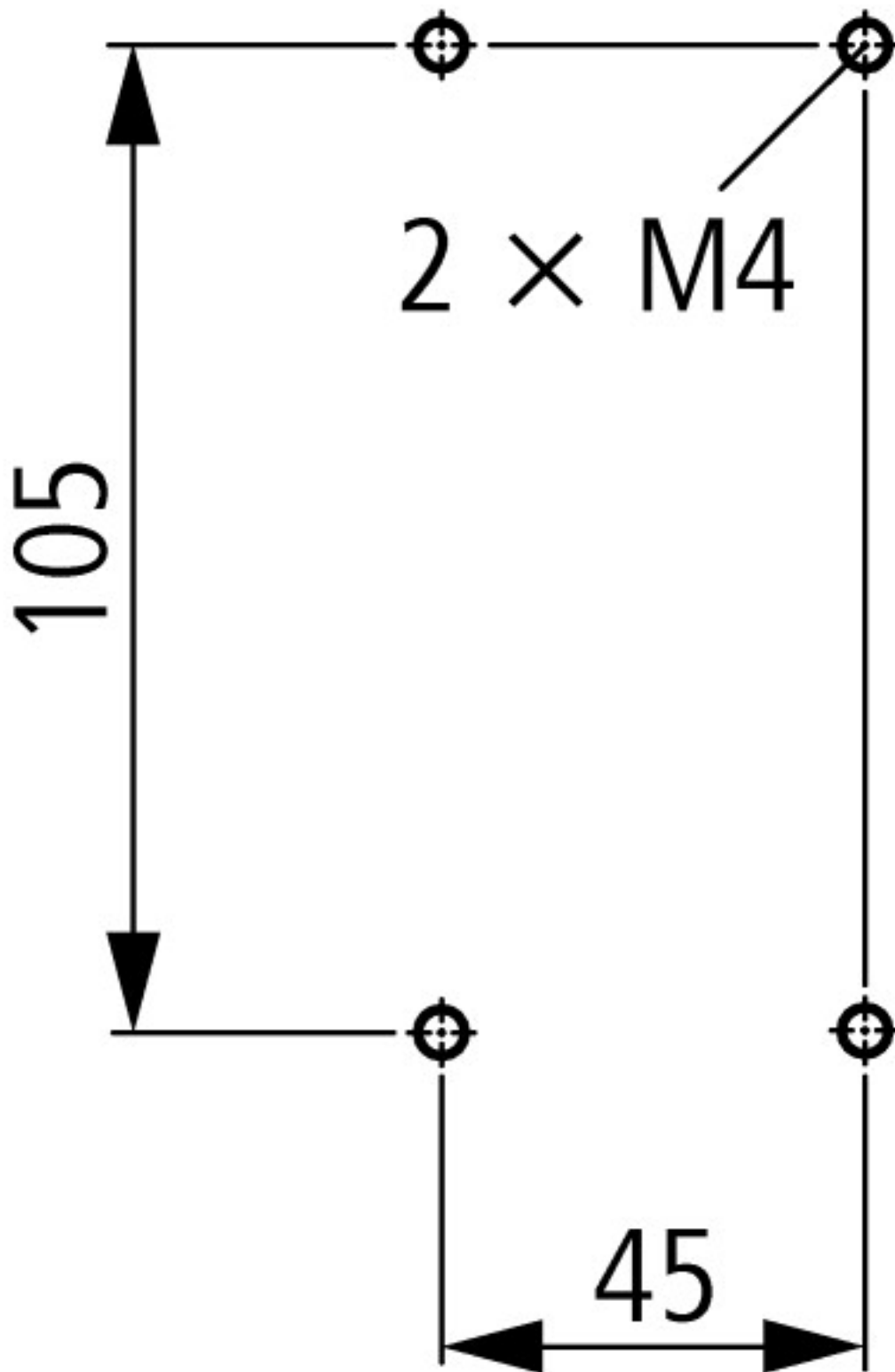


Operating characteristics
 Non inductive and slightly inductive loads
 Electrical characteristics
 Switch on: 1 × rated operational current
 Switch off: 1 × rated operational current
 Utilization category
 100 % AC-1
 Typical examples of application
 Electric heat

Dimensions



Contactors



distance at side to earthed parts: 6 mm

DILMP63
DILMP80

Additional product information (links)

IL03407049Z (AWA2100-2356) 4 pole Contactor

IL03407049Z (AWA2100-2356) 4 pole Contactor ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407049Z2012_01.pdf

UL/CSA: UL/CSA: Special Purpose Rating <http://de.ecat.moeller.net/flip-cat/?edition=HPLTE&startpage=5.85>

Switchgear of Power Factor Correction Systems http://www.moeller.net/binary/ver_techpapers/ver934en.pdf

X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely http://www.moeller.net/binary/ver_techpapers/ver938en.pdf

Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions http://www.moeller.net/binary/ver_techpapers/ver944en.pdf

Effect of the Cabel Capacitance of Long Control Cables on the Actuation of Contactors http://www.moeller.net/binary/ver_techpapers/ver949en.pdf

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|--|---|
| Motor starters and "Special Purpose Ratings" for the North American market | http://www.moeller.net/binary/ver_techpapers/ver953en.pdf |
| Switchgear for Luminaires | http://www.moeller.net/binary/ver_techpapers/ver955en.pdf |
| Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts | http://www.moeller.net/binary/ver_techpapers/ver956en.pdf |
| The Interaction of Contactors with PLCs | http://www.moeller.net/binary/ver_techpapers/ver957en.pdf |
| Busbar Component Adapters for modern Industrial control panels | http://www.moeller.net/binary/ver_techpapers/ver960en.pdf |