## MOELLER SERIES

## Safe switching of high currents

 DILM \& DILH contactors
## Safe switching of high currents DILM \& DILH contactors

With the DILM and DILH contactors from the Moeller series, Eaton offers the right contactor for every application, whether as a stand-alone device or as contactor combinations for use in distribution boards or switchgear. The devices stand out for their high level of contact reliability and their ability to withstand extreme environmental conditions.

The contactors are designed for the current range from 185 A to 3185 A. All DILM and DILH contactors are equipped with electronically controlled coil and thus offer low pick-up and holding power. Thanks to their compact size and long service life, Eaton's contactors make for a reliable component in any machine or system.

## Facts and figures

Thanks to their extensive approvals and certifications, all contactors of the DILM and DILH series are suitable for global use while also providing excellent performance at ambient temperatures from $-40^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$. They are designed for rated operating voltages up to $1,000 \mathrm{~V}$ and come with four wide-range coils covering the operating voltage range from 24 $\checkmark$ to 500 V AC/DC

## Various control options are available:

Via a separate, conventional PLC input or a separate low-power input. In the case of contactors with an electronic coil, overvoltage damping of the coil is already integrated.

## Approvals

- IEC
- CE
- CSA
- UL (listing)
- CCC
- Shipping classifications


All auxiliary contact modules feature positive-opening contacts to IEC/EN 60947-5-1 and mirror contacts to IEC/EN 60947-4-1.


## The right solution for each market segment

## Switchgear for the machine building industry

Depending on the market and industry, contactors are used in extreme operating conditions and various special applications, for example as tap changers for power transformers and as star-delta combinations in crane controls or climate control systems/chillers.
Eaton's contactors are both efficient and built to last. We offer the right solution for every application.


## Switchgear for data centers

The UPS systems and data center market requires devices with low pick-up and holding power combined with low operating power loss. The operating voltage is usually between 24 V and 48 V DC.

Eaton contactors equipped with an RDC48 wide-range coil have a control voltage range from 16.8 to 55.2 V DC and come with a processor-controlled power drive. This ensures energyefficient control as well as a low holding power of only a few watts.


## Switchgear for renewable power plants

The trend in the growing market for renewable power generation is towards greater energy efficiency, which can be achieved by increasing the operating voltage and current.

Eaton has developed a range of switchgear that meets the requirement for reliable on and off switching.


## DILM contactors Switch-on and switch-off capacity

Eaton DILM contactors are suitable for operating voltages up to $1,000 \mathrm{~V}$ and make for a reliable component in any application thanks to their long electrical and mechanical life.

## AC air contactors



| DILM185A | DILM250 | DILM400 |
| :--- | :--- | :--- |
| DILM225A | DILM300A | DILM500 |
| AC-3 185 A-225 A | AC-3 250 A-300 A | AC-3 400 A-500 A |
| AC-1 337 A-386 A | AC-1 430 A-490 A | AC-1612 A-800 A |

Our DILM vacuum contactors stand out for their high making and breaking capacity. They are particularly suitable for switching inductive loads as well as motors or pumps. Unlike air contactors, vacuum contactors do not require any gases for switching off and therefore save space during installation.

## AC vacuum contactors



| DILM580, DILM650, | DILM1000 | DILM1600 |
| :--- | :--- | :--- |
| DILM750, DILM820 | AC-3 1000 A | AC-3 1600 A |
| AC-3 580 A-820 A | AC-1 1225 A |  |
| AC-1 980 A -1225 A |  |  |

## DILH contactors tailored to the needs of your application

Our DILH contactors can be used for disconnecting networks, in inverter-controlled systems and for controlling inductive loads that are not switched on or off. They are also designed for switching loads such as heating or distribution systems and loads in accordance with utilization category AC-1 with a cos phi $>0.8$ as per IEC 60947-4-1.

## AC air contactors <br> AC vacuum contactors



## DILH600 <br> DILH800

AC-1 850 A - 1050 A


## DILH1200

DILH2000 DILH2200, DILH2600
AC-1 2450 A - 3185 A

## DILDC contactors

Built to last, our DILDC contactors for DC applications will save you both time and money. They are designed for the current range from 300 A to 600 A. The DILDC devices are capable of a higher number of operations and thus have a longer life span compared to similar devices.

## DC air contactors



| DILDC300 / DILDC400 | DILDC500 / DILDC600 |
| :--- | :--- |
| DC-1 300 A - 400 A | DC-1 500 A - 600 A |

## Why it pays to use Eaton contactors

Vacuum contactors with external varistor suppressor circuit already on board...
.to safely switch off inductive loads and protect against voltage peaks

Bespoke solutions to meet your specific requirements...
...make us your reliable partner when it comes to the creation of customized application solutions

Our contactors can be used at...
...ambient temperatures of $-40^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$

The electronically supported wide-range coils for the AC/DC voltage range...
...reduce the number of different models and simplifies project planning


The process-controlled drive...
...ensures lower pick-up \& holding power at high current levels and greater safety at high current levels


Each contactor is equipped with four auxiliary contacts (2 NO, 2 NC)...
...which reduces the costs for additional auxiliary contacts and simplifies installation


High level of technical performance...
...thanks to various contactor control options


Scope of application...
...specially tailored solutions for different market segments and standard usage categories

## DILH600/DILH800 contactors - rugged, durable and safe!

Our DILH high-current contactors can handle rated operating currents from 337 A to $3,135 \mathrm{~A}$ and have been designed for use in renewable energy applications and uninterruptible power supplies.
Our DILH600 and DILH800 contactors stand out for their high level of technical performance in specific applications. These include:

- The disconnection of local grids
- Inverter-controlled drives
- Controlling inductive loads
- Galvanic isolation of system parts if inverters/converters are used


Thanks to the electronically controlled power drive, the contactors have a lower pick-up and holding power, which reduces the need for control panel ventilation. As a result, the energy consumption and thus the application costs can be significantly reduced.
Whether you opt for the standard ("S") or the comfort version, we offer the right solution for every application. The comfort contactor stands out for its ability to be controlled in three different ways.

- The conventional way, for example via a mains switch,
- Directly from a PLC via a 24 V output, or
- Via low-power command devices, such as PCB relays, pilot devices or position switches

Our DILH contactors with wide-range coils are suitable for both $A C$ and $D C$ operation without having to exchange the coils. Simplified project planning due to the reduced number of types. Four wide-range coils cover the operating voltage range from 24 V to 500 V AC/DC. A suppressor circuit is already integrated to protect against voltage peaks, which reduces the time and costs required for installation.

## At a glance:

- For applications up to $1,000 \mathrm{~V}$
- Long mechanical and electrical life
- Suitable for global use thanks to approvals such as UL/ CSA, IEC, CCC, etc.
- Electronic drives with low pick-up and holding power
- The comfort version offers various control options - conventional control, directly from the PLC or via low-power inputs
- Standard models with assigned voltage ranges such as 220-240 V, $50 \mathrm{~Hz} / 60 \mathrm{~Hz}$.
- Ambient temperature range from $-40^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$
- Auxiliary contacts with positive-opening contacts and mirror contacts for NC contacts as standard

The high operating voltage tolerance of the DILH600 and DILH800 contactors ensures reliable and safe control, especially in unstable networks with large voltage fluctuations.


## DILM185A...M1600 contactors for high switching requirements



Simple, safe and cost-effective high-current switching

Our DILM series contactors for motor currents from 185 A to 1,600 A and motor ratings from 90 kW to 930 kW are available in the proven utilization categories AC-1, AC-2, $A C-3$ and $A C-4$. They are particularly suitable for frequent switching of highly inductive or capacitive loads.
All contactors of the comfort series come with wide-range coils as standard. The devices cover the operating voltage range from 24 V to 500 V across four intervals, regardless of whether AC or DC control is used.
The electronically controlled drives limit high inrush currents and require only low pick-up and holding power.
Our cost-effective standard contactors come with fixed voltage ranges such as $220-240 \mathrm{~V}, 50 \mathrm{~Hz} / 60 \mathrm{~Hz}$.

Our vacuum technology ensures a compact footprint even at high operating currents

Our contactors for motor current ranges of 580 A and above come with vacuum interrupters as standard. This means that the switch contact is housed inside a hermetically sealed switching tube.
A particular advantage of this technology is that no gases or arcs are generated when switching off. This allows for more compact installation of the contactors and eliminates the need for large distances to conductive parts. In addition, they also feature a high making and breaking capacity and a high short-circuit rating.
Their long mechanical and electrical life at nominal load conditions turns our contactors into a maintenance-free and reliable component for any machine or system.
All contactors are equipped with two lateral auxiliary contacts, consisting of 2 NO and 2 NC contacts, according to IEC/EN 60947-5-1 Annex $L$ in the case of positiveopening contacts and IEC/EN60947-4-1 Annex F in the case of mirror contacts.

## DILH1200...DILH2600 contactors for very high operating currents

 arrangement for balancing for a optimal power distribution

## Optimized distribution and switching of high currents

Our DILH vacuum contactors are designed for very high operating currents from $1,450 \mathrm{~A}$ to $3,185 \mathrm{~A}$. As a result of the growing use of renewable energy applications, especially wind turbines, the demand for switchgear with very high rated currents has increased. For this reason, several devices (or the circuits of the same device) are often connected in parallel to increase the current-carrying capacity.
However, when connected in parallel, the rated current of the individual contacts or circuits cannot be used equally.

The different contact resistance levels and current displacement effects result in an unbalanced current distribution, so that the total current-carrying capacity of the contacts that are connected in parallel needs to be reduced by an unbalance factor.
This is where our DILH2600 contactor comes in, which provides optimum balancing in power distribution systems where contacts or switchgear are connected in parallel.
In the case of the DILH2600, this is achieved by means of current transformers, which forcibly balance the individual circuits that are connected in parallel.

While such current balancing does not achieve complete a complete balance, it can significantly improve it. This means that the contactors can be used more efficiently.
Other advantages of our DILH vacuum contactors are their high rated making and breaking capacity and their compact design, which allows them to carry high rated operating currents of up to $3,185 \mathrm{~A}$ at a rated voltage of $1,000 \mathrm{~V}$. In addition, vacuum contactors have a long electrical and mechanical life. A further advantage is that they do not emit any gases when switching off, as is the case with air contactors, for example.

The external varistor - a suppressor circuit between the main contacts - that is already integrated in the basic version ensures safe disconnection of inductive loads and thus protects against voltage peaks.


This comparison of the pole currents clearly shows that current balancing significantly improves the utilization of the potential load of the switchgear.

# DILDC contactors Maintenance-free, reliable and cost-efficient. Easy switching of high DC currents. 

Our DC contactors for the current range from 300 A to 600 A can be used in various applications. Thanks to the proven hybrid technology, the devices have a long service life. Compared to similar DC contactors, the Eaton contactors are characterized by a significantly higher number of switching operations. This makes the DILDC contactors a maintenancefree and reliable component for any machine and system.


## Efficient and compact

- With up to 150,000 operations, the service is life of the DILDC contactors is six times longer than that of comparable devices
- There are no maintenance costs, which in turn reduces the operating costs
- Low contact wear due to the very short arcing time
- Easy on and off switching: either the conventional way or directly via a programmable logic controller (PLC)
- Compact, space-saving design
- Very short opening and closing times of the main contacts


## Reliable and flexible

- Wide operating voltage range from 110 to 250 V AC or 110 to 350 V DC
- International approvals: UL, CSA, CCC, GL, DNV
- Simple handling thanks to bidirectional switching (polarity-independent)
- Wide ambient temperature range from $-40^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$

Designed for industrial use

- End-to-end design
- Quick and easy installation using our proven connection technology


## Using a tried and tested technology the smart way

The proven hybrid technology of our DIL DC power contactors enables low wear and a long service life:

Two mechanical contacts, a quenching contact and a disconnecting contact, are connected in series. An insulatedgate bipolar transistor (IGBT) is used in parallel with the quenching contact. When switching off, the IGBT is switched on first. The quenching contact then opens mechanically. This causes the current to commutate to the IGBT and to be switched off electronically. After the power has been disconnected, galvanic isolation is achieved when the isolating contact opens.
The wide-range coil for DC and AC voltages turns the DIL DC power contactor into a maintenance-free and reliable component for any machine or system.

| Series | DILDC300 | DILDC400 | DILDC500 |
| :---: | :---: | :---: | :---: |
| Thermal rating lth | 300 A | 400 A | 500 A |
| Voltage type |  | 600 A |  |
| Rated operational voltage | DC (bidirectional) |  |  |
| Main contacts: number/type | 1,000 VDC |  |  |
| Auxiliary contacts: number/type | 2 NO |  |  |
| Operating frequency | 2 NO, 2 NC |  |  |
| Ambient temperature range | $100 / \mathrm{h}$ |  |  |
| Electrical service life | $-40^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ |  |  |
| Mechanical service life | $0.15 \times 106$ operations |  |  |
| Weight: $[\mathrm{kg}]$ | $1 \times 106$ operations |  |  |
| Utilization category: | 7.5 |  |  |



## Vacuum technology Design of a vacuum interrupter

## The main advantages of vacuum technology

- More compact size
- High rated operational currents
- For applications up to $1,000 \mathrm{~V}$
- Long mechanical and electrical life
- No emission of switching cases, unlike air contactors
- Significantly smaller distances to conductive parts



## Checklist for the correct selection of contactors

What information is required in order to select the right contactor?

Are any special standards or approvals required?

Which utilization category, i.e. AC-1, AC-2, or $\mathrm{AC}-3$ to $\mathrm{AC}-4$, is required?

- The characteristic ( $\mathrm{R}, \mathrm{L}, \mathrm{C}$ ) of the load to be switched or controlled determines the choice of switchgear for the application in question.

How high are the inrush and breaking currents that the contactor needs to be able to switch?

- The current and voltage loads when switching on and off are particularly important, especially the characteristic switching conditions, e.g. the ratio of inrush current to rated operating current

Rated operational power / rated operational current

- What are the operating conditions, such as the altitude, ambient temperature and the associated cooling requirements (duration and type)?
Operating voltage (coil voltage) and type of control
- Comfort version:
for AC / DC from 24 V ... 500 V with wide range coil,


## or

- S version:
with a fixed operating voltage of $220 \mathrm{~V}-240 \mathrm{~V}$, $50 \mathrm{~Hz} / 60 \mathrm{~Hz}$
- Should the contactor be controlled directly or via a PLC?

What type of auxiliary contacts are required?

## A comprehensive range of accessories

We offer a comprehensive range of basic accessories to support a wide variety of applications.


## Data and dimensions at a glance

## DILM standard devices

| Rated operational current | Max. rated operational power three-phase motors $50-60 \mathrm{~Hz}$ |  |  |  |  |  |  |  | Conventional thermal current | Contact diagram | Part no. Article no |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AC-3 | AC-3 |  |  |  | AC-4 |  |  |  | 3 -pole |  |  |
| 380 V | 220 V | 380 V | 660 V | 1000 | 220 V | 380 V | 660 V | 1000 | at $40^{\circ} \mathrm{C}$ |  |  |
| 400 V | 230 V | 400 V | 690 V | V | 230 V | 400 V | 690 V | V |  |  |  |
| $\mathrm{I}_{\text {e }}$ | P | P | P |  | P | P | P |  | $\mathrm{I}_{\mathrm{th}}=\mathrm{I}_{\mathrm{e}}$ |  |  |
| A | kW | kW | kW |  | kW | kW | kW |  | A |  |  |

DILM complete devices
Screw connection, 3-pole


| 185 | 55 | 90 | 140 | 108 | 41 | 75 | 102 | 77 | 275 |  | $\begin{aligned} & \text { DILM185A/22(RAC240) } \\ & 139537 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 225 | 70 | 110 | 150 | 108 | 51 | 90 | 110 | 77 | 315 |  | DILM225A/22(RAC240) ${ }^{11}$ 139547 |



| 250 | 75 | 132 | 170 | 62 | 110 | 137 | 430 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 300 | 90 | 160 | 170 | 75 | 132 | 137 | 490 |

DILM250-S/22(220-240V50/60HZ) 274190
DILM300A-S/22(220-240V50/60HZ) 139559

DILM400-S/22(220-240V50/60HZ)


## DILM comfort devices

|  | Rated operational current AC-3 | Max. rated operational power three-phase motors $50-60 \mathrm{~Hz}$ |  |  |  |  |  |  |  | Conventional thermal current AC-1 open at $40^{\circ} \mathrm{C}$ | Contact diagram | Part no. <br> Article no. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AC-3 |  |  |  | AC-4 |  |  |  |  |  |  |
|  | $\begin{aligned} & 380 \mathrm{~V} \\ & 400 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 220 \mathrm{~V} \\ & 230 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 380 \mathrm{~V} \\ & 400 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 660 \mathrm{~V} \\ & 690 \mathrm{~V} \end{aligned}$ | 1000 V | $\begin{aligned} & 220 \mathrm{~V} \\ & 230 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 380 \mathrm{~V} \\ & 400 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 660 \mathrm{~V} \\ & 690 \mathrm{~V} \end{aligned}$ | 1000 V |  |  |  |
|  | 1. | P | P | P | P | P | P | P | P | $\mathrm{l}_{\text {th }}=\mathrm{l}_{\text {d }}$ |  |  |
|  | A | kW | kW | kW | kW | kW | kW | kW | kW | A |  |  |
|  | DILM comfort contactors |  |  |  |  |  |  |  |  |  |  |  |
|  | 250 | 75 | 132 | 170 | 108 | 62 | 110 | 137 | 108 | 430 |  | DILM250/22(RA250) ${ }^{2 /}$ 208201 |
|  | 300 | 90 | 160 | 170 | 132 | 75 | 132 | 137 | 108 | 490 |  | $\underset{\substack{\text { DILM } \\ 1395600 / 22(R A 250)^{2}}}{ }$ |
|  | 400 | 125 | 212 | 300 | 132 | 92 | 160 | 240 | 132 | 612 |  | DILM400/22(RA250) ${ }^{3}$ 208209 |
|  | 500 | 155 | 265 | 300 | 132 | 112 | 200 | 240 | 132 | 800 |  | DILM500/22(RA250) ${ }^{3 /}$ 208213 |
|  | 580 | 185 | 315 | 560 | 600 | 143 | 250 | 440 | 509 | 980 |  | $\begin{aligned} & \hline \text { DILM580/22(RA250) } \\ & \text { 208216 } \end{aligned}$ |
|  | 650 | 205 | 355 | 630 | 600 | 161 | 280 | 494 | 509 | 1041 |  | $\begin{aligned} & \hline \text { DILM650/22(RA250) } \\ & 208219 \end{aligned}$ |
|  | 750 | 240 | 400 | 720 | 800 | 181 | 315 | 556 | 678 | 1102 |  | DILM750/22(RA250) ${ }^{3}$ 208222 |
|  | 820 | 260 | 450 | 750 | 800 | 209 | 355 | 633 | 678 | 1225 |  | DILM820/22(RA250) ${ }^{3 /}$ 208225 |
|  | 1000 | 315 | 560 | 1000 | 1100 | 260 | 450 | 780 | 1000 | 1225 |  | $\begin{aligned} & \begin{array}{l} \text { DILM1000/22(RA250) } \\ 267214 \end{array} \end{aligned}$ |
|  | 1600 | 500 | 900 | 1600 | 1770 | 430 | 750 | 1300 | 1650 | 2200 |  | $\begin{aligned} & \text { DILM1600/22(RAW250) } \\ & \text { 106727 } \end{aligned}$ |

## DILH comfort devices

|  | Conventional <br> thermal current <br> AC-1 <br> open <br> at $40^{\circ} \mathrm{C}$ | Contact diagram <br> Article no. |
| :--- | :--- | :--- |

## Technical data

|  |  | DILM185A | DILM225A | DILM250 | DILM300A | DILM400 | DILM500 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| General information |  |  |  |  |  |  |  |
| Standards |  | IEC/EN 60947, VDE 0660, UL, CSA |  |  |  |  |  |
| Mechanical service life |  |  |  |  |  |  |  |
| AC-operated Operations | $\times 10^{6}$ | 10 | 10 | 10 | 10 | 7 | 7 |
| DC-operated Operations | $\times 10^{6}$ | 10 | 10 | 10 | 10 | 7 | 7 |
| Mechanical operating frequency |  |  |  |  |  |  |  |
| AC-operated Operations/h |  | 3000 | 3000 | 3000 | 3000 | 2000 | 2000 |
| DC-operated Operations/h |  | 3000 | 3000 | 3000 | 3000 | 2000 | 2000 |
| Climate resistance |  | Constant damp heat, as defined in IEC 60068-2-78 Cyclic damp heat, as defined in IEC 60068-2-30 |  |  |  |  |  |
| Ambient temperature range |  |  |  |  |  |  |  |
| open | ${ }^{\circ} \mathrm{C}$ | -40 to +70 |  |  |  |  |  |
| enclosed | ${ }^{\circ} \mathrm{C}$ | -40 to +70 |  |  |  |  |  |
| during storage | ${ }^{\circ} \mathrm{C}$ | -40 to +80 |  |  |  |  |  |
| Mounting position, AC- and DC-operated |  |  |  |  |  |  |  |
| Mechanical shock resistance (IEC/EN 60068-2-27), half-sinusoidal shock for 10 ms |  |  |  |  |  |  |  |
| Main contacts |  |  |  |  |  |  |  |
| NO contact | g | 10 | 10 | 10 | 10 | 10 | 10 |
| Auxiliary contacts |  |  |  |  |  |  |  |
| NO contact | g | 10 | 10 | 10 | 10 | 10 | 10 |
| NC contact | g | 8 | 8 | 8 | 8 | 8 | 8 |
| Degree of protection |  | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO |
| Touch guard in case of vertical operation from the front (EN 50274) |  | Finger- and back-of-hand safe, with terminal cover or terminal block |  |  |  |  |  |
| Weight |  |  |  |  |  |  |  |
| Weight | kg | 3.5 | 3.5 | 7.2 | 7.1 | 8.6 | 8.6 |
| Terminal capacities, main cable (Cu cable) |  |  |  |  |  |  |  |
| Flexible with cable lug | $\mathrm{mm}^{2}$ | 50-185 | 50-185 | 50-240 | 50-240 | 50-240 | 50-240 |
| Stranded with cable lug | $\mathrm{mm}^{2}$ | 50-185 | 70-185 | 70-240 | 70-240 | 70-240 | 70-240 |
| Solid or stranded | AWG | 1/0-350 MCM | 2/0-250 MCM | 2/0-500 | 2/0-500 N | 2/0-500 MCM | 2/0-500 MCM |
| Mounted using flat cable terminals or cable terminal blocks, see terminal capacity for cable terminal blocks |  |  |  |  |  |  |  |
| Busbar Width | mm | 32 | 32 | 25 | 25 | 25 | 30 |
| Connection screw for main cable |  | M10 | M10 | M10 | M10 | M10 | M10 |
| Tightening torque | Nm | 24 | 24 | 24 | 24 | 24 | 24 |
| Terminal capacities, control circuit cable (Cu cable) |  |  |  |  |  |  |  |
| Solid | $\mathrm{mm}^{2}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ | $\begin{aligned} & 1 \times 10.75 \\ & 2 \times 10.75 \end{aligned}$ | $\begin{aligned} & 1 \times 10.75- \\ & 2 \times 10.75- \end{aligned}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ |
| Flexible with ferrule | $\mathrm{mm}^{2}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ | $\begin{aligned} & 1 \times 10.75 \\ & 2 \times 10.75 \end{aligned}$ | $\begin{aligned} & 1 \times 10.75- \\ & 2 \times 10.75- \end{aligned}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ | $\begin{aligned} & 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ |
| Solid or stranded | AWG | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 |
| Stripping length | mm | 10 | 10 | 10 | 10 | 10 | 10 |
| Connection screw for control circuit cable |  | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 |
| Tightening torque | Nm | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| Tool |  |  |  |  |  |  |  |
| Main cable |  |  |  |  |  |  |  |
| Wrench size | mm | 16 | 16 | 16 | 16 | 16 | 16 |
| Control circuit cable |  |  |  |  |  |  |  |
| Pozidriv screwdriver | Size | 2 | 2 | 2 | 2 | 2 | 2 |


| DILM580 | DILM650 | DILM750 | DILM820 | DILM1000 | DILM1600 | DILH600 | DILH800 | DILH1200 | DILH1400 | DILH2000 | DILH2200 | DILH2600 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IEC/EN 60947, VDE 0660, UL, CSA |  |  |  |  |  |  |  | IEC/EN 60947, VDE 0660, UL, CSA, CCC |  |  |  |  |
| 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 5 | 5 | 5 | 5 |
| 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 5 | 5 | 5 | 5 |
| 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Constant damp heat, as defined in IEC 60068-2-78 Cyclic damp heat, as defined in IEC 60068-2-30 |  |  |  |  |  |  |  |  |  |  |  |  |
| -40 to +70 |  |  |  |  |  |  |  |  |  |  |  |  |
| -40 to +70 |  |  |  |  |  |  |  |  |  |  |  |  |
| -40 to +80 |  |  |  |  |  |  |  |  |  |  |  |  |

$\qquad$

| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO | IPOO |
| Finger- and back-of-hand safe, with terminal cover or terminal block |  |  |  |  | - |  |  | - | - | - | - | - |
| 16.2 | 16.2 | 16.5 | 16.5 | 17.3 | 32 | 9.5 | 9.5 | 14.4 | 14.4 | 32 | 32 | 35.2 |
| 50-240 | 50-240 | 50-240 | 50-240 | 50-240 | - | 50-240 | 50-240 | - | - | - | - | - |
| 70-240 | 70-240 | 70-240 | 70-240 | 70-240 | - | 70-240 | 70-240 | - | - | - | - | - |
| $\begin{aligned} & \text { 2/0 - } 500 \\ & \text { MCM } \end{aligned}$ | $\begin{aligned} & \text { 2/0-500 } \\ & \text { MCM } \end{aligned}$ | $\begin{aligned} & \text { 2/0-500 } \\ & \text { MCM } \end{aligned}$ | $\begin{aligned} & \text { 2/0-500 } \\ & \text { MCM } \end{aligned}$ | $\begin{aligned} & \text { 2/0-500 } \\ & \text { MCM } \end{aligned}$ | - | - | - | - | - | - | - | - |
|  |  |  |  | - | - | - | - | - | - | - | - | - |


| 50 | 50 | 60 | 60 | 60 | 100 | 50 | 50 | 80 | 80 | 100 | 100 | 100 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| M10 | M10 | M12 | M12 | M12 | M12 | M10 | M10 | M12 | M12 | M12 | M12 | M12 |
| 24 | 24 | 35 | 35 | 35 | 35 | 24 | 24 | 35 | 35 | 35 | 35 | 35 |


| $\begin{aligned} & \hline 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline 1 \times(0.75-2.5) \\ & 2 \times(0.75-2.5) \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 | 18-14 |
| 10 | 10 | 10 | 10 | 101 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 | M3.5 |
| 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 16 | 16 | 18 | 18 | 18 | 18 | 16 | 16 | 18 | 18 | 18 | 18 | 18 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

## Dimensions

DILM185A - DILM225A
DILM250 - DILM500


DILM580 - DILM1000


| Part no. | b3 | d1 | f |
| :--- | :--- | :--- | :--- |
| DILM580 | 296 | 45 | 13.5 |
| DILM650 | 296 | 45 | 13.5 |
| DILM750 | 296 | 45 | 13.5 |
| DILM820 | 296 | 45 | 13.5 |
| DILM1000 | 296 | 45 | 13.5 |

(1) DILM820-XHI...-SI
(2) DILM820-XHI-SA

DILH600/DILH800
(1) DILH800-XHI ... - SI


AC-1 contactors greater than 1,000 A
DILH1200/DILH1400


| DILM1600 |
| :--- |
| DILH2000 |
| DILH2200 |



DILH2600


Eaton's electrical business is a global leader with deep regional application expertise in power distribution and circuit protection; power quality, back-up power and energy storage; control and automation; life safety and security; structural solutions; and harsh and hazardous environment solutions. Through end-to-end services, channels and an integrated digital platform and insights Eaton is powering what matters across industries and around the world, helping customers solve their most critical electrical power management challenges.

Eaton's mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. For more information, visit Eaton.com.

The products, information and prices contained in this document are subject to change. The same is true for any errors or omissions. Only the order confirmation and the technical documentation provided by Eaton are binding. Images and illustrations are indicative only and do not guarantee any particular design or functionality. Their use in any form must be approved in advance by Eaton. The same applies to trademarks (especially to Eaton, Moeller, CutlerHammer, Cooper and Bussmann). Eaton's terms of sale, as published on Eaton's websites and included with order confirmations received from Eaton, apply.

