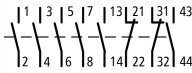


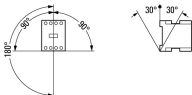
**Contactors, 4 pole, 500 A, 2 N/O, 2 NC, 220 V 50 Hz, 230 V 50 Hz, AC operation, Screw terminals**

**Part no.** DILP500/22(220-230V50HZ)  
**Catalog No.** 207463  
**Alternate Catalog No.** XTCFA500N22F

### Delivery program

|                                                           |                |   |                                                                                      |
|-----------------------------------------------------------|----------------|---|--------------------------------------------------------------------------------------|
| Product range                                             |                |   | Contactors                                                                           |
| Application                                               |                |   | Contactors for 4 pole electric consumers                                             |
| Subrange                                                  |                |   | Contactors larger than 200 A, 4 pole                                                 |
| Utilization category                                      |                |   | AC-1: Non-inductive or slightly inductive loads, resistance furnaces                 |
| Connection technique                                      |                |   | Screw terminals                                                                      |
| Number of poles                                           |                |   | 4 pole                                                                               |
| <b>Rated operational current</b>                          |                |   |                                                                                      |
| AC-1                                                      |                |   |                                                                                      |
| Conventional free air thermal current, 3 pole, 50 - 60 Hz |                |   |                                                                                      |
| Open                                                      |                |   |                                                                                      |
| at 40 °C                                                  | $I_{th} = I_e$ | A | 500                                                                                  |
| at 55 °C                                                  | $I_{th} = I_e$ | A | 470                                                                                  |
| at 60 °C                                                  | $I_{th} = I_e$ | A | 400                                                                                  |
| Conventional free air thermal current, 1 pole             |                |   |                                                                                      |
| open                                                      | $I_{th}$       | A | 1400                                                                                 |
| <b>Contacts</b>                                           |                |   |                                                                                      |
| N/O = Normally open                                       |                |   | 2 N/O                                                                                |
| N/C = Normally closed                                     |                |   | 2 NC                                                                                 |
| Contact sequence                                          |                |   |  |
| For use with                                              |                |   | DILP800-XHI...                                                                       |
| Actuating voltage                                         |                |   | 220 V 50 Hz<br>230 V 50 Hz                                                           |
| Voltage AC/DC                                             |                |   | AC operation                                                                         |

### Technical data

|                                                                       |              |               |                                                                                      |
|-----------------------------------------------------------------------|--------------|---------------|--------------------------------------------------------------------------------------|
| <b>General</b>                                                        |              |               |                                                                                      |
| Standards                                                             |              |               | IEC/EN 60947, VDE 0660                                                               |
| Lifespan, mechanical                                                  |              |               |                                                                                      |
| AC operated                                                           | Operations   | $\times 10^6$ | 5                                                                                    |
| Operating frequency, mechanical                                       |              |               |                                                                                      |
| AC operated                                                           | Operations/h |               | 3600                                                                                 |
| Climatic proofing                                                     |              |               | Damp heat, cyclic, to IEC 60068-2-30                                                 |
| Ambient temperature                                                   |              |               |                                                                                      |
| Open                                                                  |              | °C            | -40 - +70                                                                            |
| Mounting position                                                     |              |               |                                                                                      |
| Mounting position                                                     |              |               |  |
| Mechanical shock resistance (IEC/EN 60068-2-27)                       |              |               |                                                                                      |
| Half-sinusoidal shock, 15 ms                                          |              |               |                                                                                      |
| Main contacts                                                         |              |               |                                                                                      |
| N/O contact                                                           |              | g             | 10                                                                                   |
| Degree of Protection                                                  |              |               | IP00                                                                                 |
| Protection against direct contact when actuated from front (EN 50274) |              |               | Finger and back-of-hand proof with terminal shroud                                   |

|                                             |  |                 |                                  |
|---------------------------------------------|--|-----------------|----------------------------------|
| Terminal capacity main cable                |  |                 |                                  |
| Solid                                       |  | mm <sup>2</sup> | 1 x (70 - 300)<br>2 x (35 - 185) |
| Stranded                                    |  | mm <sup>2</sup> | 1 x (70 - 300)<br>2 x (35 - 185) |
| Terminal capacity control circuit cables    |  |                 |                                  |
| Solid                                       |  | mm <sup>2</sup> | 2 x (0.5 - 2.5)                  |
| Main cable connection screw/bolt            |  |                 |                                  |
|                                             |  |                 | M10                              |
| Tightening torque                           |  |                 |                                  |
|                                             |  | Nm              | 12 - 16                          |
| Control circuit cable connection screw/bolt |  |                 |                                  |
|                                             |  |                 | M3.5                             |
| Tightening torque                           |  |                 |                                  |
|                                             |  | Nm              | 1.2                              |
| Tool                                        |  |                 |                                  |
| Control circuit cables                      |  |                 |                                  |
| Pozidriv screwdriver                        |  | Size            | 2                                |

### 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 | 1000                              |
| Rated operational voltage             | $U_e$       | V AC | 1000                              |
| Safe isolation to EN 61140            |             |      |                                   |
| between coil and contacts             |             | V AC | 1000                              |
| between the contacts                  |             | V AC | 690                               |
| Making capacity (cos φ)               | Up to 690 V | A    | 5000<br>According to IEC/EN 60947 |
| Breaking capacity                     |             |      |                                   |
| 220 V 230 V                           |             | A    | 5000                              |
| 380 V 400 V                           |             | A    | 5000                              |
| 500 V                                 |             | A    | 5000                              |
| 660 V 690 V                           |             | A    | 5000                              |
| Short-circuit rating                  |             |      |                                   |
| Short-circuit protection maximum fuse |             |      |                                   |
| Type "2" coordination                 |             |      |                                   |
| 400 V                                 | gG/gL 500 V | A    | 630                               |
| Type "1" coordination                 |             |      |                                   |
| 400 V                                 | gG/gL 500 V | A    | 630                               |

### 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   | 500  |
| at 55 °C                                                  | $I_{th} = I_e$ | A   | 470  |
| at 60 °C                                                  | $I_{th} = I_e$ | A   | 400  |
| Conventional free air thermal current, 1 pole             |                |     |      |
| open                                                      | $I_{th}$       | A   | 1400 |
| AC-3                                                      |                |     |      |
| Rated operational current                                 |                |     |      |
| Open, 3-pole: 50 – 60 Hz                                  |                |     |      |
| 220 V 230 V                                               | $I_e$          | A   | 400  |
| 240 V                                                     | $I_e$          | A   | 400  |
| 415 V                                                     | $I_e$          | A   | 400  |
| 440V                                                      | $I_e$          | A   | 400  |
| 500 V                                                     | $I_e$          | A   | 370  |
| 660 V 690 V                                               | $I_e$          | A   | 370  |
| 1000 V                                                    | $I_e$          | A   | 155  |
| Motor rating                                              | P              | kWh |      |

|             |   |    |     |
|-------------|---|----|-----|
| 220 V 230 V | P | kW | 110 |
| 240V        | P | kW | 110 |
| 380 V 400 V | P | kW | 200 |
| 415 V       | P | kW | 200 |
| 440 V       | P | kW | 200 |
| 660 V 690 V | P | kW | 355 |
| 1000 V      | P | kW | 220 |

## DC

|                                 |       |   |     |
|---------------------------------|-------|---|-----|
| Rated operational current, open |       |   |     |
| DC-1                            |       |   |     |
| 60 V                            | $I_e$ | A | 370 |
| 110 V                           | $I_e$ | A | 370 |
| 220 V                           | $I_e$ | A | 370 |
| 440 V                           | $I_e$ | A | 370 |
| DC-3                            |       |   |     |
| 60 V                            | $I_e$ | A | 450 |
| 110 V                           | $I_e$ | A | 450 |
| 220 V                           | $I_e$ | A | 450 |
| 440 V                           | $I_e$ | A | 450 |
| DC-5                            |       |   |     |
| 60 V                            | $I_e$ | A | 450 |
| 110 V                           | $I_e$ | A | 450 |
| 220 V                           | $I_e$ | A | 450 |
| 440 V                           | $I_e$ | A | 450 |

## Current heat loss

|                     |  |   |     |
|---------------------|--|---|-----|
| 4 pole, at $I_{th}$ |  | W | 145 |
|---------------------|--|---|-----|

## Magnet systems

|                                                                    |         |         |            |
|--------------------------------------------------------------------|---------|---------|------------|
| Voltage tolerance                                                  |         |         |            |
| AC operated 50 Hz                                                  | Pick-up | $x U_c$ | 0.85 - 1.1 |
| Power consumption of the coil in a cold state and $1.0 \times U_S$ |         |         |            |
| AC operated 50/60 Hz                                               | Pick-up | VA      | 3500       |
| AC operated 50/60 Hz                                               | Sealing | VA      | 140        |
| AC operated 50/60 Hz                                               | Sealing | W       | 60         |
| Duty factor                                                        |         | % DF    | 100        |
| Changeover time at 100 % $U_S$ (recommended value)                 |         |         |            |
| Main contacts                                                      |         |         |            |
| AC operated                                                        |         |         |            |
| Closing delay                                                      |         | ms      | 30 - 60    |
| Opening delay                                                      |         | ms      | 10 - 20    |

## Design verification as per IEC/EN 61439

|                                                                            |            |    |                                            |
|----------------------------------------------------------------------------|------------|----|--------------------------------------------|
| Technical data for design verification                                     |            |    |                                            |
| Rated operational current for specified heat dissipation                   | $I_n$      | A  | 500                                        |
| Heat dissipation per pole, current-dependent                               | $P_{vid}$  | W  | 36.25                                      |
| Equipment heat dissipation, current-dependent                              | $P_{vid}$  | W  | 0                                          |
| Static heat dissipation, non-current-dependent                             | $P_{vs}$   | W  | 60                                         |
| Heat dissipation capacity                                                  | $P_{diss}$ | W  | 0                                          |
| Operating ambient temperature min.                                         |            | °C | -40                                        |
| Operating ambient temperature max.                                         |            | °C | 70                                         |
| IEC/EN 61439 design verification                                           |            |    |                                            |
| 10.2 Strength of materials and parts                                       |            |    |                                            |
| 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 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.                         |

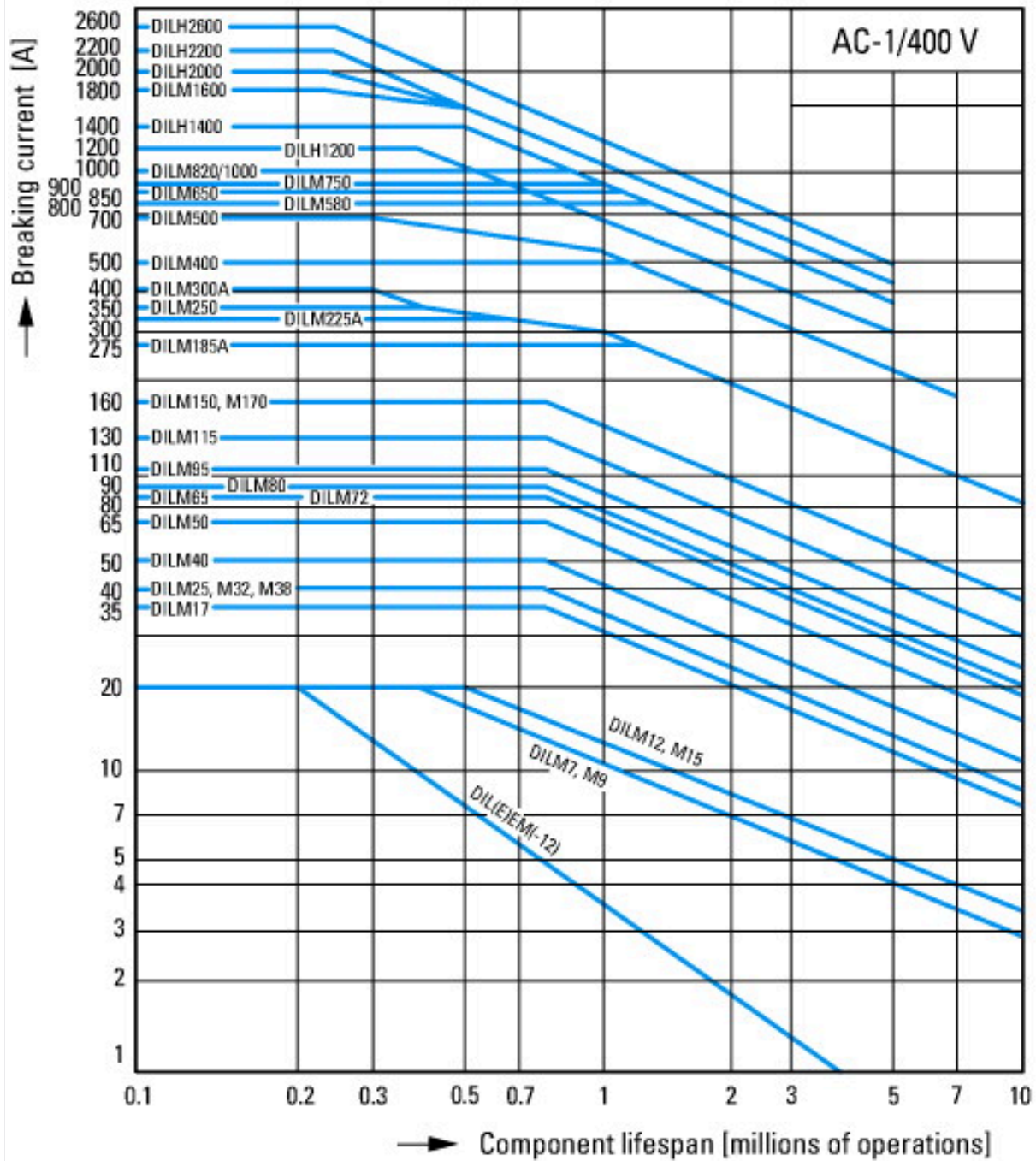
## Technical data ETIM 7.0

|                                                                                                                                                                                       |    |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------|
| Low-voltage industrial components (EG000017) / Power contactor, AC switching (EC000066)                                                                                               |    |                 |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss10.0.1-27-37-10-03 [AAB718015]) |    |                 |
| Rated control supply voltage Us at AC 50HZ                                                                                                                                            | V  | 220 - 230       |
| Rated control supply voltage Us at AC 60HZ                                                                                                                                            | V  | 0 - 0           |
| Rated control supply voltage Us at DC                                                                                                                                                 | V  | 0 - 0           |
| Voltage type for actuating                                                                                                                                                            |    | AC              |
| Rated operation current Ie at AC-1, 400 V                                                                                                                                             | A  | 500             |
| Rated operation current Ie at AC-3, 400 V                                                                                                                                             | A  | 400             |
| Rated operation power at AC-3, 400 V                                                                                                                                                  | kW | 200             |
| Rated operation current Ie at AC-4, 400 V                                                                                                                                             | A  | 0               |
| Rated operation power at AC-4, 400 V                                                                                                                                                  | kW | 0               |
| Rated operation power NEMA                                                                                                                                                            | kW | 0               |
| Modular version                                                                                                                                                                       |    | No              |
| Number of auxiliary contacts as normally open contact                                                                                                                                 |    | 2               |
| Number of auxiliary contacts as normally closed contact                                                                                                                               |    | 2               |
| Type of electrical connection of main circuit                                                                                                                                         |    | Rail connection |
| Number of normally closed contacts as main contact                                                                                                                                    |    | 0               |
| Number of main contacts as normally open contact                                                                                                                                      |    | 4               |

## Approvals

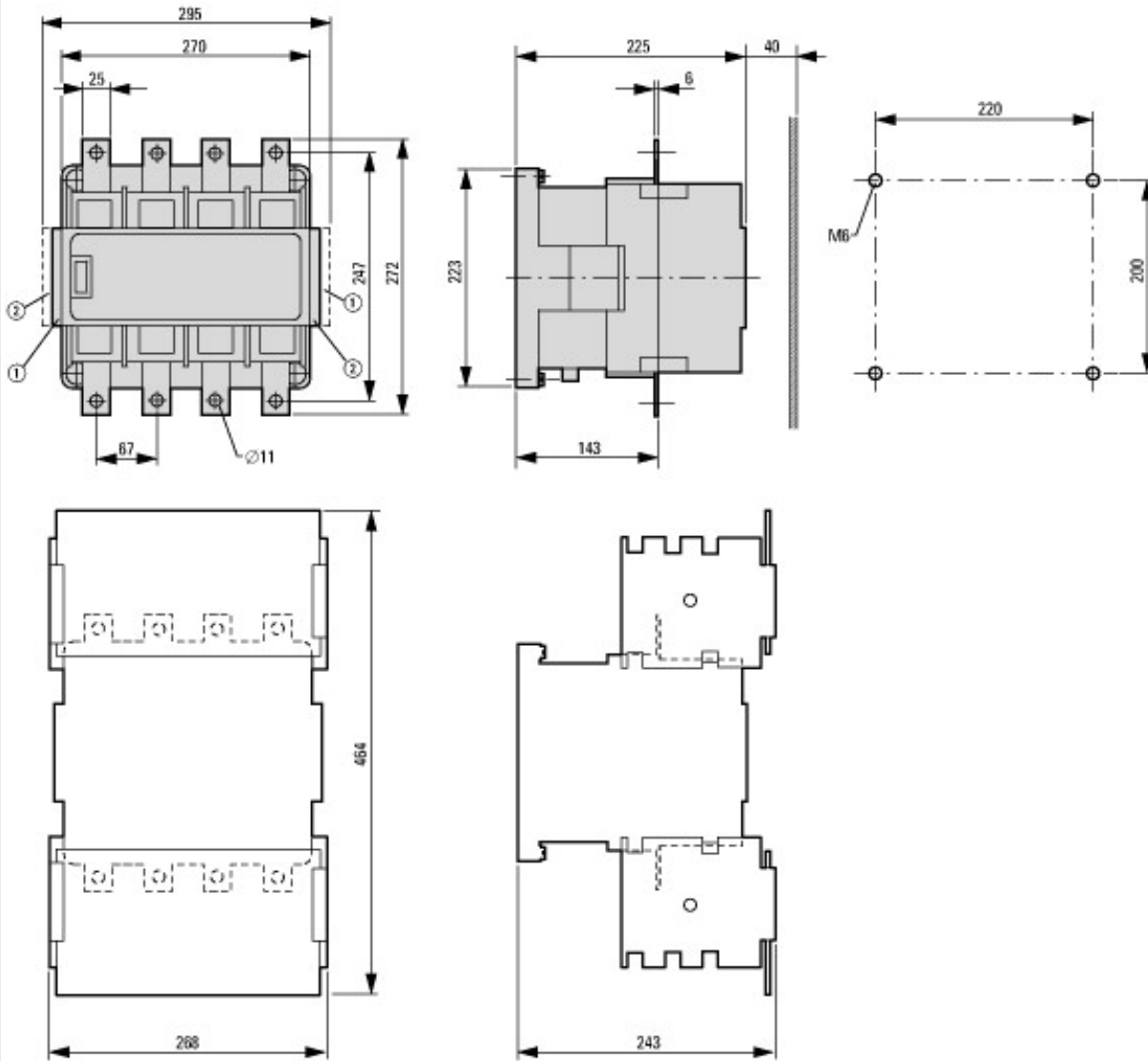
|                                      |  |                                                           |
|--------------------------------------|--|-----------------------------------------------------------|
| Product Standards                    |  | IEC/EN 60947-4-1; UL 508; CSA-C22.2 No. 14-05; CE marking |
| UL File No.                          |  | E29096                                                    |
| UL Category Control No.              |  | NLDX                                                      |
| CSA File No.                         |  | LR72236                                                   |
| North America Certification          |  | UL listed, CSA certified                                  |
| Specially designed for North America |  | No                                                        |

# Characteristics



Switching conditions for 4 pole, non-motor loads  
 Operating characteristics  
 Non inductive and slightly inductive loads  
 Electrical characteristics  
 Switch on: 1 x rated operational current  
 Switch off: 1 x rated operational current  
 Utilization category  
 100 % AC-1  
 Typical examples of application  
 Electric heat

## Dimensions



- ① DILP800-XHI-SI
- ② DILP800-XHI11-SA

DILP500 + DILP800-XHB

## Assets (links)

### Declaration of CE Conformity

00003036

### Instruction Leaflets

IL03407021Z2018\_05

## Additional product information (links)

### IL03407021Z (AWA2100-1679) 4 pole contactors > 160 A

IL03407021Z (AWA2100-1679) 4 pole contactors > 160 A [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407021Z2018\\_05.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407021Z2018_05.pdf)

Motor starters and "Special Purpose Ratings" for the North American market [http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct\\_3258146.pdf](http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf)

Switchgear of Power Factor Correction Systems [http://www.moeller.net/binary/ver\\_techpapers/ver934en.pdf](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](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](http://www.moeller.net/binary/ver_techpapers/ver944en.pdf)

Effect of the Cable Capacitance of Long Control Cables on the Actuation of Contactors [http://www.moeller.net/binary/ver\\_techpapers/ver949en.pdf](http://www.moeller.net/binary/ver_techpapers/ver949en.pdf)

Switchgear for Luminaires [http://www.moeller.net/binary/ver\\_techpapers/ver955en.pdf](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](http://www.moeller.net/binary/ver_techpapers/ver956en.pdf)

The Interaction of Contactors with PLCs [http://www.moeller.net/binary/ver\\_techpapers/ver957en.pdf](http://www.moeller.net/binary/ver_techpapers/ver957en.pdf)

