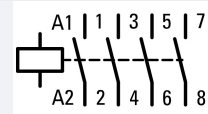




Contactor, 4 pole, 80 A, 230 V 50 Hz, 240 V 60 Hz, AC operation

Part no. **DILMP80(230V50HZ,240V60HZ)**  
 Catalog No. **109884**  
 Alternate Catalog No. **XTCF080D00F**  
 EL-Nummer (Norway) **4130407**

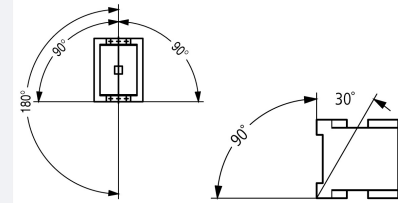
### Delivery program

|   |                |   |  |
|---|----------------|---|--|
| 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<br>NAC-3: Normal AC induction motors: starting, switch off during running |
| 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 |                |   |  |
| at 40 °C  | $I_{th} = I_e$ | A | 80   |
| at 50 °C  | $I_{th} = I_e$ | A | 76   |
| at 55 °C  | $I_{th} = I_e$ | A | 73   |
| at 60 °C  | $I_{th} = I_e$ | A | 69   |
| Contact sequence  |                |   |   |
| For use with  |                |   | DILM150-XHI(A)(V)...<br>or<br>DILM1000-XHI11-SA<br>or<br>DILM1000-XHI(V)11-SI  |
| Actuating voltage   |                |   | 230 V 50 Hz, 240 V 60 Hz   |
| Voltage AC/DC   |                |   | AC operation   |
| Connection to SmartWire-DT                                |                |   | no   |
| <b>Instructions</b>                                       |                |   | Contacts to EN 50 012.   |

### 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<br>Damp heat, cyclic, to IEC 60068-2-30 |              |               |                                 |
| Ambient temperature   |              |               |                                 |
| 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  |
| Altitude  | m                                   |    | Max. 2000   |
| Protection against direct contact when actuated from front (EN 50274) |                                     |    | Finger and back-of-hand proof   |
| Stripping length  | mm                                  |    | 10  |
| Terminal capacity main cable  |                                     |    |   |
| Solid   | mm <sup>2</sup>                     |    | 1 x (2.5 - 16)<br>2 x (2.5 - 16)  |
| Flexible with ferrule   | mm <sup>2</sup>                     |    | 1 x (2.5 - 35)<br>2 x (2.5 - 25)  |
| Stranded  | mm <sup>2</sup>                     |    | 1 x (16 - 50)<br>2 x (16 - 35)  |
| Solid or stranded   | AWG                                 |    | 12 - 2  |
| Flat conductor  | Lamellenzahl<br>x Breite x<br>Dicke | mm | 2 x (6 x 9 x 0.8)   |
| Terminal screw  |                                     |    | M6  |
| Tightening torque   | Nm                                  |    | 3.3   |
| Stripping length  | mm                                  |    | 10  |
| Terminal capacity control circuit cables                              |                                     |    |   |
| Solid   | mm <sup>2</sup>                     |    | 1 x (0.75 - 4)<br>2 x (0.75 - 4)  |
| Flexible with ferrule   | mm <sup>2</sup>                     |    | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5)  |
| Solid or stranded   | AWG                                 |    | 18 - 14   |
| Stripping length  | mm                                  |    | 10  |
| Terminal screw  |                                     |    | M3.5  |
| Tightening torque   | Nm                                  |    | 1.2   |
| Tool  |                                     |    |   |
| Main cable  |                                     |    |   |
| Pozidriv screwdriver  | Size                                |    | 2   |
| Standard screwdriver  | mm                                  |    | 0.8 x 5.5<br>1 x 6  |
| Control circuit cables  |                                     |    |   |
| Pozidriv screwdriver  | Size                                |    | 2   |
| Standard screwdriver  | mm                                  |    | 0.8 x 5.5<br>1 x 6  |

### Main conducting paths

|                                       |                  |      |                                  |
|---------------------------------------|------------------|------|----------------------------------|
| Rated impulse withstand voltage       | U <sub>imp</sub> | V AC | 8000                             |
| Overvoltage category/pollution degree |                  |      | III/3                            |
| Rated insulation voltage              | U <sub>i</sub>   | V AC | 690                              |
| Rated operational voltage             | U <sub>e</sub>   | 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    | 700<br>According to IEC/EN 60947 |
| Breaking capacity                     |                  |      |                                  |

|                                       |             |   |     |
|---------------------------------------|-------------|---|-----|
| 220 V 230 V                           |             | A | 500 |
| 380 V 400 V                           |             | A | 500 |
| 500 V                                 |             | A | 500 |
| 660 V 690 V                           |             | A | 296 |
| Short-circuit rating                  |             |   |     |
| Short-circuit protection maximum fuse |             |   |     |
| Type "2" coordination                 |             |   |     |
| 400 V                                 | gG/gL 500 V | A | 80  |
| 690 V                                 | gG/gL 690 V | A | 63  |
| Type "1" coordination                 |             |   |     |
| 400 V                                 | gG/gL 500 V | A | 160 |
| 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   | 80   |
| at 50 °C  | $I_{th} = I_e$ | A   | 76   |
| at 55 °C  | $I_{th} = I_e$ | A   | 73   |
| at 60 °C  | $I_{th} = I_e$ | A   | 69   |
| enclosed  | $I_{th}$       | A   | 64   |
| Conventional free air thermal current, 1 pole             |                |     |  |
| open  | $I_{th}$       | A   | 207  |
| enclosed  | $I_{th}$       | A   | 186  |
| Motor rating  |                |     |  |
| 220/230 V   | P              | kWh | 29   |
| 240 V   | P              | kW  | 32   |
| 380/400 V   | P              | kW  | 50   |
| 415 V   | P              | kW  | 55   |
| 440 V   | P              | kW  | 58   |
| 500 V   | P              | kW  | 66   |
| 690 V   | P              | kW  | 87   |
| AC-3  |                |     |  |
| Rated operational current                                 |                |     |  |
| Open, 3-pole: 50 – 60 Hz                                  |                |     |  |
| Notes   |                |     | At maximum permissible ambient temperature (open.) |
| 220 V 230 V   | $I_e$          | A   | 50   |
| 240 V   | $I_e$          | A   | 50   |
| 380 V 400 V   | $I_e$          | A   | 50   |
| 415 V   | $I_e$          | A   | 50   |
| 440V  | $I_e$          | A   | 50   |
| 500 V   | $I_e$          | A   | 50   |
| 660 V 690 V   | $I_e$          | A   | 32   |
| Motor rating  |                |     |  |
| 220 V 230 V   | P              | kWh | 15.5   |
| 240V  | P              | kW  | 17   |
| 380 V 400 V   | P              | kW  | 22   |
| 415 V   | P              | kW  | 30   |
| 440 V   | P              | kW  | 32   |
| 500 V   | P              | kW  | 36   |
| 660 V 690 V   | P              | kW  | 30   |

## DC

|                                 |  |  |  |
|---------------------------------|--|--|--|
| Rated operational current, open |  |  |  |
| DC-1                            |  |  |  |

|       |       |   |    |
|-------|-------|---|----|
| 60 V  | $I_e$ | A | 80 |
| 110 V | $I_e$ | A | 80 |
| 220 V | $I_e$ | A | 80 |

### Current heat loss

|                           |  |    |      |
|---------------------------|--|----|------|
| 3 pole, at $I_{th}$ (60°) |  | W  | 25.8 |
| Impedance per pole        |  | mΩ | 1.9  |

### Magnet systems

|  |          |         |            |
|--|----------|---------|------------|
| Voltage tolerance  |          |         |            |
| 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  |
| Power consumption of the coil in a cold state and $1.0 \times U_S$                         |          |         |            |
| 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       | 4.1        |
| Duty factor  |          | % DF    | 100        |
| Changeover time at 100 % $U_S$ (recommended value)   |          |         |            |
| Main contacts  |          |         |            |
| AC operated  |          |         |            |
| Closing delay  |          | ms      | 12 - 18    |
| Opening delay  |          | ms      | 8 - 13     |
| Permissible residual current with actuation of A1 - A2 by the electronics (with 0 signal). |          | mA      | $\leq 1$   |

### Rating data for approved types

|                              |  |    |                 |
|------------------------------|--|----|-----------------|
| Switching capacity           |  |    |                 |
| Maximum motor rating         |  |    |                 |
| Three-phase                  |  |    |                 |
| 200 V<br>208 V               |  | HP | 15              |
| 230 V<br>240 V               |  | HP | 20              |
| 460 V<br>480 V               |  | HP | 40              |
| 575 V<br>600 V               |  | HP | 50              |
| Single-phase                 |  |    |                 |
| 115 V<br>120 V               |  | HP | 3               |
| 230 V<br>240 V               |  | HP | 10              |
| General use                  |  | A  | 80              |
| Short Circuit Current Rating |  |    |                 |
| Basic Rating                 |  |    |                 |
| SCCR                         |  | kA | 10              |
| max. Fuse                    |  | A  | 250             |
| max. CB                      |  | A  | 250             |
| 480 V High Fault             |  |    |                 |
| SCCR (fuse)                  |  | kA | 30/100          |
| max. Fuse                    |  | A  | 250/150 Class J |
| SCCR (CB)                    |  | kA | 65              |
| max. CB                      |  | A  | 100             |
| 600 V High Fault             |  |    |                 |
| SCCR (fuse)                  |  | kA | 30/100          |
| max. Fuse                    |  | A  | 250/150 Class J |
| SCCR (CB)                    |  | kA | 30              |
| max. CB                      |  | A  | 250             |
| Special Purpose Ratings      |  |    |                 |

|                                      |    |  |      |
|--------------------------------------|----|--|------|
| Electrical Discharge Lamps (Ballast) |    |  |      |
| 480V 60Hz 3phase, 277V 60Hz 1phase   | A  |  | 79   |
| 600V 60Hz 3phase, 347V 60Hz 1phase   | A  |  | 79   |
| Incandescent Lamps (Tungsten)        |    |  |      |
| 480V 60Hz 3phase, 277V 60Hz 1phase   | A  |  | 74   |
| 600V 60Hz 3phase, 347V 60Hz 1phase   | A  |  | 74   |
| Resistance Air Heating               |    |  |      |
| 480V 60Hz 3phase, 277V 60Hz 1phase   | A  |  | 79   |
| 600V 60Hz 3phase, 347V 60Hz 1phase   | A  |  | 79   |
| Elevator Control                     |    |  |      |
| 200V 60Hz 3phase                     | HP |  | 10   |
| 200V 60Hz 3phase                     | A  |  | 32.2 |
| 240V 60Hz 3phase                     | HP |  | 15   |
| 240V 60Hz 3phase                     | A  |  | 42   |
| 480V 60Hz 3phase                     | HP |  | 30   |
| 480V 60Hz 3phase                     | A  |  | 40   |
| 600V 60Hz 3phase                     | HP |  | 40   |
| 600V 60Hz 3phase                     | A  |  | 41   |

## Design verification as per IEC/EN 61439

|  |            |    |  |
|--|------------|----|--|
| Technical data for design verification   |            |    |  |
| Rated operational current for specified heat dissipation   | $I_n$      | A  | 80   |
| Heat dissipation per pole, current-dependent   | $P_{vid}$  | W  | 8.6  |
| Equipment heat dissipation, current-dependent  | $P_{vid}$  | W  | 25.8   |
| Static heat dissipation, non-current-dependent   | $P_{vs}$   | W  | 4.1  |
| 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  |            |    | Meets the product standard's requirements.   |
| 10.2.3 Verification of thermal stability of enclosures   |            |    |  |
| 10.2.3.1 Verification of resistance of insulating materials to normal heat   |            |    | Meets the product standard's requirements.   |
| 10.2.3.2 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |            |    | 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  | 230 - 230        |
| Rated control supply voltage Us at AC 60HZ  | V  | 240 - 240        |
| 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  | 80               |
| Rated operation current Ie at AC-3, 400 V   | A  | 50               |
| Rated operation power at AC-3, 400 V  | kW | 22               |
| Rated operation current Ie at AC-4, 400 V   | A  | 40               |
| Rated operation power at AC-4, 400 V  | kW | 20               |
| Rated operation power NEMA  | kW | 29.8             |
| Modular version   |    | No               |
| Number of auxiliary contacts as normally open contact   |    | 0                |
| Number of auxiliary contacts as normally closed contact   |    | 0                |
| Type of electrical connection of main 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 60947-4-1; CSA - C22.2 No. 60947-4-1-14; 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

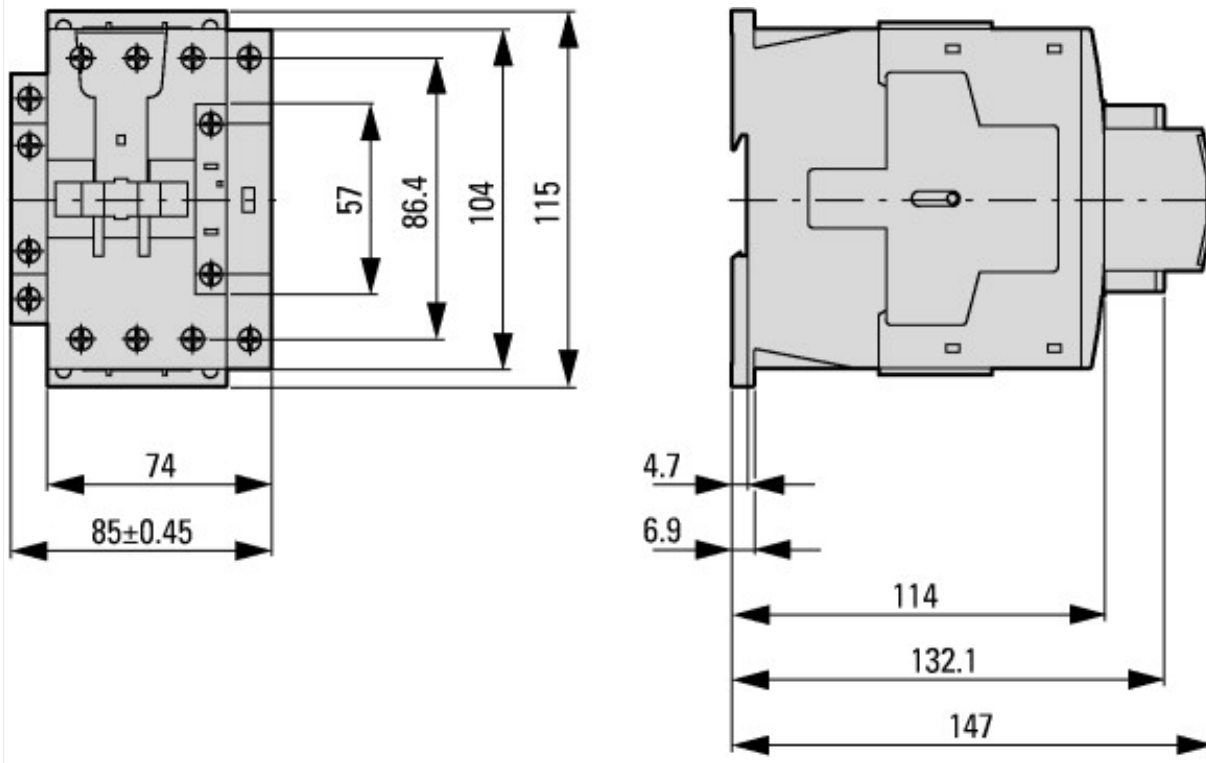




Switching conditions for 4 pole, non-motor loads  
 Operating characteristics  
 Non inductive and slightly inductive loads  
 Electrical characteristics  
 Switch on: 1 x rated operational current  
 Switch off: 1 x rated operational current  
 Utilization category  
 100 % AC-1  
 Typical examples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



## Dimensions



Contactors



distance at side to earthed parts: 6 mm

DILMP63  
DILMP80

## Assets (links)

### Instruction Leaflets

IL03407049Z2018\_05