



199289

DILM32-11(230V50HZ,240V60HZ)-PI

[Overview](#)[Specifications](#)[Resources](#)

## DELIVERY PROGRAM

[Delivery program](#)

Product range

Contactors

[Technical data](#)

Application

Contactors for Motors

[Design verification as per IEC/EN 61439](#)

Subrange

Contactors up to 95 A, 3 pole

[Technical data ETIM 7.0](#)

Utilization category

AC-1: Non-inductive or slightly inductive loads, resistance furnaces

AC-3/AC-3e: Normal AC induction motors: Starting, switching off while running

AC-4: Normal AC induction motors: starting, plugging, reversing, inching

[Approvals](#)[Characteristics](#)[Dimensions](#)

Notes

Also suitable for motors with efficiency class IE3.

Connection technique  
Push in terminals

Number of poles  
3 pole

### Rated operational current

AC-3  
Notes  
At maximum permissible ambient temperature  
(open.)  
Also tested according to AC-3e.

AC-3  
380 V 400 V [ $I_e$ ]  
32 A

AC-1  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
Open  
at 40 °C [ $I_{th} = I_e$ ]  
45 A

AC-1  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
enclosed [ $I_{th}$ ]  
36 A

AC-1  
Conventional free air thermal current, 1 pole  
open [ $I_{th}$ ]  
100 A

AC-1  
Conventional free air thermal current, 1 pole  
enclosed [ $I_{th}$ ]  
90 A

### Max. rating for three-phase motors, 50 - 60 Hz

AC-3  
220 V 230 V [ $P$ ]  
10 kW

AC-3

380 V 400 V [P]  
15 kW

AC-3  
660 V 690 V [P]  
17 kW

AC-4  
220 V 230 V [P]  
4 kW

AC-4  
380 V 400 V [P]  
7 kW

AC-4  
660 V 690 V [P]  
10 kW

## Contacts

N/O = Normally open  
1 N/O

N/C = Normally closed  
1 NC

Contact sequence



## Instructions

Contacts to EN 50 012.  
with mirror contact.

Can be combined with auxiliary contact  
DILM32-XH...-P  
DILA-XH(V)...-P

Actuating voltage  
230 V 50 Hz, 240 V 60 Hz

Voltage AC/DC  
AC operation

Connection to SmartWire-DT

no

Frame size

2

## TECHNICAL DATA

### General

Standards

IEC/EN 60947, VDE 0660, UL, CSA

Operating frequency, mechanical  
AC operated [Operations/h]  
5000

Climatic proofing

Damp heat, constant, to IEC 60068-2-78

Damp heat, cyclic, to IEC 60068-2-30

Ambient temperature

Open

-25 - +60 °C

Ambient temperature

Enclosed

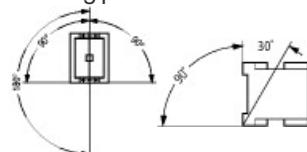
- 25 - 40 °C

Ambient temperature

Storage

- 40 - 80 °C

Mounting position



Mechanical shock resistance (IEC/EN 60068-2-27)

Half-sinusoidal shock, 10 ms

Main contacts

N/O contact

10 g

Mechanical shock resistance (IEC/EN 60068-2-27)

Half-sinusoidal shock, 10 ms

Auxiliary contacts

N/O contact

7 g

Mechanical shock resistance (IEC/EN 60068-2-27)

Half-sinusoidal shock, 10 ms

Auxiliary contacts

N/C contact

5 g

Mechanical shock resistance (IEC/EN 60068-2-27)

when tabletop-mounted

Half-sinusoidal shock, 10 ms

Main contacts

N/O contact

6.9 g

Mechanical shock resistance (IEC/EN 60068-2-27)

when tabletop-mounted

Half-sinusoidal shock, 10 ms

Auxiliary contacts

N/O contact

5.3 g

Mechanical shock resistance (IEC/EN 60068-2-27)

when tabletop-mounted

Half-sinusoidal shock, 10 ms

Auxiliary contacts

N/C contact

3.5 g

Degree of Protection

IP20

Protection against direct contact when actuated

from front (EN 50274)

Finger and back-of-hand proof

Altitude

Max. 2000 m

Weight

AC operated

0.44 kg

Spring-loaded terminal connection

Tool

Standard screw driver  
3.0 x 0.5

Push-in terminals  
Terminal capacity main cable  
Solid  
1 x (1 - 6)  
2 x (1 - 6) mm<sup>2</sup>

Push-in terminals  
Terminal capacity main cable  
flexible  
1 x (1 - 10)  
2 x (1 - 6) mm<sup>2</sup>

Push-in terminals  
Terminal capacity main cable  
flexible with ferrules  
1 x (1 - 6)  
2 x (1 - 4) mm<sup>2</sup>

Push-in terminals  
Terminal capacity main cable  
flexible with ultrasonic welded busbar end  
1 x (1 - 10)  
2 x (1 - 6) mm<sup>2</sup>

Push-in terminals  
Terminal capacity main cable  
flexible with uninsulated wire end ferrule  
1 x (1 - 6)  
2 x (1 - 6) mm<sup>2</sup>

Push-in terminals  
Terminal capacity main cable  
Solid or stranded  
18 - 8 AWG

Push-in terminals  
Terminal capacity main cable  
Stripping length  
12 mm

Push-in terminals  
Terminal capacity main cable  
Standard screw driver  
3.0 x 0.5

Push-in terminals  
Terminal capacity control circuit cables  
Solid  
1 x (0,5 - 2,5)

2 x (0,5 - 2,5) mm<sup>2</sup>

Push-in terminals  
Terminal capacity control circuit cables  
flexible  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Push-in terminals  
Terminal capacity control circuit cables  
flexible with ferrules  
1 x (0,5 - 1,5)  
2 x (0,5 - 1,5) mm<sup>2</sup>

Push-in terminals  
Terminal capacity control circuit cables  
flexible with ultrasonic welded busbar end  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Push-in terminals  
Terminal capacity control circuit cables  
flexible with uninsulated wire end ferrule  
1 x (0,5 - 2,5)  
2 x (0,5 - 2,5) mm<sup>2</sup>

Push-in terminals  
Terminal capacity control circuit cables  
Solid or stranded  
20 - 14 AWG

Push-in terminals  
Terminal capacity control circuit cables  
Stripping length  
10 mm

Push-in terminals  
Tool  
Standard screw driver  
3.0 x 0.5 mm

## Main conducting paths

Rated impulse withstand voltage [U<sub>imp</sub>]  
8000 V AC

Overvoltage category/pollution degree  
III/3

Rated insulation voltage [U]  
690 V AC

Rated operational voltage [U<sub>e</sub>]  
690 V AC

Safe isolation to EN 61140  
between coil and contacts  
400 V AC

Safe isolation to EN 61140  
between the contacts  
400 V AC

Making capacity (p.f. to IEC/EN 60947) [Up to 690  
V]  
384 A

Breaking capacity  
220 V 230 V  
320 A

Breaking capacity  
380 V 400 V  
320 A

Breaking capacity  
500 V  
320 A

Breaking capacity  
660 V 690 V  
180 A

Short-circuit rating  
Short-circuit protection maximum fuse  
Type "2" coordination  
400 V [gG/gL 500 V]  
50 A

Short-circuit rating  
Short-circuit protection maximum fuse  
Type "2" coordination  
690 V [gG/gL 690 V]  
35 A

Short-circuit rating  
Short-circuit protection maximum fuse

Type "1" coordination  
400 V [gG/gL 500 V]  
125 A

Short-circuit rating  
Short-circuit protection maximum fuse  
Type "1" coordination  
690 V [gG/gL 690 V]  
63 A

## AC

AC-1  
Rated operational current  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
Open  
at 40 °C [ $I_{th} = I_e$ ]  
45 A

AC-1  
Rated operational current  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
Open  
at 50 °C [ $I_{th} = I_e$ ]  
43 A

AC-1  
Rated operational current  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
Open  
at 55 °C [ $I_{th} = I_e$ ]  
42 A

AC-1  
Rated operational current  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
Open  
at 60 °C [ $I_{th} = I_e$ ]  
40 A

AC-1  
Rated operational current  
Conventional free air thermal current, 3 pole, 50 -  
60 Hz  
enclosed [ $I_{th}$ ]  
36 A

AC-1  
Rated operational current

Conventional free air thermal current, 1 pole  
open [ $I_{th}$ ]  
100 A

AC-1  
Rated operational current  
Conventional free air thermal current, 1 pole  
enclosed [ $I_{th}$ ]  
90 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
Notes  
At maximum permissible ambient temperature  
(open.)  
Also tested according to AC-3e.

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
220 V 230 V [ $I_e$ ]  
32 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
240 V [ $I_e$ ]  
32 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
380 V 400 V [ $I_e$ ]  
32 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
415 V [ $I_e$ ]  
32 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
440V [ $I_e$ ]  
32 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
500 V [ $I_e$ ]  
32 A

AC-3  
Rated operational current  
Open, 3-pole: 50 – 60 Hz  
660 V 690 V [ $I_e$ ]  
18 A

AC-3  
Motor rating [P]  
220 V 230 V [P]  
10 kW

AC-3  
Motor rating [P]  
240V [P]  
11 kW

AC-3  
Motor rating [P]  
380 V 400 V [P]  
15 kW

AC-3  
Motor rating [P]  
415 V [P]  
19 kW

AC-3  
Motor rating [P]  
440 V [P]  
20 kW

AC-3  
Motor rating [P]  
500 V [P]  
23 kW

AC-3  
Motor rating [P]  
660 V 690 V [P]  
17 kW

AC-4  
Open, 3-pole: 50 – 60 Hz  
220 V 230 V [ $I_e$ ]  
15 A

AC-4  
Open, 3-pole: 50 – 60 Hz  
240 V [ $I_e$ ]

15 A

AC-4

Open, 3-pole: 50 – 60 Hz

380 V 400 V [ $I_e$ ]

15 A

AC-4

Open, 3-pole: 50 – 60 Hz

415 V [ $I_e$ ]

15 A

AC-4

Open, 3-pole: 50 – 60 Hz

440 V [ $I_e$ ]

15 A

AC-4

Open, 3-pole: 50 – 60 Hz

500 V [ $I_e$ ]

15 A

AC-4

Open, 3-pole: 50 – 60 Hz

660 V 690 V [ $I_e$ ]

12 A

AC-4

Motor rating [P]

220 V 230 V [P]

4 kW

AC-4

Motor rating [P]

240 V [P]

4.5 kW

AC-4

Motor rating [P]

380 V 400 V [P]

7 kW

AC-4

Motor rating [P]

415 V [P]

7.5 kW

AC-4

Motor rating [P]

440 V [P]

8 kW

AC-4  
Motor rating [P]  
500 V [P]  
9 kW

AC-4  
Motor rating [P]  
660 V 690 V [P]  
10 kW

### Current heat loss

3 pole, at  $I_{th}$  (60°)  
10.3 W

Current heat loss at  $I_e$  to AC-3/400 V  
6.6 W

Impedance per pole  
2.7 mΩ

### Magnet systems

Voltage tolerance  
AC operated [Pick-up]  
0.8 - 1.1 x  $U_c$

Voltage tolerance  
Drop-out voltage AC operated [Drop-out]  
0.3 - 0.6 x  $U_c$

Power consumption of the coil in a cold state and  
1.0 x  $U_S$   
50 Hz [Pick-up]  
52 VA

Power consumption of the coil in a cold state and  
1.0 x  $U_S$   
50 Hz [Sealing]  
7.1 VA

Power consumption of the coil in a cold state and  
1.0 x  $U_S$   
50 Hz [Sealing]  
2.1 W

Power consumption of the coil in a cold state and  
1.0 x  $U_S$   
60 Hz [Pick-up]  
67 VA

Power consumption of the coil in a cold state and  
1.0 x  $U_S$   
60 Hz [Sealing]  
8.7 VA

Power consumption of the coil in a cold state and  
1.0 x  $U_S$   
60 Hz [Sealing]  
2.1 W

Duty factor  
100 % DF

Changeover time at 100 %  $U_S$  (recommended  
value)  
Main contacts  
AC operated  
Closing delay  
16 - 22 ms

Changeover time at 100 %  $U_S$  (recommended  
value)  
Main contacts  
AC operated  
Opening delay  
8 - 14 ms

Changeover time at 100 %  $U_S$  (recommended  
value)  
Arcing time  
10 ms

## Electromagnetic compatibility (EMC)

Emitted interference  
According to EN 60947-1

Interference immunity  
According to EN 60947-1

## Rating data for approved types

Switching capacity  
Maximum motor rating  
Three-phase  
200 V  
208 V  
10 HP

Switching capacity  
Maximum motor rating  
Three-phase  
230 V  
240 V  
10 HP

Switching capacity  
Maximum motor rating  
Three-phase  
460 V  
480 V  
20 HP

Switching capacity  
Maximum motor rating  
Three-phase  
575 V  
600 V  
25 HP

Switching capacity  
Maximum motor rating  
Single-phase  
115 V  
120 V  
3 HP

Switching capacity  
Maximum motor rating  
Single-phase  
230 V  
240 V  
5 HP

Switching capacity  
General use  
40 A

Auxiliary contacts  
General Use  
AC  
600 V

Auxiliary contacts  
General Use

AC  
10 A

Auxiliary contacts  
General Use  
DC  
250 V

Auxiliary contacts  
General Use  
DC  
1 A

Short Circuit Current Rating  
Basic Rating  
SOCR  
5 kA

Short Circuit Current Rating  
Basic Rating  
max. Fuse  
125 A

Short Circuit Current Rating  
Basic Rating  
max. CB  
125 A

## DESIGN VERIFICATION AS PER IEC/EN 61439

Operating ambient temperature min.  
-25 °C

Operating ambient temperature max.  
+60 °C

## TECHNICAL DATA ETIM 7.0

Low-voltage industrial components (EG000017) / Power contactor, AC switching (EO000066)

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  
230 - 230 V

Rated control supply voltage Us at AC 60Hz  
240 - 240 V

Rated control supply voltage Us at DC  
0 - 0 V

Voltage type for actuating  
AC

Rated operation current Ie at AC-1, 400 V  
45 A

Rated operation current Ie at AC-3, 400 V  
32 A

Rated operation power at AC-3, 400 V  
15 kW

Rated operation current Ie at AC-4, 400 V  
15 A

Rated operation power at AC-4, 400 V  
7 kW

Rated operation power NEMA  
0 kW

Modular version  
No

Number of auxiliary contacts as normally open  
contact  
1

Number of auxiliary contacts as normally closed  
contact  
1

Type of electrical connection of main circuit  
Spring clamp connection

Number of normally closed contacts as main contact

0

Number of main contacts as normally open contact

3

## 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

Nb

## CHARACTERISTICS

Accessories

- 1: Overload relay
- 2: Suppressor
- 3: Auxiliary contact modules

Switching conditions for non-motor consumers, 3 pole, 4 pole

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



