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DILM38-11(RDC24)-PI - Contactor, 3 pole, 380 V 400 V 18.5 kW, 1 N/O, 1 NC, RDC 24: 24 - 27 V DC, DC operation, Push in terminals



199298 DILM38-11(RDC24)-PI

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



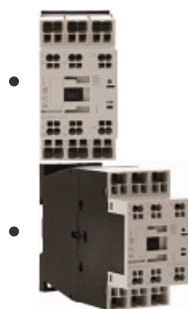
## 199298 DILM38-11(RDC24)-PI

Contactor, 3 pole, 380 V 400 V 18.5 kW, 1 N/O, 1 NC, RDC 24: 24 - 27 V DC, DC operation, Push in terminals

Alternate Catalog No.

XTCEPI038C11TD

Application: Contactors for Motors, Contactors up to 170 A, 3 pole, Utilization category: AC-1: Non-inductive or slightly inductive loads, resistance furnaces, NAC-3: Normal AC induction motors: starting, switch off during running, AC-4: Normal AC induction motors: starting, plugging, reversing, inching, Connection technique: Push in terminals, Not suitable for motors with efficiency class IE3., Number of poles: 3 pole, Rated operational current AC-3 380 V 400 V:  $I_e = 38$  A, Rated operational current AC-1 Conventional free air thermal current, 3 pole, 50 - 60 Hz Open at 40 °C:  $I_{th} = I_e = 45$  A, enclosed:  $I_{th} = 36$  A, Rated operational current AC-1 Conventional free air thermal current, 1 pole open:  $I_{th} = 100$  A, enclosed:  $I_{th} = 90$  A, Max. rating for three-phase motors, 50 - 60 Hz AC-3 220 V 230 V:  $P = 11$  kW, 380 V 400 V:  $P = 18.5$  kW, 660 V 690 V:  $P = 21$  kW, Max. rating for three-phase motors, 50 - 60 Hz AC-4 220 V 230 V:  $P = 4$  kW, 380 V 400 V:  $P = 7$  kW, 660 V 690 V:  $P = 10$  kW, Can be combined with auxiliary contact: DILM32-XH...-PI, DILA-XH(V)...-PI, Contacts N/O = Normally open: 1 N/O, Contacts N/C = Normally closed: 1 NC, Contacts to EN 50 012., with mirror contact., Voltage AC/DC: DC operation



- [Delivery program](#)
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### Delivery program

Product range

Contactors

Application

Contactors for Motors

Subrange

Contactors up to 170 A, 3 pole

Utilization category

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

NAC-3: Normal AC induction motors: starting, switch off during running

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

Notes

Not suitable for motors with efficiency class IE3.

Connection technique

Push in terminals

Number of poles

3 pole

Rated operational current

AC-3Notes

At maximum permissible ambient temperature (open.)

AC-3380 V 400 V [ $I_e$ ]

38 A

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

45 A

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

36 A

AC-1Conventional free air thermal current, 1 poleopen [ $I_{th}$ ]

100 A

AC-1Conventional free air thermal current, 1 poleenclosed [ $I_{th}$ ]

90 A

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

AC-3220 V 230 V [P]

11 kW

AC-3380 V 400 V [P]

18.5 kW

AC-3660 V 690 V [P]

21 kW

AC-4220 V 230 V [P]

4 kW

AC-4380 V 400 V [P]

7 kW

AC-4660 V 690 V [P]

10 kW

Contacts

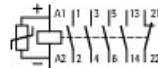
NO = Normally open

1 NO

NC = Normally closed

1 NC

Contact sequence



### Instructions

Contacts to EN 50 012.

with mirror contact.

Can be combined with auxiliary contact

DILMB2-XH...-PI

DILA-XH(V)...-PI

Actuating voltage

RDC 24: 24 - 27 V DC

Voltage AC/DC

DC operation

Connection to SmartWire-DT

yes

in conjunction with DIL-SWD SmartWire DT contactor module

Frame size

2

## Technical data

General

Standards

IEC/EN 60947, VDE 0660, UL, CSA

Operating frequency, mechanicalDC operated [Operations/h]

5000

Climatic proofing

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

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

Ambient temperatureOpen

-25 - +60 °C

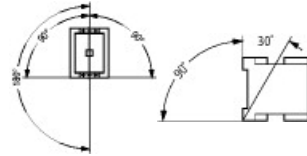
Ambient temperatureEnclosed

- 25 - 40 °C

Ambient temperatureStorage

- 40 - 80 °C

Mounting position



Mechanical shock resistance (IEC/EN 60068-2-27)Half-sinusoidal shock, 10 msMain contactsN/O contact  
10 g

Mechanical shock resistance (IEC/EN 60068-2-27)Half-sinusoidal shock, 10 msAuxiliary contactsN/O contact  
7 g

Mechanical shock resistance (IEC/EN 60068-2-27)Half-sinusoidal shock, 10 msAuxiliary contactsN/C contact  
5 g

Mechanical shock resistance (IEC/EN 60068-2-27) when tabletop-mountedHalf-sinusoidal shock, 10 msMain  
contactsN/O contact  
6.9 g

Mechanical shock resistance (IEC/EN 60068-2-27) when tabletop-mountedHalf-sinusoidal shock, 10 msAuxiliary  
contactsN/O contact

5.3 g

Mechanical shock resistance (IEC/EN 60068-2-27) when tabletop-mountedHalf-sinusoidal shock, 10 msAuxiliary  
contactsN/C contact

3.5 g

Degree of Protection

IP20

Protection against direct contact when actuated fromfront (EN 50274)

Finger and back-of-hand proof

Altitude

Max. 2000 m

WeightDC operated

0.55 kg

Spring-loaded terminal connectionToolStandard screw driver

3.0 x 0.5

Push-in terminalsTerminal capacity main cableSolid

1 x (1 - 6)

2 x (1 - 6) mm<sup>2</sup>

Push-in terminalsTerminal capacity main cableflexible

1 x (1 - 10)

2 x (1 - 6) mm<sup>2</sup>

Push-in terminalsTerminal capacity main cableflexible with ferrules

1 x (1 - 6)

2 x (1 - 4) mm<sup>2</sup>

Push-in terminalsTerminal capacity main cableflexible with ultrasonic welded busbar end

1 x (1 - 10)

2 x (1 - 6) mm<sup>2</sup>

Push-in terminalsTerminal capacity main cableflexible with uninsulated wire end ferrule

1 x (1 - 6)

2 x (1 - 6) mm<sup>2</sup>

Push-in terminalsTerminal capacity main cableSolid or stranded

18 - 8 AWG

Push-in terminalsTerminal capacity main cableStripping length

12 mm

Push-in terminalsTerminal capacity main cableStandard screw driver

3.0 x 0.5

Push-in terminalsTerminal capacity control circuit cablesSolid

1 x (0,5 - 2,5)

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

Push-in terminalsTerminal capacity control circuit cablesflexible

1 x (0,5 - 2,5)

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

Push-in terminalsTerminal capacity control circuit cablesflexible with ferrules

1 x (0,5 - 1,5)

2 x (0,5 - 1,5) mm<sup>2</sup>

Push-in terminalsTerminal capacity control circuit cablesflexible with ultrasonic welded busbar end

1 x (0,5 - 2,5)

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

Push-in terminalsTerminal capacity control circuit cablesflexible 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 [ $U_{imp}$ ]  
 8000 V AC  
 Overvoltage category/pollution degree  
 III/3  
 Rated insulation voltage [ $U$ ]  
 690 V AC  
 Rated operational voltage [ $U_e$ ]  
 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) [ $I_p$  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.)  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 220 V 230 V [ $I_e$ ]  
 38 A  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 240 V [ $I_e$ ]  
 38 A  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 380 V 400 V [ $I_e$ ]  
 38 A  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 415 V [ $I_e$ ]  
 38 A  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 440 V [ $I_e$ ]  
 38 A  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 500 V [ $I_e$ ]  
 38 A  
 AC-3 Rated operational current Open, 3-pole: 50 – 60 Hz 660 V 690 V [ $I_e$ ]  
 22.5 A  
 AC-3 Motor rating [ $P$ ] 220 V 230 V [ $P$ ]

11 kW  
 AC-3Mtor rating [P]240V [P]  
 12 kW  
 AC-3Mtor rating [P]380 V 400 V [P]  
 18.5 kW  
 AC-3Mtor rating [P]415 V [P]  
 20 kW  
 AC-3Mtor rating [P]440 V [P]  
 21 kW  
 AC-3Mtor rating [P]500 V [P]  
 24 kW  
 AC-3Mtor rating [P]660 V 690 V [P]  
 21 kW  
 AC-4Open, 3-pole: 50 – 60 Hz220 V 230 V [ $I_e$ ]  
 15 A  
 AC-4Open, 3-pole: 50 – 60 Hz240 V [ $I_e$ ]  
 15 A  
 AC-4Open, 3-pole: 50 – 60 Hz380 V 400 V [ $I_e$ ]  
 15 A  
 AC-4Open, 3-pole: 50 – 60 Hz415 V [ $I_e$ ]  
 15 A  
 AC-4Open, 3-pole: 50 – 60 Hz440 V [ $I_e$ ]  
 15 A  
 AC-4Open, 3-pole: 50 – 60 Hz500 V [ $I_e$ ]  
 15 A  
 AC-4Open, 3-pole: 50 – 60 Hz660 V 690 V [ $I_e$ ]  
 12 A  
 AC-4Mtor rating [P]220 V 230 V [P]  
 4 kW  
 AC-4Mtor rating [P]240 V [P]  
 4.5 kW  
 AC-4Mtor rating [P]380 V 400 V [P]  
 7 kW  
 AC-4Mtor rating [P]415 V [P]  
 7.5 kW  
 AC-4Mtor rating [P]440 V [P]  
 8 kW  
 AC-4Mtor rating [P]500 V [P]  
 9 kW  
 AC-4Mtor rating [P]660 V 690 V [P]  
 10 kW  
 Current heat loss  
 3 pole, at  $I_h$  (60°)  
 10.3 W  
 Current heat loss at  $I_e$  to AC-3/400 V  
 9.3 W  
 Impedance per pole  
 2.7 mΩ  
 Magnet systems  
 Voltage toleranceDC operated [Pick-up]  
 0.7 - 1.2 x  $U_c$   
 Voltage toleranceNotes  
 RDC 24 ( $U_{min}$  24 V DC/ $U_{max}$  27 V DC)  
 Example:  $U_S = 0.7 \times U_{min} - 1.2 \times U_{max} / U_S = 0.7 \times 24V - 1.2 \times 27V$  DC  
 Voltage toleranceDC operated [Drop-out]  
 0.15 - 0.6 x  $U_c$   
 Voltage toleranceNotes  
 at least smoothed two-phase bridge rectifier or three-phase rectifier  
 Power consumption of the coil in a cold state and 1.0 x  $U_S$  DC operated [Pick-up]  
 12 W  
 Power consumption of the coil in a cold state and 1.0 x  $U_S$  DC operated [Sealing]  
 0.9 W  
 Duty factor  
 100 % DF  
 Changeover time at 100 %  $U_S$  (recommended value)Main contactsDC operatedClosing delayClosing delay  
 47 ms  
 Changeover time at 100 %  $U_S$  (recommended value)Main contactsDC operatedOpening delayOpening delay  
 30 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 capacityMaximum motor ratingThree-phase200 V  
 208 V  
 10 HP  
 Switching capacityMaximum motor ratingThree-phase230 V  
 240 V  
 10 HP  
 Switching capacityMaximum motor ratingThree-phase460 V  
 480 V  
 20 HP  
 Switching capacityMaximum motor ratingThree-phase575 V  
 600 V  
 30 HP  
 Switching capacityMaximum motor ratingSingle-phase115 V  
 120 V  
 3 HP  
 Switching capacityMaximum motor ratingSingle-phase230 V  
 240 V  
 5 HP  
 Switching capacityGeneral use  
 40 A  
 Auxiliary contactsGeneral UseAC  
 600 V  
 Auxiliary contactsGeneral UseAC  
 10 A  
 Auxiliary contactsGeneral UseDC  
 250 V  
 Auxiliary contactsGeneral UseDC  
 1 A  
 Short Circuit Current RatingBasic RatingSCCR  
 5 kA  
 Short Circuit Current RatingBasic Ratingmax. Fuse  
 125 A  
 Short Circuit Current RatingBasic Ratingmax. 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 (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  $U_s$  at AC 50 Hz  
 0 - 0 V  
 Rated control supply voltage  $U_s$  at AC 60 Hz  
 0 - 0 V  
 Rated control supply voltage  $U_s$  at DC  
 24 - 27 V  
 Voltage type for actuating  
 DC  
 Rated operation current  $I_e$  at AC-1, 400 V  
 45 A  
 Rated operation current  $I_e$  at AC-3, 400 V  
 38 A  
 Rated operation power at AC-3, 400 V  
 18.5 kW  
 Rated operation current  $I_e$  at AC-4, 400 V  
 15 A

Rated operation power at AC-4, 400 V  
 7 kW  
 Rated operation power NEVA  
 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  
 No

## 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



## Additional product information

- [Motor starters and "Special Purpose Ratings" for the North American market \(PDF\)](#)
- [Switchgear of Power Factor Correction Systems \(PDF\)](#)
- [X-Start - Modern Switching Installations Efficiently Fitted and Wired Securely \(PDF\)](#)
- [Mirror Contacts for Highly-Reliable Information Relating to Safety-Related Control Functions \(PDF\)](#)
- [Effect of the Cable Capacitance of Long Control Cables on the Actuation of Contactors \(PDF\)](#)

- [Switchgear for Luminaires](#)  
(PDF)
- [Standard Compliant and Functionally Safe Engineering Design with Mechanical Auxiliary Contacts](#)  
(PDF)
- [The Interaction of Contactors with PLCs](#)  
(PDF)
- [Busbar Component Adapters for modern Industrial control panels](#)  
(PDF)

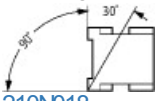
## Wiring diagram

-   
[2100SW-77](#)  
Line drawing

## 3D drawing

-   
[2110DRW-59](#)  
Line drawing

## Dimensions single product

-   
[2100DIM-84](#)  
Line drawing
-   
[210N017](#)  
Line drawing  
Mounting position
-   
[210N018](#)  
Line drawing  
Mounting position

## Instruction Leaflet

- [Push-in: Contactors, complete units \(IL034094ZU\)](#)  
(PDF, 08/2021, multilingual)

## Declaration of Conformity

### EU

- [DILM8-11...-PI - DILM38-11...-PI - Contactors & Contactor combinations \(DA-DC-00004120\)](#)  
Asset  
(PDF)

## Product photo



- 

[DILM38-11-PI\\_C](#)  
 Photo  
 Contactor  
 (Web)

- 

[DILM38-11-PI\\_L](#)  
 Photo  
 Contactor  
 (Web)

- 

[DILM38-11-PI\\_R](#)  
 Photo  
 Contactor  
 (Web)

# CAD data

## Step files

- [DA-CD-dil\\_m8\\_38\\_pi](#)  
 File  
 (Web, Language independent)
- [DA-CS-dil\\_m8\\_38\\_pi](#)  
 File  
 (Web, Language independent)

## edz files

- [DA-CE-ETN.DILM38-11\(RDC24\)-PI](#)  
 File  
 (Web, Language independent)

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