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DIULM9/21(230V50HZ,240V60HZ) - Reversing contactor combination, 380 V 400 V: 4 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation



278086 DIULM9/21(230V50HZ,240V60HZ)

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## 278086 DIULM9/21(230V50HZ,240V60HZ)

Reversing contactor combination, 380 V 400 V: 4 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation

Alternate Catalog No.

XTCR009B21F

EL-Nummer (Norway)

4130465

Reversing contactor combination, Application: Contactor combinations for starting motors with two directions of rotation, Accessories: DIUL reversing combinations, Utilization category: NAC-3: Normal AC induction motors: starting, switch off during running, AC-4: Normal AC induction motors: starting, plugging, reversing, inching, Rated operational current AC-3 380 V 400 V:  $I_e = 9$  A, Max. rating for three-phase motors, 50 - 60 Hz AC-3 220 V 230 V: P= 2.5 kW, 380 V 400 V: P= 4 kW, 660 V 690 V: P= 4.5 kW, Actuating voltage: 230 V 50 Hz, 240 V 60 Hz, Voltage AC/DC: AC operation, Notes: Also suitable for motors with efficiency class IE3

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### Delivery program

Product range

Contactor combinations

Application

Contactor combinations for starting motors with two directions of rotation

Accessories

DIUL reversing combinations

Utilization category

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

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



Notes

Also suitable for motors with efficiency class IE3.

Rated operational current [ $I_e$ ]

AC-3380 V 400 V [ $I_e$ ]

9 A

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

AC-3220 V 230 V [P]

2.5 kW

AC-3380 V 400 V [P]

4 kW

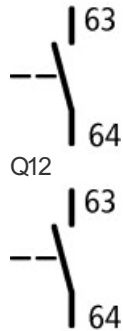
AC-3660 V 690 V [P]

4.5 kW

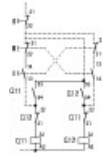
AC-4220 V 230 V [P]

1.5 kW

AC-4380 V 400 V [F]  
 2.5 kW  
 AC-4660 V 690 V [F]  
 3.6 kW  
 Actuating voltage  
 230 V 50 Hz, 240 V 60 Hz  
 Voltage AC/DC  
 AC operation  
 Individual components of the combination  
 Contactor Q11  
 DILM9-01  
 + DILA-XH120 Part no.  
 Contactor Q12  
 DILM9-01  
 + DILA-XH120 Part no.  
 Spare auxiliary contacts  
 Q11



Mechanical interlock  
 +  
 Circuit diagram  
 Contact sequence



## Design verification as per IEC/EN 61439

Technical data for design verification  
 Rated operational current for specified heat dissipation [ $I_r$ ]  
 9 A  
 Heat dissipation per pole, current-dependent [ $P_{vid}$ ]  
 0.28 W  
 Equipment heat dissipation, current-dependent [ $P_{vid}$ ]  
 0.84 W  
 Static heat dissipation, non-current-dependent [ $P_{vs}$ ]  
 1.4 W  
 Heat dissipation capacity [ $P_{diss}$ ]  
 0 W  
 Operating ambient temperature min.  
 -25 °C  
 Operating ambient temperature max.  
 +60 °C

### 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 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2 Strength of materials and parts 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 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.6 Mechanical impact  
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 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 Insulation properties 10.9.3 Impulse withstand voltage  
Is the panel builder's responsibility.

10.9 Insulation properties 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) / Combination of contactors (EC000010)  
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) /  
Combination of contactor (ecl@ss10.0.1-27-37-10-09 [AGZ572014])

Function

Reversing safety

Rated control supply voltage  $U_s$  at AC 50Hz

230 - 230 V

Rated control supply voltage  $U_s$  at AC 60Hz

240 - 240 V

Rated control supply voltage  $U_s$  at DC

0 - 0 V

Voltage type for actuating

AC

Rated operation current  $I_e$  at AC-3, 400 V

9 A

Rated operation power at AC-3, 400 V

4 kW

Rated operation power NEMA

3.7 kW

Type of electrical connection of main circuit

Screw connection

Degree of protection (IP)

IP20

Degree of protection (NEMA)

Other

## 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.

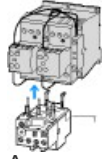
NLDX

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

## Dimensions



Basic unit with auxiliary contact module

## CAD data

- [Product-specific CAD data](#)  
(Web)
- [3D Preview](#)  
(Web)

## DWG files

- [DA-CD-diul\\_bg1](#)  
File  
(Web)

## edz files

- [DA-CE-ETN.DIULM9\\_21\(230V50HZ,240V60HZ\)](#)  
File  
(Web)

## Step files

- [DA-CS-diul\\_bg1](#)  
File  
(Web)

## 3D drawing

- [2120DRAW-1](#)  
Line drawing  
Reversing combination, size 1

## Product photo

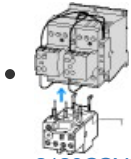
-   
[2120PIC-11](#)  
Photo

## Dimensions single product

- 

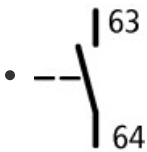
212X008  
Line drawing  
Reversing combination

## Explosion drawing

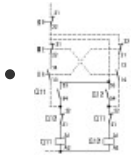


2120CON-1  
Line drawing  
Reversing combination, size 2

## Wiring diagram



210S070  
Line drawing  
Contactor contact representation



212S005  
Line drawing  
Reversing contactor circuit diagram for frame size 2 control

## Instruction Leaflet

- [Wiring for contactor combinations \(IL03407030Z\)](#)  
Asset  
former AWA2100-2139  
(PDF, 05/2018, multilingual)
- [DILM7 - DILM15, XTCE007B - XTCE012B Contactors: complete devices \(IL03407043Z\)](#)  
Asset  
former AWA2100-2291  
(PDF, 05/2018, multilingual)

## Standards

-   
0000SFC-571  
Logo  
IE3-ready logo 4c

## Declaration of Conformity

### EU

- [DILM7-DILM15 - contactors & contactor combinations \(DA-DC-00004095\)](#)  
Asset  
(PDF)

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