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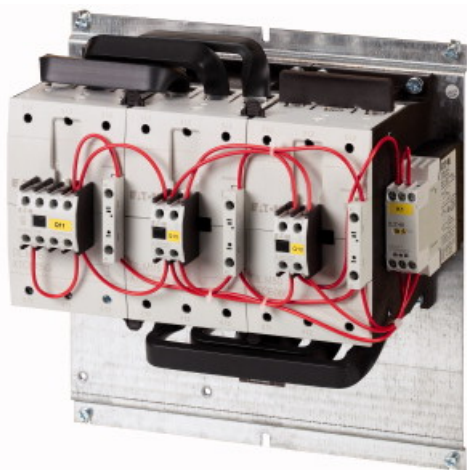


SDAINLM165(230V50HZ,240V60HZ) - Star-delta contactor combination, 380 V 400 V: 90 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation



240035 SDAINLM165(230V50HZ,240V60HZ)

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## 240035 SDAINLM165(230V50HZ,240V60HZ)

Star-delta contactor combination, 380 V 400 V: 90 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation

Alternate Catalog No.

XTSD165F11F

EL-Nummer (Norway)

4131009

Star-delta contactor combination, Application: Star-delta motor starting for contactor combinations, Operating frequency: maximum 30 starts per hour, Accessories: Star-delta combinations SDAINL, Utilization category: NAC-3: Normal AC induction motors: starting, switch off during running, Rated operational current AC-3 380 V 400 V:  $I_e = 165$  A, Max. rating for three-phase motors, 50 - 60 Hz AC-3 220 V 230 V: P= 45 kW, 380 V 400 V: P= 90 kW, 500 V: P= 110 kW, 660 V 690 V: P= 132 kW, Max. changeover time: 20 s, Actuating voltage: 230 V 50 Hz, 240 V 60 Hz, Voltage AC/DC: AC operation, Individual components of the combination Mains contactor Q11: DILM95, + DILM150-XH31, Delta contactor Q15: DILM95, + DILM150-XH11 Part no., Star contactor Q13: DILM65, + DILM150-XH11 Part no., Timing relay K1: ETR4-51 Part no., Notes: Also suitable for motors with efficiency class IE3

- [Delivery program](#)
- [Design verification as per IEC/EN 61439](#)
- [Technical data ETIM 7.0](#)
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### Delivery program

Product range

Contactor combinations

Application

Star-delta motor starting for contactor combinations

Accessories

Star-delta combinations SDAINL

Utilization category

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



Notes

Also suitable for motors with efficiency class IE3.

Description

Operating frequency: maximum 30 starts per hour

Rated operational current [ $I_e$ ]

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

165 A

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

AC-3 220 V 230 V [P]

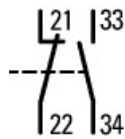
45 kW

AC-3 380 V 400 V [P]

90 kW

AC-3 500 V [P]

110 kW  
 AC-3660 V 690 V [F]  
 132 kW  
 Max. changeover time  
 < 20 s  
 Actuating voltage  
 230 V 50 Hz, 240 V 60 Hz  
 Voltage AC/DC  
 AC operation  
 Individual components of the combination  
 Mains contactor Q11  
 DILM95  
 + DILM150-XH131 Part no.  
 Delta contactor Q15  
 DILM95  
 + DILM150-XH111 Part no.  
 Star contactor Q13  
 DILM65  
 + DILM150-XH111 Part no.  
 Timing relay K1  
 ETR4-51 Part no.  
 Q11



## Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [ $I_r$ ]

165 A

Heat dissipation per pole, current-dependent [ $P_{\text{rd}}$ ]

10.9 W

Equipment heat dissipation, current-dependent [ $P_{\text{rd}}$ ]

32.6 W

Static heat dissipation, non-current-dependent [ $P_{\text{rs}}$ ]

13.6 W

Heat dissipation capacity [ $P_{\text{diss}}$ ]

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

Star-delta contactor

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

165 A

Rated operation power at AC-3, 400 V

90 kW

Rated operation power NEMA

0 kW

Type of electrical connection of main circuit

Screw connection

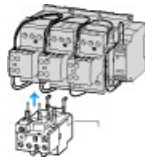
Degree of protection (IP)

IP00

Degree of protection (NEMA)

Other

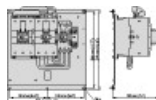
## Characteristics



Accessories

1: Overload relay

## Dimensions



## CAD data

- Product-specific CAD data

(Web)

- [3D Preview](#)  
(Web)

## DWG files

- [DA-CD-sdainlm140\\_165](#)  
File  
(Web)

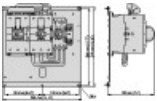
## edz files

- [DA-CE-ETN.SDAINLM165\(230V50HZ,240V60HZ\)](#)  
File  
(Web)

## Step files

- [DA-CS-sdainlm140\\_165](#)  
File  
(Web)

## Dimensions single product

-   
[2210DIM-7](#)  
Line drawing

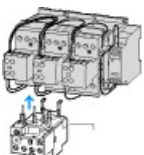
## 3D drawing

- [2210DRW-8](#)  
Line drawing

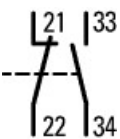
## Product photo

-   
[2210PIC-13](#)  
Photo

## Explosion drawing

-   
[2210CON-1](#)  
Line drawing  
Star-delta combination, size 2

## Wiring diagram

-   
[210S030](#)  
Line drawing  
2-pole auxiliary contact module

# Instruction Leaflet

- [Wiring for contactor combinations \(IL03407030Z\)](#)  
Asset  
former AWA2100-2139  
(PDF, 05/2018, multilingual)
- [Contactors DILM\(IL03407039Z\)](#)  
Asset  
former AWA2100-2286, Pub51188  
(PDF, 07/2021, multilingual)

# Symbol

-  [0000SFC-173](#)  
Graphic  
Logo new yellow small

# Standards

-   
[0000SFC-571](#)  
Logo  
IE3-ready logo 4c

# Declaration of Conformity

## EU


- [DILM80-DILM170 - Contactors & contactor combinations \(DA-DC-00004097\)](#)  
Asset  
(PDF)

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