


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



**Part no.** SDAINLM165(230V50HZ,240V60HZ)  
**Catalog No.** 240035  
**Alternate Catalog No.** XTSD165F11F  
**EL-Nummer (Norway)** 4131009

**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. IE3-ready devices are identified by the logo on their packaging.
Description		Operating frequency: maximum 30 starts per hour

**Rated operational current**

AC-3			
380 V 400 V	$I_e$	A	165

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

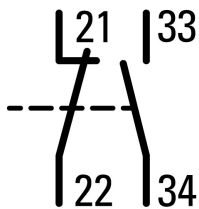
AC-3			
220 V 230 V	P	kW	45
380 V 400 V	P	kW	90
500 V	P	kW	110
660 V 690 V	P	kW	132

Max. changeover time		s	20
Actuating voltage			230 V 50 Hz, 240 V 60 Hz
Voltage AC/DC			AC operation

**Individual components of the combination**

Mains contactor Q11	Part no.	DILM95 + DILM150-XH131
Delta contactor Q15	Part no.	DILM95 + DILM150-XH111
Star contactor Q13	Part no.	DILM65 + DILM150-XH111
Timing relay K1	Part no.	ETR4-51

Spare auxiliary contacts



Q11

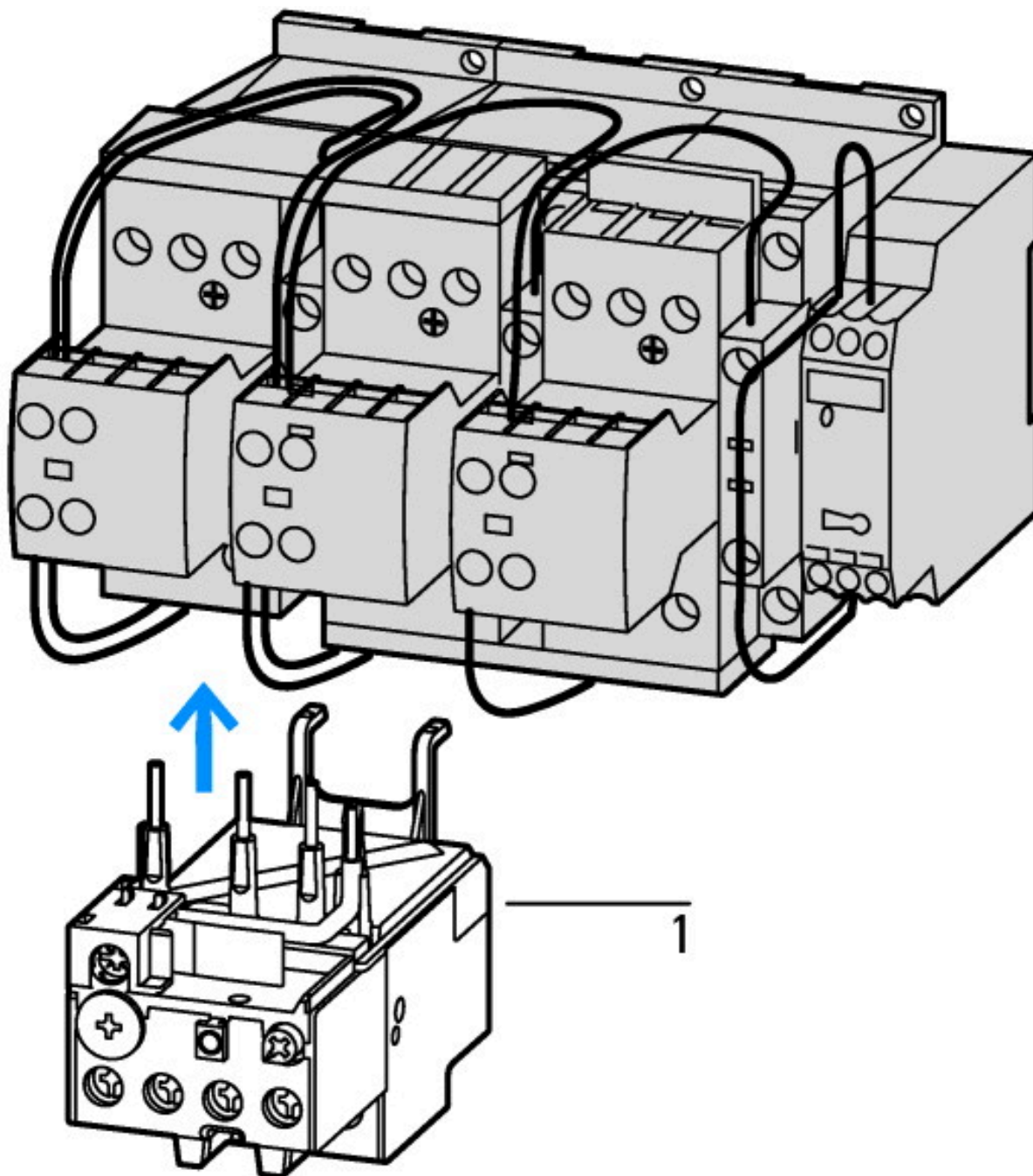
**Design verification as per IEC/EN 61439**

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	165
Heat dissipation per pole, current-dependent	$P_{vid}$	W	10.9
Equipment heat dissipation, current-dependent	$P_{vid}$	W	32.6
Static heat dissipation, non-current-dependent	$P_{vs}$	W	13.6

Heat dissipation capacity	P <sub>diss</sub>	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.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			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.

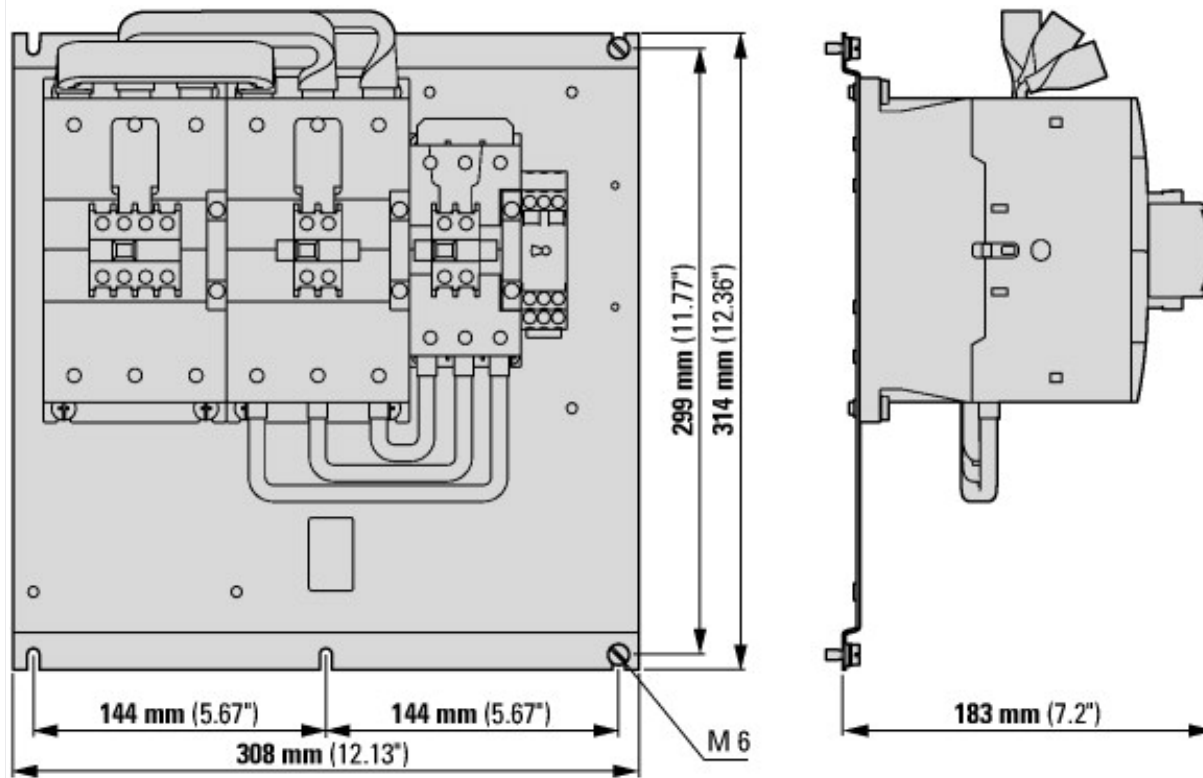
## Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / 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 <sub>s</sub> at AC 50HZ		V	230 - 230
Rated control supply voltage U <sub>s</sub> at AC 60HZ		V	240 - 240
Rated control supply voltage U <sub>s</sub> at DC		V	0 - 0
Voltage type for actuating			AC
Rated operation current I <sub>e</sub> at AC-3, 400 V		A	165
Rated operation power at AC-3, 400 V		kW	90
Rated operation power NEMA		kW	0
Type of electrical connection of main circuit			Screw connection
Degree of protection (IP)			IP00
Degree of protection (NEMA)			Other



1: Overload relay

## Dimensions



## Additional product information (links)

**IL03407030Z (AWA2100-2139) Wiring for contactor combinations**

IL03407030Z (AWA2100-2139) Wiring for contactor combinations

[https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407030Z2018\\_05.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407030Z2018_05.pdf)