




Star-delta contactor combination, 380 V 400 V: 45 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation



Part no. **SDAINLM90(230V50HZ,240V60HZ)**
 Catalog No. **239937**
 Alternate Catalog No. **XTSD090D11F**
 EL-Nummer (Norway) **4131006**

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 | 90 |

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

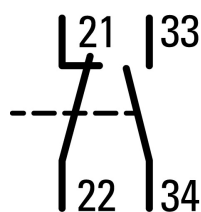
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|-------------|---|----|----|
| AC-3 | | | |
| 220 V 230 V | P | kW | 22 |
| 380 V 400 V | P | kW | 45 |
| 500 V | P | kW | 55 |
| 660 V 690 V | P | kW | 45 |

| | | | |
|----------------------|--|---|--------------------------|
| 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. | DILM50 + DILM150-XHI31 |
| Delta contactor Q15 | Part no. | DILM50 + DILM150-XHI11 |
| Star contactor Q13 | Part no. | DILM40 + DILM150-XHI11 |
| Timing relay K1 | Part no. | ETR4-51 |

Spare auxiliary contacts



Q11

Design verification as per IEC/EN 61439

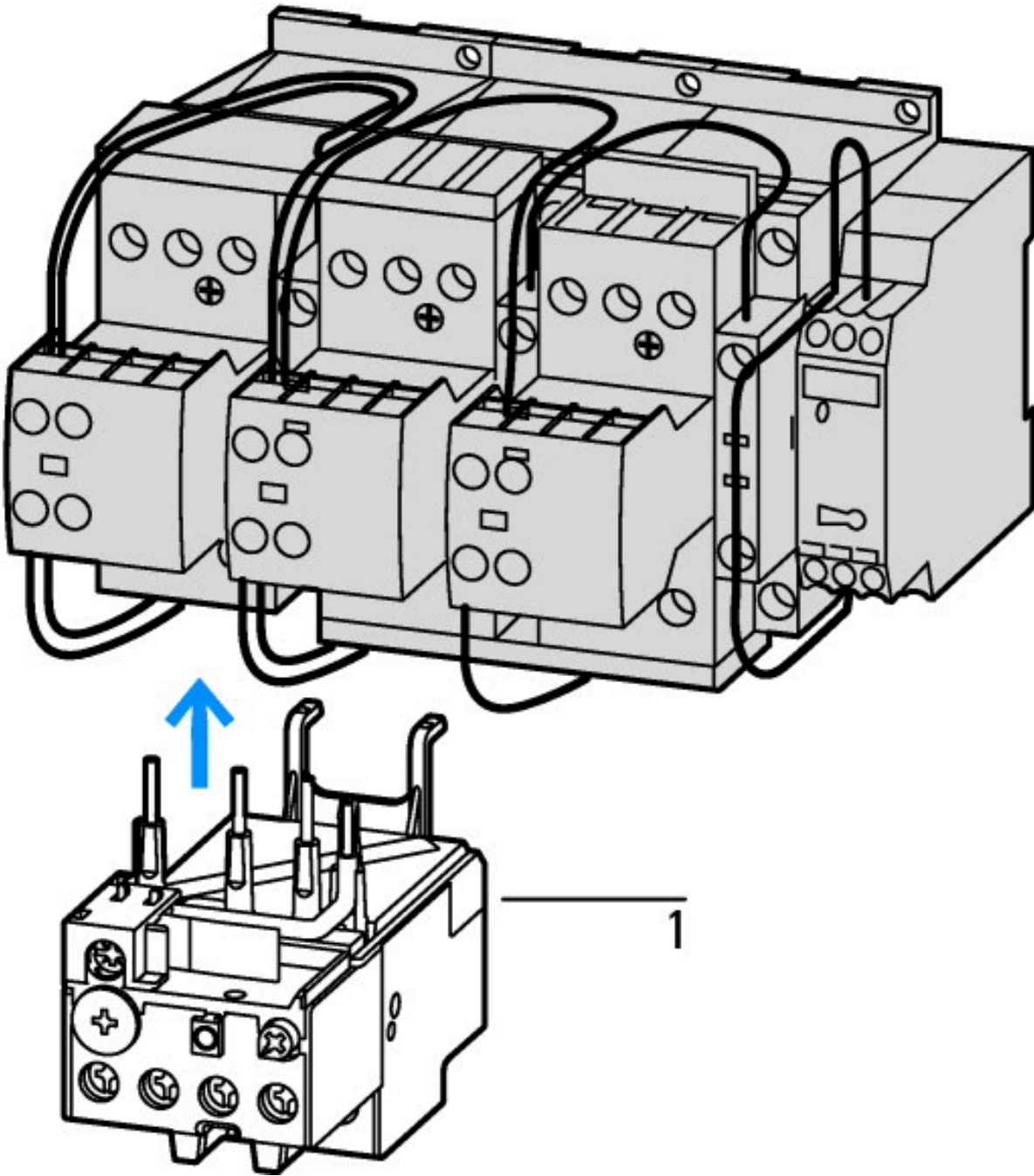
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|--|-----------|---|------|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I_n | A | 90 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 10.7 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 32.1 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 10.2 |

| | | | |
|--|-------------------|----|--|
| Heat dissipation capacity | P _{diss} | 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

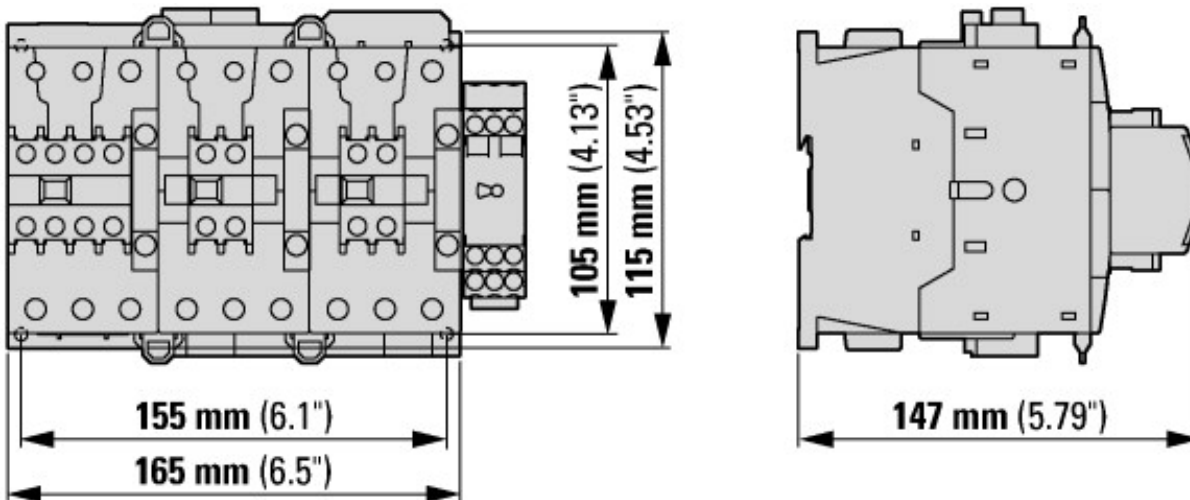
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|--|--|----|----------------------|
| Low-voltage industrial components (EG000017) / Combination of contactors (EC000010) | | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Combination of contactor (ecl@ss10.0.1-27-37-10-09 [AGZ572014]) | | | |
| Function | | | Star-delta contactor |
| Rated control supply voltage U _s at AC 50HZ | | V | 230 - 230 |
| Rated control supply voltage U _s at AC 60HZ | | V | 240 - 240 |
| Rated control supply voltage U _s at DC | | V | 0 - 0 |
| Voltage type for actuating | | | AC |
| Rated operation current I _e at AC-3, 400 V | | A | 90 |
| Rated operation power at AC-3, 400 V | | kW | 45 |
| 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 |

Characteristics



1: Overload relay

Dimensions



Basic unit with auxiliary contact module

Assets (links)

Declaration of CE Conformity

00003252

Instruction Leaflets

IL03407030Z2018_05

IL03407033Z2018_03