

# Specifications



## Eaton 239937

Eaton Moeller® series SDAINL Star-delta contactor combination, 380 V 400 V: 45 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series star-delta contactor combination
<b>CATALOG NUMBER</b>	239937
<b>MODEL CODE</b>	SDAINLM90(230V50HZ,240V60HZ)
<b>EAN</b>	4015082399375
<b>PRODUCT LENGTH/DEPTH</b>	147 mm
<b>PRODUCT HEIGHT</b>	115 mm
<b>PRODUCT WIDTH</b>	188 mm
<b>PRODUCT WEIGHT</b>	2.935 kg
<b>CERTIFICATIONS</b>	CE
<b>GLOBAL CATALOG</b>	239937



Powering Business Worldwide

## Product specifications

<b>USED WITH</b>	ETR4-51
<b>ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT</b>	Screw connection
<b>NUMBER OF POLES</b>	Three-pole
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product

	standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>FREQUENCY RATING</b>	50-60 Hz
<b>POLLUTION DEGREE</b>	3
<b>UTILIZATION CATEGORY</b>	AC-3: Normal AC induction motors: starting, switch off during running
<b>CONNECTION</b>	Screw terminals
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	60 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	32.1 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER</b>	10.7 W

<b>POLE, CURRENT-DEPENDENT PVID</b>	
<b>APPLICATION</b>	Star-delta motor starting for contactor combinations
<b>PRODUCT CATEGORY</b>	Contactor combinations
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>VOLTAGE TYPE</b>	AC
<b>DEGREE OF PROTECTION</b>	IP00 NEMA Other
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	1
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	1
<b>NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT</b>	0
<b>NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)</b>	9
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	230 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	230 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	240 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	240 V
<b>OVERVOLTAGE CATEGORY</b>	III
<b>DUTY FACTOR</b>	100 %
<b>CHANGEOVER TIME</b>	20 s, max.
<b>INTERFERENCE IMMUNITY</b>	According to EN 60947-1
<b>FUNCTIONS</b>	Star-delta contactor
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V

<b>RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V</b>	90 A
<b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V</b>	90 A
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	90 A
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	45 kW
<b>RATED OPERATIONAL POWER (NEMA)</b>	0 kW
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	10.2 W
<b>SUITABLE FOR</b>	Also motors with efficiency class IE3
<b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>	55 kW
<b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>	45 kW
<b>ACTUATING VOLTAGE</b>	230 V 50 Hz, 240 V 60 Hz
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>	0
<b>VOLTAGE TYPE OF OPERATING VOLTAGE</b>	AC
<b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>	230 V
<b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>	690 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>	230 V
<b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>	690 V
<b>OPERATING VOLTAGE AT DC - MIN</b>	0 V
<b>OPERATING VOLTAGE AT DC - MAX</b>	0 V

## Resources

CATALOGS [eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

DECLARATIONS OF CONFORMITY [eaton-star-delta-contactor-combination-declaration-of-conformity-eu250764en.pdf](#)

	<a href="#">eaton-star-delta-contactor-combination-declaration-of-conformity-uk251247en.pdf</a>
	<a href="#">eaton-star-delta-starters-sdainl-contactor-combination-dimensions.eps</a>
DRAWINGS	<a href="#">eaton-star-delta-starters-sdainl-contactor-combination-3d-drawing.eps</a>
	<a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a>
ECAD MODEL	<a href="#">ETN.SDAINLM90(230V50HZ,240V60HZ).edz</a>
INSTALLATION INSTRUCTIONS	<a href="#">IL03407030Z</a> <a href="#">IL03407033Z</a>
MCAD MODEL	<a href="#">sdainlm115_a</a> <a href="#">sdainlm115_a.stp</a>
SYSTEM OVERVIEW	<a href="#">eaton-star-delta-starters-star-delta-sdainl-contactor-combination-explosion-drawing.eps</a>
WIRING DIAGRAMS	<a href="#">eaton-contactors-contact-sdainl-combination-wiring-diagram.eps</a>

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**PROJECT NAME:**

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**PROJECT NUMBER:**

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**PREPARED BY:**

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**DATE:**

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**Eaton Corporation plc**  
 Eaton House  
 30 Pembroke Road  
 Dublin 4, Ireland  
 Eaton.com

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