

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

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

Features & Functions

FUNCTIONS	Star-delta contactor
NUMBER OF POLES	Three-pole

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE - MAX	60 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
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AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
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AMBIENT STORAGE TEMPERATURE - MAX	80 °C
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General

APPLICATION	Star-delta motor starting for contactor combinations
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DEGREE OF PROTECTION	IP00 NEMA Other
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CONNECTION	Screw terminals
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OVERVOLTAGE CATEGORY	III
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POLLUTION DEGREE	3
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PRODUCT CATEGORY	Contactor combinations
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SUITABLE FOR	Also motors with efficiency class IE3
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USED WITH	ETR4-51
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USED WITH	ETR4-51
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UTILIZATION CATEGORY	AC-3: Normal AC induction motors: starting, switch off during running
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VOLTAGE TYPE	AC
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Electro magnetic compatibility

INTERFERENCE IMMUNITY	According to EN 60947-1
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Electrical rating

RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	90 A
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RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	90 A
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RATED INSULATION VOLTAGE (UI)	690 V
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RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	45 kW
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RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	55 kW
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RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	45 kW
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Contacts

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	1
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NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
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Magnet system

CHANGEOVER TIME	20 s, max.
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DUTY FACTOR	100 %
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RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	230 V
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RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	230 V
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RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	240 V
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RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	240 V
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Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	32.1 W
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HEAT DISSIPATION CAPACITY PDISS	0 W
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HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	10.7 W
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RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	90 A
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STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	10.2 W
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10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
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10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
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10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT	Meets the product standard's requirements.
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10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	Meets the product standard's requirements.
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10.2.4 RESISTANCE TO ULTRA-VIOLET (UV)	Meets the product standard's requirements.
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RADIATION	
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.
10.9.2 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.

Resources

CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-star-delta-contactor-combination-declaration-of-conformity-uk251247en.pdf eaton-star-delta-contactor-combination-declaration-of-conformity-eu250764en.pdf
DRAWINGS	eaton-star-delta-starters-sdainl-contactor-combination-dimensions.eps eaton-general-ie-ready-dilm-contactor-standards.eps eaton-star-delta-starters-sdainl-contactor-combination-3d-drawing.eps
ECAD MODEL	ETN.SDAINLM90(230V50HZ,240V60HZ).edz
INSTALLATION INSTRUCTIONS	IL03407033Z IL03407030Z
MCAD MODEL	sdainlm115_a.stp eaton-iec-contactors-mcad-drawings-sdainlm115-a.dwg
SYSTEM OVERVIEW	eaton-star-delta-starters-star-delta-sdainl-contactor-combination-explosion-drawing.eps
WIRING DIAGRAMS	eaton-contactors-contact-sdainl-combination-wiring-diagram.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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