## DATASHEET - SDAINLM12(230V50HZ,240V60HZ)

Star-delta contactor combination, 380 V 400 V: 5.5 kW, 230 V 50 Hz, 240 V 60 Hz, AC operation



Part no.	SDAINLM12(230V50HZ,240V60HZ)
Catalog No.	278286
Alternate Catalog	XTSD012B10F
No.	
EL-Nummer	4130484
(Norway)	

## **Delivery program**

Aplication adequation and approximate and appr				
Accessories Access	Product range			Contactor combinations
Name Illiation categoryNoteAC3AC3-Normal AC induction motors: starting, switch of during running As suitable for motors with efficiency class IE3.NotesNoteSo suitable for motors with efficiency class IE3.Rated operational currentNotePerating frequency: maximum 30 starts per hourAC-3II380 V400 VIIAc-3II200 V200 VPerating for three-phase motors, 50 - 60 HzPeratingAC-3II200 V200 VPeratingIS00 VPeratingSoS00 VPerating </td <td>Application</td> <td></td> <td></td> <td>Star-delta motor starting for contactor combinations</td>	Application			Star-delta motor starting for contactor combinations
Notes     Acsaulable for motors with efficiency class IE3.       Description     perating frequency: maximum 30 starts per hour       Ac-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       AC-3     Perating for three-phase motors, 50 - 60 Hz       So V 400 V     Perating for three-phase motors, 50 - 60 Hz       So V 400 V     Perating for three-phase motors, 50 - 60 Hz       So V 400 V     Perating for three-phase motors, 50 - 60 Hz       So V 400 V     Perating for three-phase motors, 50 - 60 Hz       So V 400 V     Perating for three-phase motors, 50 - 60 Hz       So V 400 V     Perating for three-phase motors, 50 + 60 Hz       So V 400 V     Perating for three-phase motors, 50 + 60 Hz       Mains contactor 011     Perating for three-phase motors, 50 + 60 Hz       Mains contac	Accessories			Star-delta combinations SDAINL
Description     Max     Pertain frequency: maximum 30 starts per hour       Ac-3     -	Utilization category			NAC-3: Normal AC induction motors: starting, switch off during running
Rated operational current Image: Rate operational current Image: Rate operational current Image: Rate operational current   AC-3 Image: Rate operational current Image: Rate operational current Image: Rate operational current   3800 400 V Image: Rate operational current Image: Rate operational current Image: Rate operational current   AC-3 Image: Rate operational current Image: Rate operational current Image: Rate operational current   AC-3 Image: Rate operational current Image: Rate operational current Image: Rate operational current   AC-3 Image: Rate operational current Image: Rate operational current Image: Rate operational current   AC-3 Image: Rate operational current Image: Rate operational current Image: Rate operational current   AC-3 Image: Rate operational current Image: Rate operational current Image: Rate operational current   Mains contactor Q11 Image: Rate operational current Image: Rate operational current Image: Rate operational current   Mains contactor Q13 Image: Rate operational current Image: Rate operational current Image: Rate operational current   Image: Rate operation Current Image: Rate operational current Image: Rate operational current Image: Rate operational current   Image: Rate operation Current Image: Rate operational current Image: Rate	Notes			Also suitable for motors with efficiency class IE3.
AC.3     Image: Constraint of three phase motors, 50 - 60 Hz     Image: Constraint of three phase motors, 50 Hz     Image: Constraint of three phase motors,	Description			Operating frequency: maximum 30 starts per hour
30 V 40 V     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 - 60 Hz     Image: Marcing for three-phase motors, 50 Hz     Image: Marcing	Rated operational current			
Max. rating for three-phase motors, 50 - 60 Hz     AC-3     A	AC-3			
AC-3 P KW   20 V 230 V P KW   380 V 400 V P KW   500 V P KW   660 V 690 V P KW   660 V 690 V P KW   Actuating voltage P KW   Actuating voltage F S   Notage AC/DC F S   Individual components of the combination F S   Mains contactor Q11 F F   Delta contactor Q13 F F   Star contactor Q13 F F	380 V 400 V	le	Α	12
20 V 230 V P KW 3   300 V 400 V P KW 5.5   500 V P KW 5.5   600 V 690 V P KW 5.5   Actuating voltage P KW 5.5   Notage AC/DC F S 200 V 500 V	Max. rating for three-phase motors, 50 - 60 Hz			
380 V 400 V     PA     KW     5.5       500 V     PA     KW     5.5       660 V 690 V     PA     KW     5.5       Max. changeover time     PA     KW     5.5       Actuating voltage     FA     SA     201       Individual components of the combination     FA     FA     Sarcontactor Q15       Delta contactor Q15     Factor Ga     Factor Ga     Factor Ga       Star contactor Q13     Factor Ga     Factor Ga     Factor Ga	AC-3			
Store     Reconstruction     Reconstruction     Reconstruction     Reconstruction     Reconstruction     Second and address anddres and address anddres anddress and address and addr	220 V 230 V	Р	kW	3
660 Y 690 Y P KW 5   Max. changeover time s 0   Actuating voltage s 30 Y 50 Hz, 240 V 60 Hz   Voltage AC/DC F 60 Y 60 Hz   Individual components of the combination F F   Mains contactor Q11 Parton Parton   Star contactor Q13 F Parton	380 V 400 V	Р	kW	5.5
Max. changeover time <td>500 V</td> <td>Р</td> <td>kW</td> <td>5.5</td>	500 V	Р	kW	5.5
Actuating voltage 30 V 50 Hz, 240 V 60 Hz   Voltage AC/DC AC operation   Individual components of the combination For to the combination   Mains contactor Q11 Part no.   Delta contactor Q15 Part no.   Star contactor Q13 Part no.	660 V 690 V	Ρ	kW	5.5
Voltage AC/DC AC operation   Individual components of the combination Image: Components of the combination   Mains contactor 011 Image: Components of the combination   Delta contactor 015 Image: Components of the combination   Star contactor 013 Image: Components of the combination	Max. changeover time		S	20
Individual components of the combination Image: Components of the combination   Mains contactor Q11 Part no.   Delta contactor Q15 Part no.   Star contactor Q13 Part no.	Actuating voltage			230 V 50 Hz, 240 V 60 Hz
Mains contactor Q11 Part no. DILM7-10 + DILA-XH120   Delta contactor Q15 Part no. DILM7-01 + DILA-XH120   Star contactor Q13 Part no. DILM7-01 + DILA-XH120	Voltage AC/DC			AC operation
Delta contactor Q15 Delta Contactor Q13 Delta Contactor	Individual components of the combination			
Star contactor Q13 Part no. DILM7-01 + DILA-XHI20	Mains contactor Q11		Part no.	
+ DILA-XHI20	Delta contactor Q15		Part no.	
Timing relay K1 Part no. ETR4-51	Star contactor Q13		Part no.	
	Timing relay K1		Part no.	ETR4-51

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	7
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.73
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	2.2
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	4.8
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 Us at AC 50HZ		V	230 - 230
Rated control supply voltage Us at AC 60HZ		V	240 - 240
Rated control supply voltage Us at DC		V	0 - 0
Voltage type for actuating			AC
Rated operation current le at AC-1, 400 V			12
Rated operation current le at AC-3, 400 V		А	12
Rated operation power at AC-3, 400 V		kW	5.5
Rated operation power NEMA		kW	0
Number of normally closed contacts as main contact			0
Number of main contacts as normally open contact			9
Type of electrical connection for auxiliary- and control current circuit			EV000415
Type of electrical connection of main circuit			Screw connection
Degree of protection (IP)			IP20
Degree of protection (NEMA)			Other
Rail mounting possible			Yes