

Star-Delta Starters Type NLSDM***C

Metal Enclosure to IP55
IEC947-4-1 Issue 11
Installation Instructions



Safety - Important.

All electrical equipment for operating on low voltages contain devices which are capable of causing serious or fatal injuries.

Only skilled & qualified personnel should carry out installation or maintenance work on this equipment and must adhere to all appropriate international, regional & local standards applicable.

CC Newlec YD-S-Rev1

Installation

1. Remove cover from starter by releasing the 4 captive lid screws with screwdriver.
2. Check that the separately supplied Thermal Overload current range is suitable for the motor involved. Fit the overload and assemble the pre-wired Start Contact as shown below.
3. Connect the leads provided in the Starter to the Thermal Overload - Violet wire from "C" Contactor terminal 13 to Overload terminal 95 and Red wire from "C" Contactor terminal 1 to Overload terminal 96.
4. Check the Contactor operating coil Voltage & Frequency is suitable for the intended supply and motor.
5. Remove appropriate top/bottom knockouts and mount the Starter base on a vertical surface, free from any vibrations.
6. Attach required conduits and/or cable glands.
7. Connect the supply and motor cables and ensure ALL terminals are tight.
8. Ensure that all Earth connections are fitted and tight, including the base to lid lead supplied as standard.
9. Once installed, adjust the Thermal Overload setting lever to match the Full Load Current of the motor to be protected.
10. Replace the cover, ensuring that the base mounted seal is in continuous contact with the lid and that the 4 off fixing screws are tight.

Thermal Overload Selection Chart								
Approximate Motor Rating			Overload	Overload Current Ranges - Amps				Recommended Fuse
400V/3PH AC-3		Approx		DOL Range		In Delta Loop Range		
kW	hp	FLC Amps	Reference	Min	Max	Min	Max	Amps Maximum
1.1	1.5	2.6	NLOLC1	1	1.6	1.7	2.7	4A
1.5	2	3.5	NLOLC2	1.6	2.5	2.7	4.3	6A
1.8	2.5	4.1	NLOLC2	1.6	2.5	2.7	4.3	6A
2.2	3	5	NLOLC3	2.5	4	4.3	6.9	10A
3	4	6.3	NLOLC3	2.5	4	4.3	6.9	10A
3.7	5	7.8	NLOLC4	4	6	6.9	10.3	16A
4	5.5	8.5	NLOLC4	4	6	6.9	10.3	16A
5.5	7.5	11.3	NLOLC5	5.5	8	9.5	13.8	20A
7.5	10	15.2	NLOLC6	7	10	12.1	17.3	20A
11	15	21.7	NLOLC7	10	13	17.3	22.5	25A
15	20	29.3	NLOLC8	13	18	22.5	31.5	32A

Enclosure Dimensions : 184h x 284w x 149d (fixing centres 4 x M4 240w x 140h)

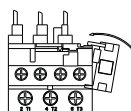
Note: This product is not suitable for DC applications.

ASSEMBLY / REMOVAL OF START CONTACT

The start contact is clipped into position adjacent to terminal 96 on the overload relay.

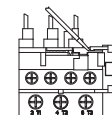
ASSEMBLY:

Locate contact on lower right hand corner of overload relay moulding and rotate anti-clockwise until firmly clipped into place



REMOVAL:

Place small screwdriver blade under leading edge of clip and lever off



Terminal capacity

	Main	Auxiliary
Contactor	2 x 4mm ² Max	2 x 1 - 2.5mm ²
Overload	2 x 4mm ² Max	2 x 1 - 2.5mm ²

Summary

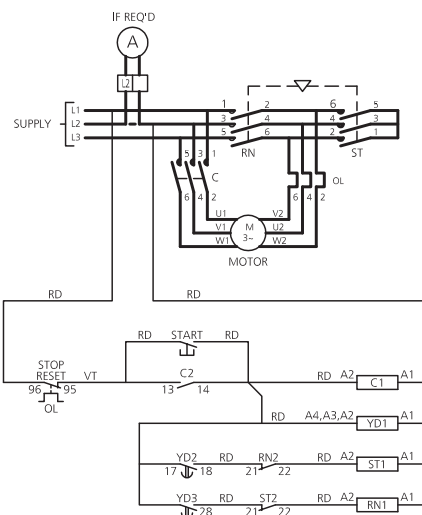
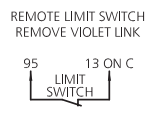
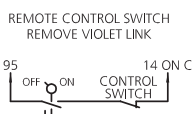
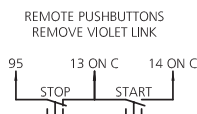
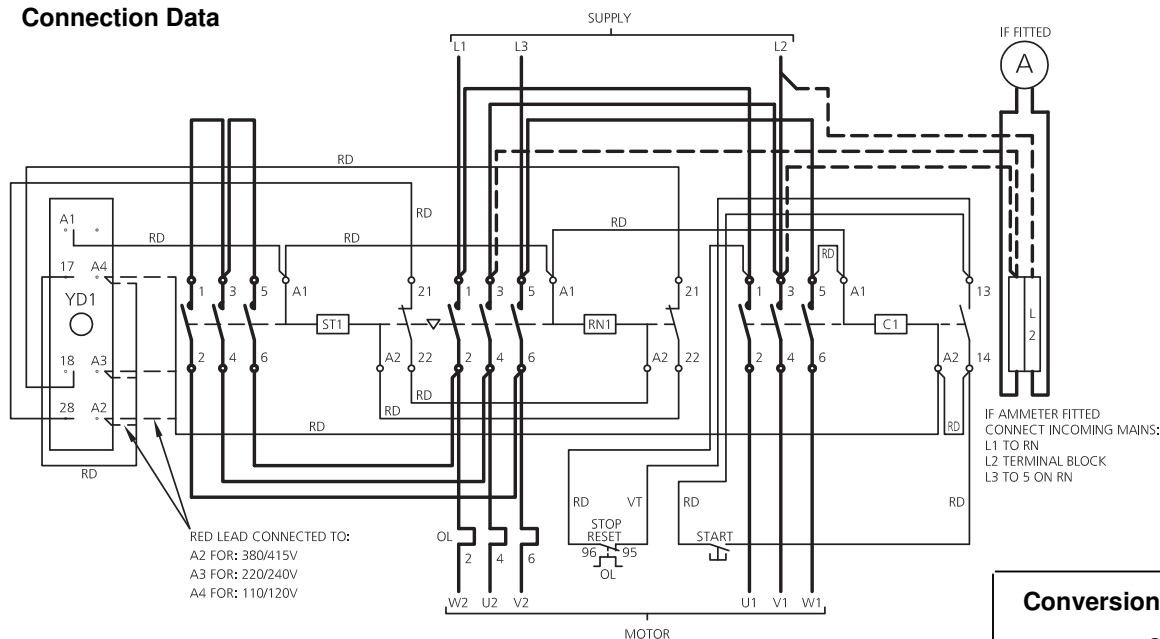
A range of Star-Delta motor starter with ingress protection to IP55. Painted steel enclosure.

Trip class 10 requirements IEC 947-4-1

1.05 x FLC	No tripping
1.2 x FLC	Trip within 2 hours
1.5 x FLC	Trip within 4 minutes
7.2 x FLC	Trip between 4s and 10s

NOTE: FLC = Full load current

Connection Data



SEPARATE NO-VOLT SUPPLY: REMOVE LINK BETWEEN
1 ON C & 96 ON OL AND 5 ON C & A1 ON C.
CONNECT SEPARATE SUPPLY TO 96 ON OL & A1 ON C.

FOR LINE & NEUTRAL CONTROL, REMOVE LINK BETWEEN
A1 ON C & 5 ON C AND CONNECT NEUTRAL TO A1 ON C

Conversion Chart

Motor full load current A	Overload setting Delta loop current A
5	2.9
6	3.5
7	4.0
8	4.6
9	5.2
10	5.8
12	7.0
14	8.1
16	9.3
18	10.4
20	11.6
25	14.5
30	17.4
35	20.3

Note : Overload relay is fitted in the delta loop. It is therefore necessary to use the conversion chart to obtain correct overload setting for a particular motor full load current.

Council of European Communities Directives: The products in this publication conform to relevant EEC Directives and EN Standards. Installation and use of such products must be carried out by competent, properly trained personnel, complying with any instructions supplied by the manufacturer. Liability for improper incorporation, assembly, use, processing, storing or handling of goods remains the sole responsibility of the individual, or company carrying out such work. This publication is for information only. Whilst every care has been taken in the preparation of this leaflet, no liability is accepted for any consequence of its use. No licence to use any patent should be assumed. All dimensions are approximate only and subject to change without notice, as are other technical features resulting from continual development and improvement.