

Solid-State Overload Relay Forms

The solid-state overload relay (SSOLR) is available on NEMA Size 00–7. For Class 8536, 8538, 8539, 8736, 8738, 8739 and 8810 devices.

Form Description

Type S Starter with Motor Logic™ Solid-State Overload Relay (SSOLR)

3: Motor Logic SSOLR, Class 10/20 (Selectable)

0: No additional modifications

1: N.O. auxiliary contact (field convertible to N.C.)

Special Factory-Assembled SSOLR/Contactor Size Combinations (When Applicable):

(must be specified on Size 00 starter orders)

Blank: Overload relay matched to the starter size (for example, Size 1 contactor and 9–27 A overload relay)

0: 6–18 A overload relay on the starter size indicated by the starter catalog number

1: 9–27 A overload relay on the starter size indicated by the starter catalog number

2: 15–45 A overload relay on the starter size indicated by the starter catalog number

3: 30–90 A overload relay on the starter size indicated by the starter catalog number

4: 45–135 A overload relay on the starter size indicated by the starter catalog number

8: 1.5–4.5 A overload relay on the starter size indicated by the starter catalog number (only offered on Feature Units)

9: 3–9 A overload relay on the starter size indicated by the starter catalog number

NOTE: Size 7 comes standard with the Motor Logic SSOLR, Class 10/20 (Selectable). No Form designation is required.

Special note for Class 8810 devices:

You **must** specify two separate Form numbers to get Motor Logic overload relays on two-speed starters.

The catalog number will be alphanumeric. Example:

- Open style, Size 4 two speed starter with Motor Logic SSOLRs
- Single winding, 460 V, constant or variable torque
- High speed FLA = 96 A
- Low speed FLA = 27 A (use Size 2 overload relay)

Catalog number to order: **8810SF01V02H30H302S**

Where:

- Form H30 is a Size 4 contactor with a 45–135 A Motor Logic SSOLR for high speed
- Form H302 is a 15–45 A Motor Logic SSOLR on the low speed contactor.

Table 16.324: Special Factory-Assembled Starter Combinations with Motor Logic SSOLR Protection

NEMA Contactor Size	SSOLR Size						
	00 1.5–4.5 A	0 3–9 A	1 6–18 A	2 9–27 A	3 15–45 A	4 30–90 A	5 45–135 A
00	H308	H30	—	—	—	—	—
0	H308	H309	H30	—	—	—	—
1	H308	H309	H300	H30	—	—	—
2	—	H309	H300	H301	H30	—	—
3	—	—	—	—	—	H30	—
4	—	—	—	—	—	—	H30

Adapted Bimetallic Overload Relay Forms

New

Table 16.325: Adapted Bimetallic Overload Relay for NEMA Type S Starter

This bimetallic overload relay is available on NEMA Sizes 00, 0 & 1 for Class 8536, 8538, 8539, 8736, 8738 and 8739 devices. To order a starter with the **adapter only**, add Form E to the catalog number (8536SBG2V02ES). When ordering with the adapter and bimetallic overload relay installed, use [Table 16.326](#) as a guide.

Form Description

Bimetallic Overload Relay

Class

- Class 10 Balanced Loads (with single phase sensitivity)
- Class 20 Balanced Loads (with single phase sensitivity)
- Class 10 Unbalanced Loads (without single phase sensitivity)
- Class 20 Unbalanced Loads (without single phase sensitivity)

FLA: Suffix from the TeSys D Overload Relays table below (for example, for 4–6 FLA, use suffix **10**)

Terminals: **0** for screw terminal and **6** for ring tongue terminals

Sample catalog number: **8536SCO3V02E2160S**

NEMA Size 1 starter controlling a 7.5 hp motor (11 FLA)—Bimetallic overload relay is LRD16L (9–13 FLA)

Table 16.326: TeSys D Overload Relays for Sizes 00–1 Type S Starters, Non-Reversing and Reversing, Classes 8536, 8538, 8539, 8736, 8738, and 8739

Current Setting Range Amperes	Class 20 with Single Phase Sensitivity	Class 20 without Single Phase Sensitivity	Class 20 with Single Phase Sensitivity	Class 20 without Single Phase Sensitivity	Factory Installed—Catalog Number Suffix (CP1 List)
	Screw Termination	Screw Termination	Ring Tongue Connector	Ring Tongue Connector	
0.40 to 0.63	LRD04L	LR3D04L	LRD04L6	LR3D04L6	04
0.63 to 1	LRD05L	LR3D05L	LRD05L6	LR3D05L6	05
1 to 1.6	LRD06L	LR3D06L	LRD06L6	LR3D06L6	06
1.6 to 2.5	LRD07L	LR3D07L	LRD07L6	LR3D07L6	07
2.5 to 4	LRD08L	LR3D08L	LRD08L6	LR3D08L6	08
4 to 6	LRD10L	LR3D10L	LRD10L6	LR3D10L6	10
5.5 to 8	LRD12L	LR3D12L	LRD12L6	LR3D12L6	12
7 to 10	LRD14L	LR3D14L	LRD14L6	LR3D14L6	14
9 to 13	LRD16L	LR3D16L	LRD16L6	LR3D16L6	16
12 to 18	LRD21L	LR3D21L	LRD21L6	LR3D21L6	21
17 to 24	LRD22L	LR3D22L	LRD22L6	LR3D22L6	22
23 to 32	LRD32L	LR3D32L	LRD32L6	LR3D32L6	32