Selection Information

Class	2510, 2511, 2512	T02, T36	8502 & 8702	8536 & 8736	8538 & 8738
		NEMA Style, Full Voltage Non-Reversing and Full Voltage Reversing			
Type of Product	Manual Starters and Switches, Non-Reversing, Reversing and Two Speed	TeSys™ N Contactors and Starters	AC Magnetic Contactors	AC Magnetic Starters	Combination Magnetic Starters with Disconnect Switch
Page	page 16-4	page 16-14	8502: page 16-30 8702: page 16-61	8536: page 16-35 8736: page 16-63	8538: page 16-48 8738: page 16-68
NEMA Sizes	M-0 M-1 M-1P	00–7	00–7	00–7	8538: 0– 6 8738: 0–5
Load Voltage	Type F: 277 Vac Types K & M: 600 Vac	600 Vac Max.	600 Vac Max.	600 Vac Max.	600 Vac Max.
Current Ratings (Continuous)	Type F: 16 A Types K & M: 30 A	9–810 A	9–810 A	9–810 A	8538: 18–540 A 8738: 18–270 A
Horsepower Ratings (Maximum)	Type F: 1 Type K: 20 Type M: 10	600	0.5–600	0.5–600	8538: 0.5–400 8738: 0.5–200
Overload Relay	Type F: Melting Alloy Type K: N/A Type M: Melting Alloy	Contactors: N/A Starters: Bimetallic (Size 00-2) or Solid-State	N/A	Melting Alloy Bimetallic (Size 00–2) Solid State	Melting Alloy Bimetallic (Size 0–2) Solid State
Enclosure Types	1, Flush Mount, 3R, 4, 4X, 7 & 9 and Open	Open	1, 3R, 4, 4X, 12/3R, 7 & 9 and Open	1, 3R, 4, 4X, 12/3R, 7 & 9 and Open	1, 4, 4X, 12/3R
Approvals	UL File E42243 NLRV UR File E42243 NLRV2 CSA File LR 25490	Contactors: UL File E164862 NLDX CSA LR43364 Class 3211-24 Starters: UL File E152395 NKJH CSA LR60905 Class 3211-24	UL File E78351 NLDX CSA 60905 Class 3211-04	UL File E78351 NLDX CSA 60905 Class 3211-04	UL File E152395 NKJH7 CSA LR584 Class 3211 04

Catalog Numbering System

Class 8536 **Type S C G 3 V02** **Form S**

General Classification

8502	Contactor
8536	Starter
8538	Combination Starter with Disconnect Switch
8539	Combination Starter with Circuit Breaker
8702	Reversing Contactor
8736	Reversing Starter
8738	Reversing Combination Starter with Disconnect Switch
8739	Reversing Combination Starter with Circuit Breaker
8810	Two Speed Starter ▲
8903	Type SLighting Contactors ▲
8940	Pumping Plant Panel ▲
8941	Duplex Controller ▲

▲Consult the Table of Contents for page numbers.

Design

Type S NEMA Contactors and Starters

NEMA Size		Rating (8903 only)	
A	Size 00		
B	Size 0	M	30 A
C	Size 1	P	60 A
D	Size 2	Q	100 A
E	Size 3	V	200 A
F	Size 4	X	300 A
G	Size 5	Y	400 A
H	Size 6	Z	600 A

Enclosure

A	NEMA 12 Industrial Use
F	NEMA 1 Flush Mounting General Purpose
G	NEMA 1 General Purpose Surface Mounting
H	NEMA 3R Rainproof
O	Open Style Device (no enclosure)
W	NEMA 4X Corrosion Resistant

Numerals

Used to designate specific physical arrangements, such as the number of poles, fuse clip size, etc.; but the numbering varies with the Class of the equipment. Consult the Digest listings for the specific device numbers

Voltage Code

AC operated devices without control transformer

Code	Voltage/Frequency
V01	24/60
V02	120/60 or 110/50
V06	480/60 or 440/50
V07	600/60 or 550/50
V08	208/60

V81: 480V Primary, 120 V Secondary for units using a fused transformer control circuit (Form F4T)

This is only a partial listing. Consult the Digest page for each product for more options.

Common Forms (factory modifications)

A	Start-Stop pushbuttons in the enclosure cover
C	Hand-Off-Auto selector switch in the enclosure cover
E	Bimetallic overload relays
F4T	Fused transformer control circuit (primary fuses only)
FF4T	Fused transformer control circuit (primary & secondary fuses)
H	Solid-state overload relay (SSOLR)
P1	Red ON pilot light in the enclosure cover
P2	Green OFF pilot light in the enclosure cover
S	Separate control circuit
X01	One normally closed auxiliary contact N.C.
X10	One normally open auxiliary contact N.O.

Consult "Factory Modifications (Forms)" for additional Form designations. When more than one Form is applied to a single device, arrange the Forms in alphanumerical order.

See Motor Overload Protection—Factory Modifications (Forms), page for additional Form designations and Solid-State Overload Relay Forms, page 16-120 for more information about Motor Logic SSOLRs.

Table 16.78: Coil Voltage Codes

Voltage		Code
60 Hz	50 Hz	
24 *[1]*	—	V01
120	110	V02
208	—	V08
240	220	V03
480	440	V06
600	550	V07
Specify	Specify	V99

NOTE: These are the common voltages, more are available. Contact Schneider Electric at www.schneider-electric.com/us/ for information about other voltage codes.

[1] 24 V coils are not available on Sizes 4–7. On sizes 00–3, **Form S** (separate control) must be specified.

Type SCO2 Size 1, 3-Pole Contactor

General Information

Class 8502 Type S magnetic contactors are used to switch heating loads, capacitors, transformers, and electric motors where overload protection is provided separately. Class 8502 contactors are available in NEMA Sizes 00–6. Type S contactors are designed for operation up to 600 Vac, 50–60 Hz.

NOTE: In Table 16.80, replace ●●● with the voltage code shown in Table 16.81.

Table 16.80: 3-Pole Polyphase—600 Vac Maximum—50–60 Hz

NEMA Size	Continuous Current Ratings	Motor Voltage	Max. Hp	Open Type	NEMA 1 General Purpose Enclosure	NEMA 4X Watertight, Dusttight Brushed Stainless Steel Enclosure*[2]*
				Type	Type	Type
00	9	200	1.5	SAO12●●●	SAG12●●●	Use Size 0
		230	1.5			
		460	2			
		575	2			
0	18	200	3	SBO2●●●	SBG2●●●	SBW12●●●
		230	3			
		460	5			
		575	5			
1	27	200	7.5	SCO2●●●	SCG2●●●	SCW12●●●
		230	7.5			
		460	10			
		575	10			
2	45	200	10	SDO2●●●	SDG2●●●	SDW12●●●
		230	15			
		460	25			
		575	25			
3	90	200	25	SEO2●●●	SEG2●●●	SEW12●●●
		230	30			
		460	50			
		575	50			
4	135	200	40	SFO2●●●	SFG2●●●	SFW12●●●
		230	50			
		460	100			
		575	100			
5	270	200	75	SGO2●●●	SGG2●●●	SGW12●●●
		230	100			
		460	200			
		575	200			
6	540	200	150	SHO2●●●	SHG2●●●	—
		230	200			
		460	400			
		575	400			

[2] Stainless steel enclosures are shipped with hubs installed in the top and bottom of the enclosure.

Type SCO3…H30
Size 1, Three-Pole Starter with Motor Logic™ SSOLR

Schneider Electric offers express shipping for factory modified NEMA Type 1 and Type 12/3R Enclosed Starters. When you need them fast, our Laser™ Delivery program is the answer to getting your product when you need it most. Ask for Laser™ Delivery, then select the product and the modifications you need when you place your order. It's as easy as that!

General Information

Type S magnetic starters are used for full-voltage starting and stopping of AC squirrel cage motors. Motor overload protection for three-phase starter applications can be provided through one of four options, as follows:

- **Solid-State Overload Relay Protection (Motor Logic™ SSOLR)**
  These ambient insensitive overload relays are available on Sizes 00 through 6. They provide phase loss and phase unbalance protection. To order, add Form **H30** (for selectable trip class 10 or 20 protection). For more information about Motor Logic SSOLRs, see page 16-102 and page 16-120. (Catalog no. example: 8536SCO3V06H30)

- **Adapted Bimetallic or Solid-State Overload Relay (NEMA Sizes 00–1)**
  The Adapted Bimetallic or Solid-State relay option includes a specially designed adapter that attaches with bus bars to the Type S NEMA contactor. This adapter allows direct mounting of the IEC Style bimetallic (LRD or LR3D) or solid-state (LR9D) overload relay. To order this starter configuration, add **Form E** (adapter only) to the standard catalog number. The LRD, LR3D, or LR9D overload relay must be purchased separately, based on the FLA of the motor, and installed in the field to properly operate the starter. For the Adapted Bimetallic device only, if the FLA is known at the time of purchase, you can order the starter with the overload relay installed. For more information and a list of options, see Adapted Bimetallic Overload Relay Forms, page 16-120. (Catalog no. example: 8536SCO3V06E—without overload relay).

- **TeSys™ T Motor Management System (NEMA Sizes 1–6)**
  TeSys™ T is a flexible system that integrates seamlessly into your automation system through five major communication protocols. TeSys T can predict what will happen in the process, as it accurately monitors current, voltage, and power over a wide range. For additional information about TeSys T Motor Management System, see page 16-104 and page 16-121. NOTE: The full catalog number contains a four-character Form number (for example, 8536SCO3V06**H616**).

- **Melting Alloy Type Thermal Overload Relays (NEMA Sizes 00–6)**
  Melting alloy type thermal overload relays utilize the use of replaceble thermal units. These thermal units must be ordered separately and installed to operate the starter. Thermal unit selection begins on page 16-134. The catalog number includes no Form number (for example, 8536SCO3V06).

3-Pole Polyphase—NEMA 1 and 4X

NOTE: In Table 16.86, replace ●●● with the voltage code shown in Table 16.88.

Table 16.86: 3-Pole Polyphase—600 Vac Maximum—50–60 Hz, with Motor Logic™ SSOLR*[9]*

NEMA Size	Continuous Current Ratings	Motor Voltage	Max. Hp	Open Type	NEMA 1 General Purpose Enclosure	NEMA 4X Watertight, Dusttight Brushed Stainless Steel Enclosure*[10]*	NEMA 4X Watertight, Dusttight, Corrosion-Resistant Glass-Polyester Enclosure
				Type	Type	Type	Type
00	9	200	1.5	SAO12●●●H30	SAG12●●●H30	Use Size 0	Use Size 0
		230	1.5				
		460	2				
		575	2				
0	18	200	3	SBO2●●●H30	SBG2●●●H30	SBW12●●●H30	SBW22●●●H30
		230	3				
		460	5				
		575	5				
1	27	200	7.5	SCO3●●●H30	SCG3●●●H30	SCW13●●●H30	SCW23●●●H30
		230	7.5				
		460	10				
		575	10				
2	45	200	10	SDO1●●●H30	SDG1●●●H30	SDW11●●●H30	SDW21●●●H30
		230	15				
		460	25				
		575	25				
3	90	200	25	SEO1●●●H30	SEG1●●●H30	SEW11●●●H30	SEW21●●●H30
		230	30				
		460	50				
		575	50				
4	135	200	40	SFO1●●●H30	SFG1●●●H30	SFW11●●●H30	SFW21●●●H30
		230	50				
		460	100				
		575	100				
5	270	200	75	SGO1●●●H30	SGG1●●●H30	SGW11●●●H30	—
		230	100				
		460	200				
		575	200				
6	540	200	150	SHO2●●●H30	SHG2●●●H30	—	—
		230	200				
		460	400				
		575	400				

[9] To order melting alloy overload relay, remove form "H30" from part number.
[10] Stainless steel enclosures are shipped with hubs installed in the top and bottom of the enclosure.