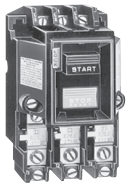
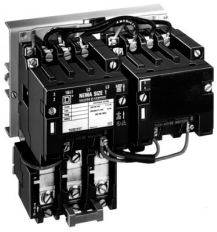
Selection Information











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.

Single-Phase, 4- and 5-Pole Polyphase—Open Style or NEMA 1 and 4X Enclosures

NOTE: In Table 16.84, replace ●●● with the voltage code shown in Table 16.81.

Table 16.84: 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[7]
				Type	Type	Type
1-Pole Single Phase						
0	18	115	1	SBO5●●●	SBG5●●●	SBW15●●●
		230	2			
1	27	115	2	SCO5●●●	SCG5●●●	SCW15●●●
		230	3			
2-Pole Single Phase						
00	9	115	1/3	SAO11●●●	SAG11●●●	Use Size 0
		230	1			
0	18	115	1	SBO1●●●	SBG1●●●	SBW11●●●
		230	2			
1	27	115	2	SCO1●●●	SCG1●●●	SCW11●●●
		230	3			
2	45	115	3	SDO1●●●	SDG1●●●	SDW11●●●
		230	7-1/2			
3	90	—	—	SEO1●●●	SEG1●●●	SEW11●●●
		—	—			
4	135	—	—	SFO1●●●	SFG1●●●	SFW11●●●
5	270	—	—	SGO1●●●	SGG1●●●	SGW11●●●
6	540	—	—	SHO1●●●	SHG1●●●	—
4-Pole Polyphase						
0	18	200	3	SBO3●●●	SBG3●●●	SBW13●●●
		230	3			
		460	5			
		575	5			
1	27	200	7-1/2	SCO3●●●	SCG3●●●	SCW13●●●
		230	7-1/2			
		460	10			
		575	10			
2	45	200	10	SDO3●●●	SDG3●●●	SDW13●●●
		230	15			
		460	25			
		575	25			
3	90	200	25	SEO3●●●	SEG3●●●	SEW13●●●
		230	30			
		460	50			
		575	50			
4	135	200	40	SFO3●●●	SFG3●●●	SFW13●●●
		230	50			
		460	100			
		575	100			
5-Pole Polyphase						
0	18	200	3	SBO4●●●	SBG4●●●	SBW14●●●
		230	3			
		460	5			
		575	5			
1	27	200	7-1/2	SCO4●●●	SCG4●●●	SCW14●●●
		230	7-1/2			
		460	10			
		575	10			
2	45	200	10	SDO4●●●	SDG4●●●	SDW14●●●
		230	15			
		460	25			
		575	25			
3	90	200	25	SEO4●●●	SEG4●●●	SEW14●●●
		230	30			
		460	50			
		575	50			
4	135	200	40	SFO4●●●	SFG4●●●	SFW14●●●
		230	50			
		460	100			
		575	100			

Dimensions: page 16-41
Factory Modifications (Forms): page 16-117
Separate Enclosures (Class 9991): page 16-111
Replacement Parts (Class 9998): page 16-93
Type S Accessories (Class 9999): page 16-127

For How to Order Information, see page 16-28.

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

Type SCO2 Size 1, 3-Pole Contactor

General Information

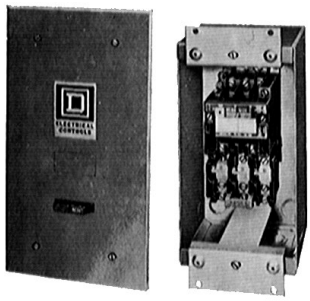
Class 8502 Type S magnetic contactors are used to switch heating loads, capacitors, transformers, and electric motors where overload protection is provided separately. Class 8502 contactors are available in NEMA Sizes 00–6. Type S contactors are designed for operation up to 600 Vac, 50–60 Hz.

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.



Flush Mounting Starter with Pull Box and Mounting Strap and Plaster Adjustment Feature

Type SCG8
NEMA 1 Enclosure

Flush Mounting, General Purpose Separate Enclosures

Flush mounting, general purpose separate enclosures for Type S Sizes 0–2, 30–60 A are provided with knock-outs in the cover for field assembly of one Class 9999 push button or selector switch kit and one Class 9999 pilot light kit. (Refer to Class 9999 for selection.) For Type S Size 3, 100 A, three closing plates are provided for installation of Class 9001 Type K oiltight control units. For enclosure dimensions, refer to Table 16.299.

Table 16.295: Flush Mounting Selection Table

For Use With		NEMA Size or Ampere Rating	Flush Mounting General Purpose (Components)			
			Flush Plates		Mounting Strap	Pull Box
Class	Types (All Pole Arrangements)		Standard	Stainless Steel *[7]*		
			Type	Type	Type	Type
2510	MBO, MCO	MO M1 M1P	MF1	(with pullbox and plaster adjustment)		
			MF2	(without pullbox but with mounting strap)		
Magnetic Contactors						
8502*[8]*	SBO, SCO	0, 1	—	—	—	—
	SDO	2	—	—	SDF2	—
	SEO	3	SEF11	(Enclosure Complete)		
Magnetic Starters						
8536	SBO, SCO	0, 1	—	—	—	—
	SDO	2	—	—	SDF2	—
Lighting Contactors Non-Combination Electrically and Mechanically Held						
8903*[8]*	LO, LXO	20 A	—	—	SDF2	—
	SMO 1–4	30 A	—	—	—	—
	SMO 10–13	30 A	—	—	—	—
	SPO 1–4	60 A	—	—	SDF2	—
	SPO 10–13	60 A	—	—	SDF2	—
	SQO 1–13	100 A	SEF11	(Enclosure Complete)		

NEMA 1 General Purpose separate enclosures in Table 16.296, when used with open style components, are equivalent to a standard factory assembled control device.

Table 16.296: NEMA 1 Selection Table

For Use With			NEMA 1 General Purpose Enclosure Class 9991
Class	Type	No. of Poles	Type
2510	F and K	All	—
	M–Sizes M0 and M1	All	—
	M–Size M1P	All	—
8501	CO	All	UE1
	XO	2–12, 2–4 **with** attachments	UE7
	XDO	2–8 **without** attachments	
8502	SAO, SBO, SCO	2–4	—
	SDO	2–4	—
	SEO	2–4	—
	SFO	2–4	—
8536	SAO, SBO, SCO	2–4	SCG8
	SDO	2–4	SDG8
	SEO	2–4	SEG8 *[8] [9]*
	SFO	2–4	—
	SGO	3	—
8702, 8736	SAO, SBO, SCO	All	SCG9
	SDO	All	SDG9 *[10]*
8903	LO, LXO	All	LXG1 *[11]*
	SMO	All	—
	SPO	All	—
	SQO	All	—
	SVO	All	—
8910	DP	1–2	DPG1
	DPA12, 13, 22, 23, 32, 33, 42, 43	2–3	DPG1
	DPA14, 24, 34, 44, 52, 53	2–4	DPG2
	DPA62, 63	2–3	DPG3
	DPA72, 73, 92, 93	2–3	—
	H, J, K, L & M	All	UE6
8911	DPSO13, 23, 33, 43	3	—
	DPSO53	3	—
	DPSO63, 73, 93	3	SEG8
9050	AO (Single Head)	All	UE6
	HO	All	UE6
9070	EO51, EO61, EO71, K750, K1000	—	SDG4
	EO2, EO3, EO4, EO15, EO16 EO18, EO19, T75, T100, T150, T200, T250, T300, T350, T500	—	—
	EO1, EO17, T50	—	UE7

[7] The standard cabinet has a brushed finish.
[8] For contactors, replace the reset assembly with a proper closing plate. For flush mounting, use Class 9999 Type SG2. (Class 9991 Types SEF11 and LF1 are designed for contactors only, so reset closing plates are not required.)
[9] This enclosure is suitable only for starters with a **melting alloy**, **solid-state**, or **adapted bimetallic** overload relay.
[10] For horizontally arranged Class 8702 contactors, replace the reset assembly with a Class 9001 Type K51 closing plate.
[11] If cover mounted control units are required, select an oversized enclosure listed in Table 16.297.