

Selection Information



16 NEMA AND DEFINITE PURPOSE CONTACTORS AND STARTERS

| Class | 2510, 2511, 2512 | T02, T36 | 8502 & 8702 | 8536 & 8736 | 8538 & 8738 |
|------------------------------|--|--|--|--|---|
| Type of Product | Manual Starters and Switches, Non-Reversing, Reversing and Two Speed | NEMA Style, Full Voltage Non-Reversing and Full Voltage Reversing | | | |
| | | 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

Type S C G 3 V02

Form S

Class 8536

General Classification

| | |
|------|--|
| 8502 | Contactors |
| 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 S Lighting 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 alphanumeric order.

See [Motor Overload Protection—Factory Modifications \(Forms\)](#), page 16-120 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.