



Duplex starter w/o alternator, Size 0, Three phase full voltage, Solid-state overload relay, OLR amp range 5.5-22A, 380-440/440-480V 50/60Hz coil, Non-combination type, Encl NEMA type 4X 304 S-Steel, Water/dust tight noncorrosive

|   |                                      |
|---|--------------------------------------|
| product brand name  | Class 83                             |
| design of the product   | Duplex controller without alternator |
| special product feature   | ESP200 overload relay                |
| <b>General technical data</b>   |                                      |
| weight [lb]   | 40 lb                                |
| Height x Width x Depth [in]   | 20 × 16 × 6 in                       |
| touch protection against electrical shock                               | NA for enclosed products             |
| installation altitude [ft] at height above sea level maximum            | 6560 ft                              |
| ambient temperature [°F]  |                                      |
| • during storage  | -22 ... +149 °F                      |
| • during operation  | -4 ... +104 °F                       |
| ambient temperature   |                                      |
| • during storage  | -30 ... +65 °C                       |
| • during operation  | -20 ... +40 °C                       |
| country of origin   | USA                                  |
| <b>Horsepower ratings</b>   |                                      |
| yielded mechanical performance [hp] for 3-phase AC motor                |                                      |
| • at 200/208 V rated value  | 3 hp                                 |
| • at 220/230 V rated value  | 3 hp                                 |
| • at 460/480 V rated value  | 0 hp                                 |
| • at 575/600 V rated value  | 0 hp                                 |
| <b>Contactors</b>   |                                      |
| size of contactor   | NEMA controller size 0               |
| number of NO contacts for main contacts                                 | 3                                    |
| operating voltage for main current circuit at AC at 60 Hz maximum       | 600 V                                |
| operational current at AC at 600 V rated value                          | 18 A                                 |
| mechanical service life (operating cycles) of the main contacts typical | 10000000                             |
| <b>Auxiliary contact</b>  |                                      |
| number of NC contacts at contactor for auxiliary contacts               | 0                                    |
| number of NO contacts at contactor for auxiliary contacts               | 1                                    |
| number of total auxiliary contacts maximum                              | 8                                    |
| contact rating of auxiliary contacts of contactor according to UL       | 10A@600VAC (A600), 5A@600VDC (P600)  |
| <b>Coil</b>   |                                      |
| type of voltage of the control supply voltage                           | AC                                   |
| control supply voltage  |                                      |
| • at DC rated value   | 0 ... 0 V                            |
| • at AC at 50 Hz rated value  | 380 ... 440 V                        |
| • at AC at 60 Hz rated value  | 440 ... 480 V                        |
| holding power at AC minimum   | 8.6 W                                |

|  |   |
|--|---|
| apparent pick-up power of magnet coil at AC  | 218 VA  |
| apparent holding power of magnet coil at AC  | 25 VA   |
| operating range factor control supply voltage rated value of magnet coil   | 0.85 ... 1.1  |
| percentual drop-out voltage of magnet coil related to the input voltage  | 50 %  |
| ON-delay time  | 19 ... 29 ms  |
| OFF-delay time   | 10 ... 24 ms  |
| <b>Overload relay</b>  |   |
| product function   |   |
| • overload protection  | Yes   |
| • phase failure detection  | Yes   |
| • asymmetry detection  | Yes   |
| • ground fault detection   | Yes   |
| • test function  | Yes   |
| • external reset   | Yes   |
| reset function   | Manual, automatic and remote                        |
| adjustable current response value current of the current-dependent overload release                                      | 5.5 ... 22 A  |
| tripping time at phase-loss maximum  | 3 s   |
| relative repeat accuracy   | 1 %   |
| product feature protective coating on printed-circuit board  | Yes   |
| number of NC contacts of auxiliary contacts of overload relay  | 1   |
| number of NO contacts of auxiliary contacts of overload relay  | 1   |
| operational current of auxiliary contacts of overload relay  |   |
| • at AC at 600 V   | 5 A   |
| • at DC at 250 V   | 1 A   |
| contact rating of auxiliary contacts of overload relay according to UL   | 5A@600VAC (B600), 1A@250VDC (R300)                  |
| insulation voltage (Ui)  |   |
| • with single-phase operation at AC rated value  | 600 V   |
| • with multi-phase operation at AC rated value   | 300 V   |
| <b>Enclosure</b>   |   |
| degree of protection NEMA rating of the enclosure  | NEMA 4x 304 stainless steel enclosure               |
| design of the housing  | dustproof, waterproof & resistant to corrosion      |
| <b>Mounting/wiring</b>   |   |
| mounting position  | Vertical  |
| fastening method   | Surface mounting and installation                   |
| type of electrical connection for supply voltage line-side   | Screw-type terminals                                |
| tightening torque [lbf-in] for supply  | 20 ... 20 lbf-in                                    |
| type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded                        | 1x (14 ... 2 AWG)                                   |
| temperature of the conductor for supply maximum permissible  | 75 °C   |
| material of the conductor for supply   | AL or CU  |
| type of electrical connection for load-side outgoing feeder  | Screw-type terminals                                |
| tightening torque [lbf-in] for load-side outgoing feeder   | 20 ... 20 lbf-in                                    |
| type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded       | 1x (14 ... 2 AWG)                                   |
| temperature of the conductor for load-side outgoing feeder maximum permissible   | 75 °C   |
| material of the conductor for load-side outgoing feeder  | AL or CU  |
| type of electrical connection of magnet coil   | Screw-type terminals                                |
| tightening torque [lbf-in] at magnet coil  | 5 ... 12 lbf-in                                     |
| type of connectable conductor cross-sections of magnet coil for AWG cables single or multi-stranded                      | 2x (16 ... 12 AWG)                                  |
| temperature of the conductor at magnet coil maximum permissible  | 75 °C   |
| material of the conductor at magnet coil   | CU  |
| type of electrical connection at contactor for auxiliary contacts  | Screw-type terminals                                |
| tightening torque [lbf-in] at contactor for auxiliary contacts   | 10 ... 15 lbf-in                                    |
| type of connectable conductor cross-sections at contactor for AWG cables for auxiliary contacts single or multi-stranded | 1x (12 AWG), 2x (16 ... 14 AWG), 2x (18 ... 16 AWG) |
| temperature of the conductor at contactor for auxiliary contacts maximum permissible                                     | 75 °C   |

|   |                      |
|---|----------------------|
| material of the conductor at contactor for auxiliary contacts   | CU                   |
| type of electrical connection at overload relay for auxiliary contacts  | Screw-type terminals |
| tightening torque [lbf-in] at overload relay for auxiliary contacts   | 7 ... 10 lbf-in      |
| type of connectable conductor cross-sections at overload relay for AWG cables for auxiliary contacts single or multi-stranded | 2x (20 ... 14 AWG)   |
| temperature of the conductor at overload relay for auxiliary contacts maximum permissible                                     | 75 °C                |
| material of the conductor at overload relay for auxiliary contacts  | CU                   |

#### Short-circuit current rating

|   |   |
|---|---|
| design of the fuse link for short-circuit protection of the main circuit required | 10kA@600V (Class H or K); 100kA@600V (Class R or J) |
| design of the short-circuit trip  | Thermal magnetic circuit breaker                    |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                |   |
| • at 240 V  | 14 kA   |
| • at 480 V  | 10 kA   |
| • at 600 V  | 10 kA   |
| certificate of suitability  | NEMA ICS 2; UL 508; CSA 22.2, No.14                 |

#### Further information

**Industrial Controls - Product Overview (Catalogs, Brochures,...)**

[www.usa.siemens.com/iccatalog](http://www.usa.siemens.com/iccatalog)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:83CUD95WH>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

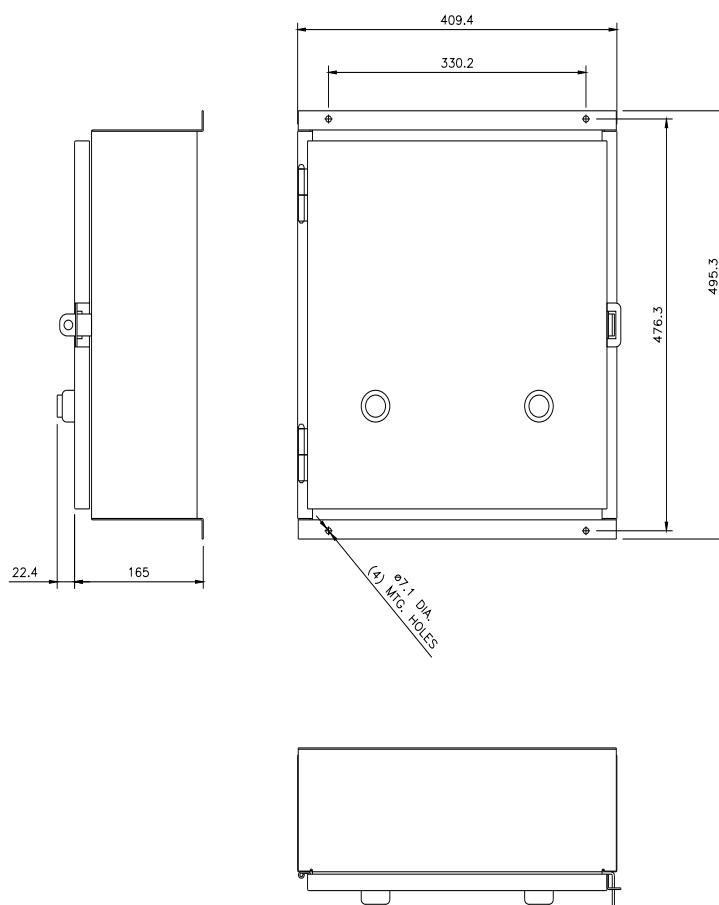
<https://support.industry.siemens.com/cs/US/en/ps/US2:83CUD95WH>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:83CUD95WH&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:83CUD95WH&lang=en)

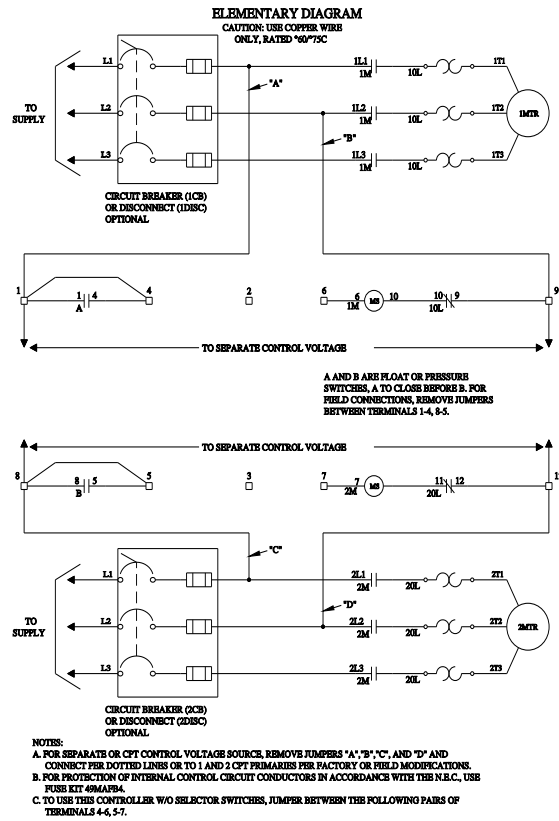
**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:83CUD95WH/certificate>



# SCHEMATIC DIAGRAM

Class 83 & 84 Duplex W/Manual Alternation Size 0-4



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