



Duplex starter w/o alternator Size 4 Three phase full voltage Solid-state overload relay OLR amp range 50-200A Combination type Two 200A disconnect switches Encl NEMA type 4X 304 S. Steel Water/dust tight non-corrosive

|   |   |
|---|---|
| product brand name  | Class 84  |
| design of the product   | Duplex controller with two non-fusible disconnect switches without alternator |
| special product feature   | ESP200 overload relay   |
| <b>General technical data</b>   |   |
| weight [lb]   | 106 lb  |
| Height x Width x Depth [in]   | 56 × 29 × 10 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  | 40 hp   |
| • at 220/230 V rated value  | 50 hp   |
| • at 460/480 V rated value  | 100 hp  |
| • at 575/600 V rated value  | 100 hp  |
| <b>Contactors</b>   |   |
| size of contactor   | NEMA controller size 4  |
| 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                          | 135 A   |
| mechanical service life (operating cycles) of the main contacts typical | 5000000   |
| <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                              | 7   |
| 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   | 22 W  |

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|--|--|
| apparent pick-up power of magnet coil at AC  | 510 VA   |
| apparent holding power of magnet coil at AC  | 51 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  | 18 ... 34 ms                                   |
| OFF-delay time   | 10 ... 12 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                   |
| trip class   | CLASS 5 / 10 / 20 (factory set) / 30           |
| adjustable current response value current of the current-dependent overload release                                | 50 ... 200 A                                   |
| tripping time at phase-loss maximum  | 3 s  |
| relative repeat accuracy   | 1 %  |
| 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>Disconnect Switch</b>   |  |
| response value of switch disconnecter  | 200A / 600V                                    |
| design of fuse holder  | non-fusible                                    |
| operating class of the fuse link   | non-fusible                                    |
| <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   | Box lug  |
| tightening torque [lbf-in] for supply  | 275 ... 275 lbf-in                             |
| type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded                  | 1x (6 AWG ... 300 Kcmil)                       |
| 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  | Box lug  |
| tightening torque [lbf-in] for load-side outgoing feeder   | 200 ... 200 lbf-in                             |
| type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded | 1x (6 AWG ... 250 MCM)                         |
| temperature of the conductor for load-side outgoing feeder maximum permissible                                     | 75 °C  |
| material of the conductor for load-side outgoing feeder  | 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) |
| 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=US2:84JUH95WDH>

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

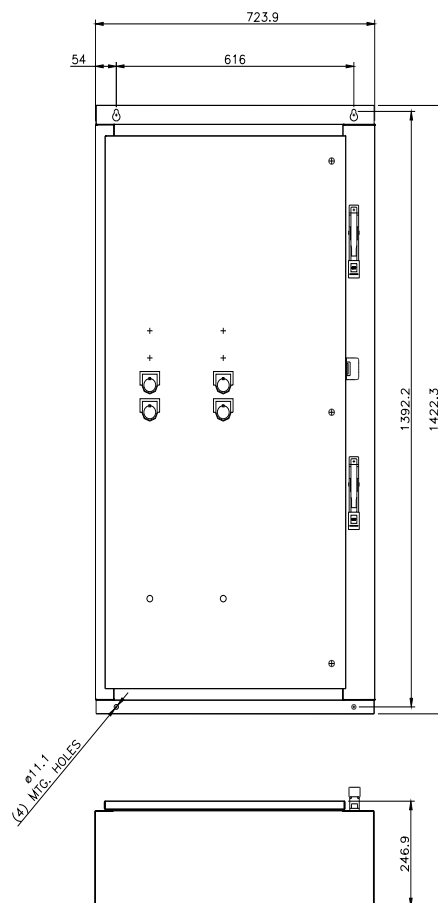
<https://support.industry.siemens.com/cs/US/en/ps/US2:84JUH95WDH>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:84JUH95WDH&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:84JUH95WDH&lang=en)

Certificates/approvals

<https://support.industry.siemens.com/cs/US/en/ps/US2:84JUH95WDH/certificate>



## SCHEMATIC DIAGRAM

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



**NOTE:**  
A. FOR SEPARATE OR CPE CONTROL VOLTAGE SOURCE, REMOVE FUSERS "A"/"B"/"C", AND "7" AND CONNECT THE DOTTED LINES OR TO 1 AND 2 OF TERMINALS FOR FACTORY OR FIELD MODIFICATIONS.  
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE SIZE 10A/25A.  
C. TO USE THE CONTROLLER IN TWO REVERSE SWITCHING, FUSERS BETWEEN THE FOLLOWING PAIRS OF TERMINALS 6-4, 5-7.

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