

Duplex starter with alternator Size 0 Three phase full voltage Solid-state overload relay OLRelay amp range 5.5-22A 110VAC 50HZ / 120VAC 60HZ coil Non-combination type Encl NEMA type 4 painted steel Water/dust tight weather proof



Figure similar

| General technical data                                       |                          |
|--|--------------------------|
| Weight [lb]  | 40 lb                    |
| Height x Width x Depth [in]                                  | 20 × 16 × 6 in           |
| 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          |
| Ambient temperature [°F] during operation                    | -4 ... +104 °F           |
| Ambient temperature during storage                           | -30 ... +65 °C           |
| Ambient temperature during operation                         | -20 ... +40 °C           |
| Country of origin  | USA                      |

| Horsepower ratings   |      |
|--|------|
| Yielded mechanical performance [hp] for three-phase AC motor                 |      |
| <ul style="list-style-type: none"> <li>• at 200/208 V rated value</li> </ul> | 3 hp |
| <ul style="list-style-type: none"> <li>• at 220/230 V rated value</li> </ul> | 3 hp |
| <ul style="list-style-type: none"> <li>• at 460/480 V rated value</li> </ul> | 0 hp |

- at 575/600 V rated value

0 hp

### Contactors

|   |          |
|---|----------|
| Number of NO contacts for main contacts                                 | 3        |
| Operating voltage for main current circuit at AC at 60 Hz maximum       | 600 V    |
| Operating current at AC at 600 V rated value                            | 18 A     |
| Mechanical service life (switching cycles) of the main contacts typical | 10000000 |

### Auxiliary contact

|   |                                     |
|---|-------------------------------------|
| 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) |

### Coil

|  |               |
|--|---------------|
| Type of voltage of the control supply voltage                                  | AC            |
| Control supply voltage   |               |
| <ul style="list-style-type: none"> <li>• at DC rated value</li> </ul>          | 0 ... 0 V     |
| <ul style="list-style-type: none"> <li>• at AC at 60 Hz rated value</li> </ul> | 120 ... 120 V |
| <ul style="list-style-type: none"> <li>• at AC at 50 Hz rated value</li> </ul> | 110 ... 110 V |
| Holding power at AC minimum  | 8.6 W         |
| Apparent pick-up power of magnet coil at AC                                    | 218 V·A       |
| Apparent holding power of magnet coil at AC                                    | 25 V·A        |
| Operating range factor control supply voltage rated value of magnet coil       | 0.85 ... 1.1  |
| Percental drop-out voltage of magnet coil related to the input voltage         | 50 %          |
| Switch-on delay time   | 19 ... 29 ms  |
| Off-delay time   | 10 ... 24 ms  |

### Overload relay

|  |   |
|--|---|
| Product function   |   |
| <ul style="list-style-type: none"> <li>• Overload protection</li> <li>• Phase failure detection</li> <li>• Phase unbalance</li> <li>• Ground fault detection</li> <li>• Test function</li> <li>• External reset</li> </ul> | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| Reset function   | Manual, automatic and remote                                      |
| Adjustable pick-up value current of the current-dependent overload release   | 5.5 ... 22 A  |

|   |                                    |
|---|------------------------------------|
| Trip 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                                  |
| Operating current of auxiliary contacts of overload relay   | 5 A<br>1 A                         |
| <ul style="list-style-type: none"> <li>• at AC at 600 V</li> <li>• at DC at 250 V</li> </ul>  |                                    |
| Contact rating of auxiliary contacts of overload relay according to UL  | 5A@600VAC (B600), 1A@250VDC (R300) |
| Insulation voltage  | 600 V<br>300 V                     |
| <ul style="list-style-type: none"> <li>• with single-phase operation at AC rated value</li> <li>• with multi-phase operation at AC rated value</li> </ul> |                                    |

| Enclosure   |  |
|---|--|
| Degree of protection NEMA rating of the enclosure | NEMA 4 enclosure                       |
| Design of the housing                             | Dust-tight, watertight & weather proof |

| Mounting/wiring   |                                   |
|---|-----------------------------------|
| (mounting position)   | Vertical                          |
| (mounting type)   | 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 at AWG conductors 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 at AWG conductors 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 at AWG conductors 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 at AWG conductors 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 at AWG conductors 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   |

### 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=US2:83CUD92EF>

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

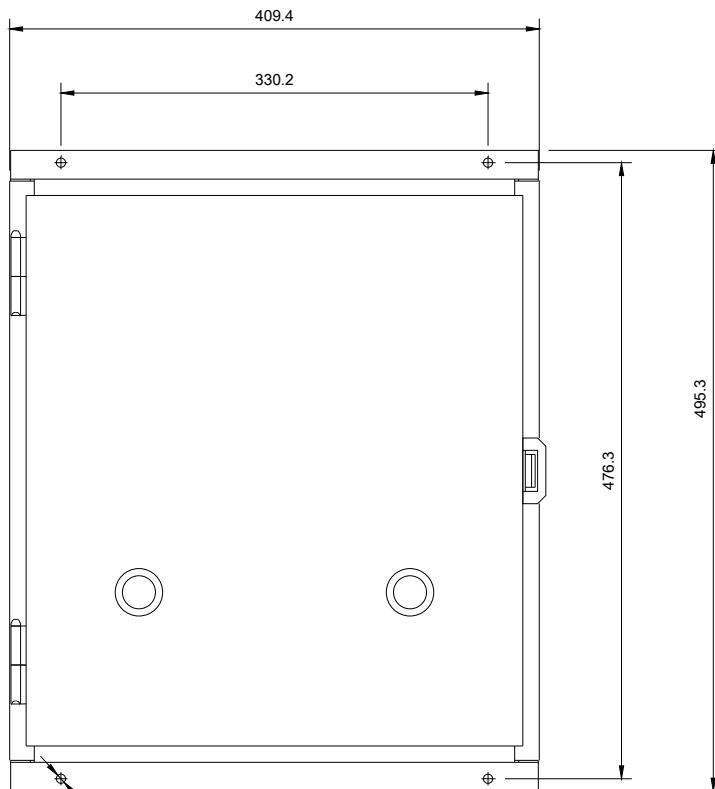
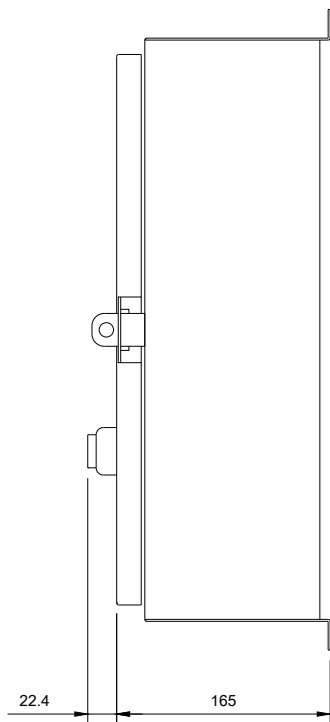
<https://support.industry.siemens.com/cs/US/en/ps/US2:83CUD92EF>

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

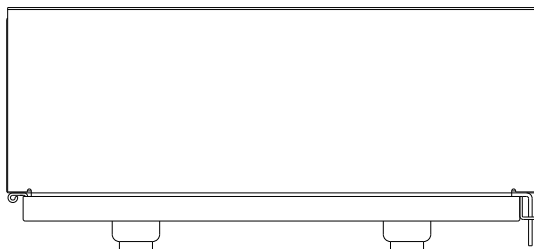
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**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:83CUD92EF/certificate>

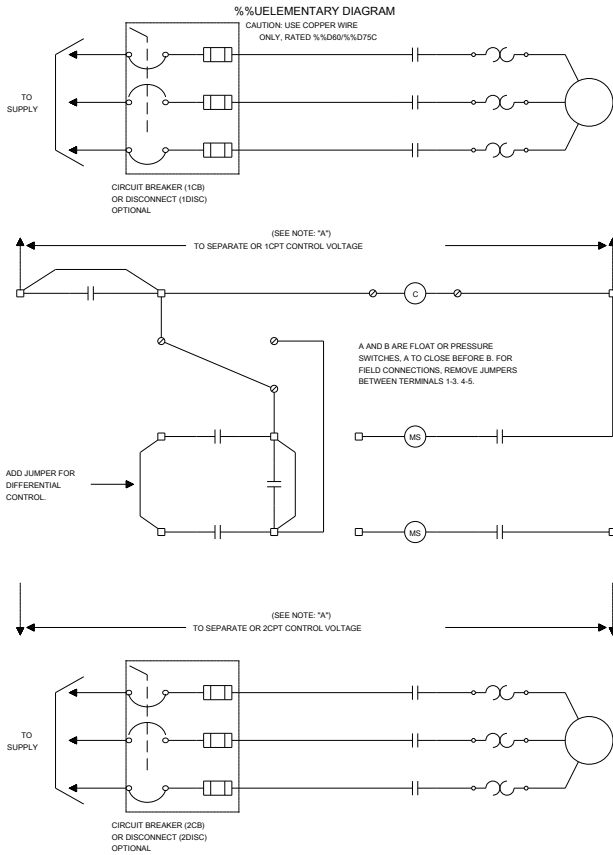


(\*) MFG RULES



# %%USCHEMATIC DIAGRAM

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



- NOTES:
- A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE, CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT PRIMARIES PER FACTORY OR FIELD MODIFICATIONS.
  - B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT 49MFB4.
  - C. TO USE THIS CONTROLLER TWO SELECTOR SWITCHES, JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS 4-6, 5-7, AND 9-2.
  - D. FOR TWO POSITION SELECTOR SWITCHES, WIRE AS SHOWN ALSO ADD JUMPER BETWEEN TERMINALS 9-2.
  - E. SEPARATE SOURCE CONNECTIONS TO TERMINALS 8 AND 12 ARE REQUIRED ONLY WHEN THREE POSITION SELECTOR SWITCH IS BUILT IN.

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