



Figure similar

Duplex starter w/o alternator, Size 1, Three phase full voltage, Amb. compensate bimetal OLR, contactor A rating 27A, 110V 50Hz / 120V 60Hz coil, Combination type, Two 3A circuit breakers, Enc NEMA type 4 painted steel, Water/dust tight for outdoors

|                                                                         |                                                                                                                            |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| product brand name                                                      | Class 84                                                                                                                   |
| design of the product                                                   | Duplex controller with two MCPs without alternator                                                                         |
| special product feature                                                 | Gravity dropout contacts; 45 degree, wedge action contacts; Self-rising pressure type control terminals; Encapsulated coil |
| <b>General technical data</b>                                           |                                                                                                                            |
| weight [lb]                                                             | 70 lb                                                                                                                      |
| Height x Width x Depth [in]                                             | 34 × 25 × 8 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                                              | 0.5 hp                                                                                                                     |
| • at 220/230 V rated value                                              | 0.75 hp                                                                                                                    |
| • at 460/480 V rated value                                              | 1.5 hp                                                                                                                     |
| • at 575/600 V rated value                                              | 2 hp                                                                                                                       |
| <b>Contactor</b>                                                        |                                                                                                                            |
| size of contactor                                                       | NEMA controller size 1                                                                                                     |
| 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                          | 27 A                                                                                                                       |
| mechanical service life (switching 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)                                                                                        |

| 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> <li>at AC at 50 Hz rated value</li> <li>at AC at 60 Hz rated value</li> </ul> | 0 ... 0 V<br>110 ... 110 V<br>120 ... 120 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>test function</li> <li>external reset</li> </ul>                        | Yes<br>Yes<br>Yes                                |
| reset function                                                                                                                              | Manual and automatic                             |
| adjustment range of thermal overload trip unit                                                                                              | 0.85 ... 1.15                                    |
| number of NC contacts of auxiliary contacts of overload relay                                                                               | 1                                                |
| number of NO contacts of auxiliary contacts of overload relay                                                                               | 0                                                |
| operational current of auxiliary contacts of overload relay                                                                                 |                                                  |
| <ul style="list-style-type: none"> <li>at AC at 600 V</li> <li>at DC at 250 V</li> </ul>                                                    | 10 A<br>5 A                                      |
| contact rating of auxiliary contacts of overload relay according to UL                                                                      | 10A@600VAC (A600), 5A@250VDC (P300)              |
| Enclosure                                                                                                                                   |                                                  |
| degree of protection NEMA rating of the enclosure                                                                                           | NEMA Type 4                                      |
| design of the housing                                                                                                                       | Dust-tight, watertight & weather proof           |
| Circuit Breaker                                                                                                                             |                                                  |
| type of the motor protection                                                                                                                | Motor circuit protector (magnetic trip only)     |
| operational current of motor circuit breaker rated value                                                                                    | 3 A                                              |
| adjustable current response value current of instantaneous short-circuit trip unit                                                          | 10 ... 35 A                                      |
| Mounting/wiring                                                                                                                             |                                                  |
| mounting position                                                                                                                           | Vertical                                         |
| fastening method                                                                                                                            | Surface mounting and installation                |
| type of electrical connection for supply voltage line-side                                                                                  | Box lug                                          |
| type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded                                            | 1x (14 AWG ... 10 AWG) or 1x (12 AWG ... 10 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                                                                                    | 35 ... 50 lbf·in                                 |
| 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 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 at 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                                                          | 5 ... 12 lbf-in                                     |
| type of connectable conductor cross-sections at overload relay at AWG cables for auxiliary contacts single or multi-stranded | 2x (16 ... 12 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 short-circuit trip                                                                     | Instantaneous trip circuit breaker   |
| breaking capacity maximum short-circuit current (Icu)                                                |                                      |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul> | 100 kA<br>100 kA<br>25 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=US2:84DPB95EMF81>

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

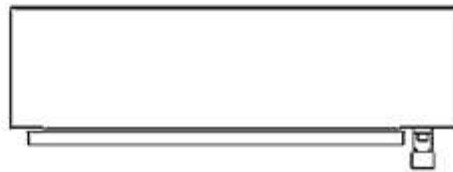
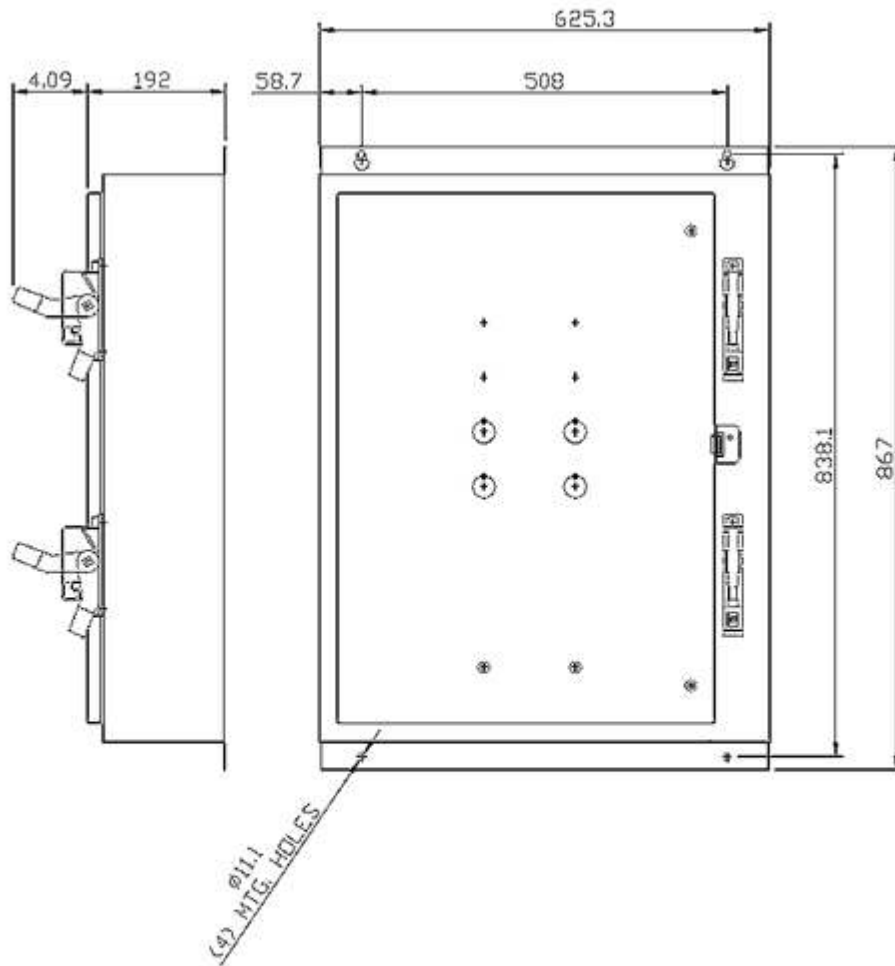
<https://support.industry.siemens.com/cs/US/en/ps/US2:84DPB95EMF81>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:84DPB95EMF81&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:84DPB95EMF81&lang=en)

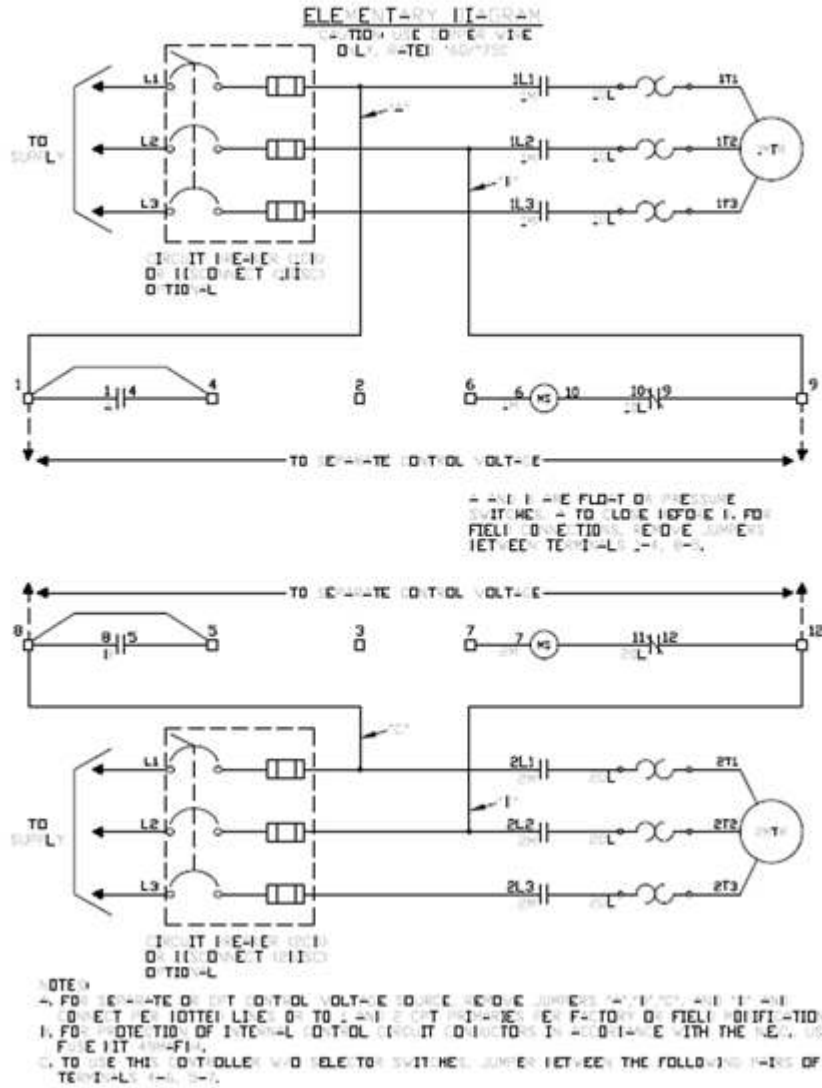
**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:84DPB95EMF81/certificate>



# SCHEMATIC DIAGRAM

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



last modified:

3/8/2020