

Duplex starter W/O alternator Size 4 Three phase full voltage Solid-state overload relay OLRelay amp range 50-200A Combination type Two 150A circuit breakers Enclosure NEMA type 1 Indoor general purpose use



Figure similar

Product brand name	Class 84
Design of the product	Duplex controller with two MCPs without alternator
Special product feature	ESP200 overload relay

General technical data	
Weight [lb]	106 lb
Height x Width x Depth [in]	56 x 29 x 10 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 maximum	149 °F
• during operation maximum	104 °F
Ambient temperature	
• during storage maximum	65 °C
• during operation maximum	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>	40 hp
<ul style="list-style-type: none"> <li>• at 220/230 V rated value</li> </ul>	50 hp
<ul style="list-style-type: none"> <li>• at 460/480 V rated value</li> </ul>	100 hp
<ul style="list-style-type: none"> <li>• at 575/600 V rated value</li> </ul>	100 hp

### Contactors

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
Operating current at AC at 600 V rated value	135 A
Mechanical service life (switching cycles) of the main contacts typical	5000000

### 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	7
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 50 Hz rated value</li> </ul>	190 ... 220 V
<ul style="list-style-type: none"> <li>• at AC at 60 Hz rated value</li> </ul>	220 ... 240 V
Holding power at AC minimum	22 W
Apparent pick-up power of magnet coil at AC	510 V·A
Apparent holding power of magnet coil at AC	51 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	18 ... 34 ms
Off-delay time	10 ... 12 ms

### Overload relay

Product function	
<ul style="list-style-type: none"> <li>• Overload protection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Phase failure detection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Phase unbalance</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• Ground fault detection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Test function</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• External reset</li> </ul>	Yes
Reset function	Manual, automatic and remote
Trip class	Class 5 / 10 / 20 (factory set) / 30
Adjustable pick-up value current of the current-dependent overload release	50 ... 200 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	<ul style="list-style-type: none"> <li>• at AC at 600 V 5 A</li> <li>• at DC at 250 V 1 A</li> </ul>
Contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 1A@250VDC (R300)
Insulation voltage	<ul style="list-style-type: none"> <li>• with single-phase operation at AC rated value 600 V</li> <li>• with multi-phase operation at AC rated value 300 V</li> </ul>

Enclosure	
Degree of protection NEMA rating of the enclosure	NEMA Type 1
Design of the housing	Indoor general purpose use

Motor Circuit Protector (magnetic trip only)	
Operating current of motor circuit breaker rated value	150 A
Adjustable pick-up value current of instantaneous short-circuit trip unit	800 ... 1500 A

Mounting/wiring	
Mounting position	Vertical
Mounting type	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 conductors single or multi-stranded	1x (6 AWG ... 350 Kcmil) or 1x (4 AWG ... 350 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 at AWG conductors 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 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 short-circuit trip	Instantaneous trip circuit breaker
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	<ul style="list-style-type: none"> <li>• at 240 V 100 kA</li> <li>• at 480 V 100 kA</li> <li>• at 600 V 25 kA</li> </ul>
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?mfb=US2:84JUH95BMG>

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

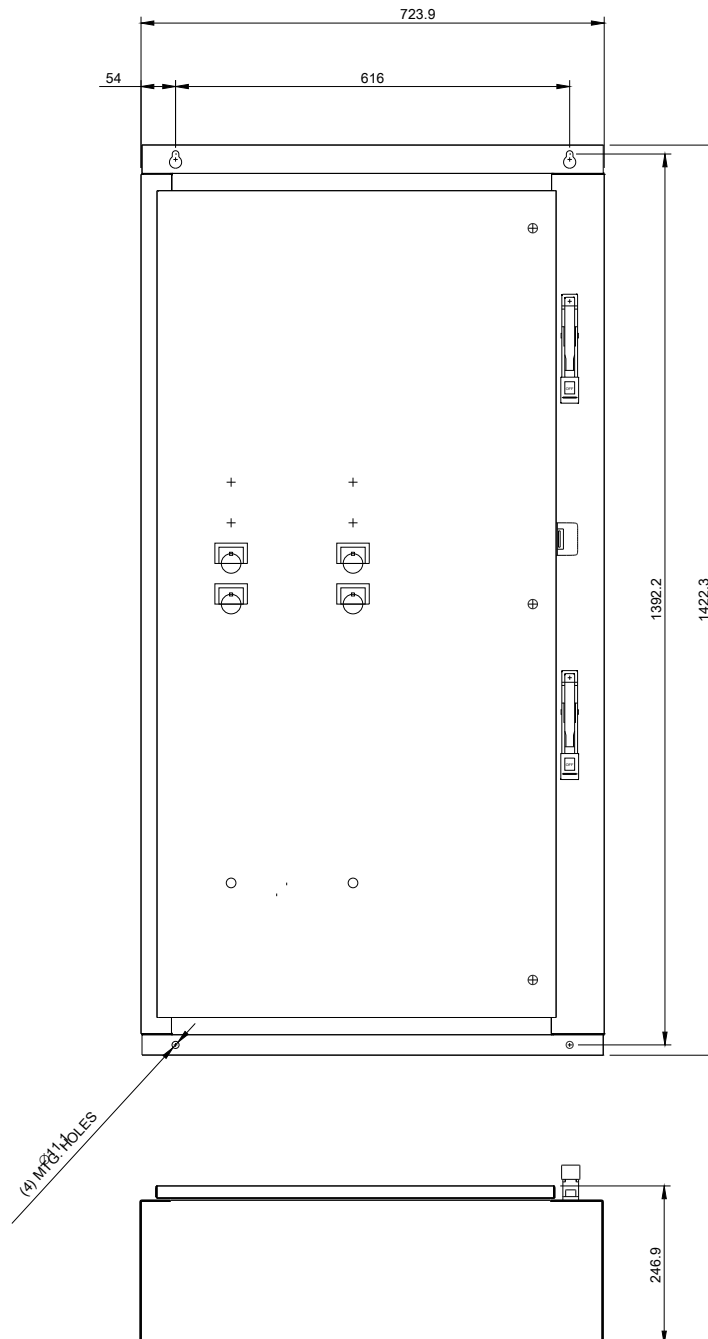
<https://support.industry.siemens.com/cs/US/en/ps/US2:84JUH95BMG>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=US2:84JUH95BMG&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=US2:84JUH95BMG&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:84JUH95BMG/certificate>



# %%USCHEMATIC DIAGRAM

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



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