



Figure similar

Duplex starter w/o alternator, Size 3 1/2, Three phase full voltage, Solid-state overload relay, OLR amp range 50-200A, 24VAC 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	Half-size controller; ESP200 overload relay
<b>General technical data</b>	
weight [lb]	93 lb
Height x Width x Depth [in]	29 × 23 × 9 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	30 hp
• at 220/230 V rated value	40 hp
• at 460/480 V rated value	75 hp
• at 575/600 V rated value	75 hp
<b>Contactors</b>	
size of contactor	Controller half size 3 1/2
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	115 A
mechanical service life (switching 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	

<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
holding power at AC minimum	24 ... 24 V
apparent pick-up power of magnet coil at AC	24 ... 24 V
apparent holding power of magnet coil at AC	14 W
operating range factor control supply voltage rated value of magnet coil	310 VA
percental drop-out voltage of magnet coil related to the input voltage	26 VA
ON-delay time	0.85 ... 1.1
OFF-delay time	50 %
	26 ... 41 ms
	14 ... 19 ms

### Overload relay

product function	
<ul style="list-style-type: none"> <li>• overload protection</li> <li>• phase failure detection</li> <li>• asymmetry detection</li> <li>• ground fault detection</li> <li>• test function</li> <li>• external reset</li> </ul>	Yes
reset function	Yes
adjustable current response value current of the current-dependent overload release	Yes
tripping time at phase-loss maximum	Yes
relative repeat accuracy	Yes
product feature protective coating on printed-circuit board	Yes
number of NC contacts of auxiliary contacts of overload relay	Manual, automatic and remote
number of NO contacts of auxiliary contacts of overload relay	50 ... 200 A
operational current of auxiliary contacts of overload relay	3 s
<ul style="list-style-type: none"> <li>• at AC at 600 V</li> <li>• at DC at 250 V</li> </ul>	1 %
contact rating of auxiliary contacts of overload relay according to UL	Yes
insulation voltage (Ui)	1
<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>	1
	5 A
	1 A
	5A@600VAC (B600), 1A@250VDC (R300)
	600 V
	300 V

### Enclosure

degree of protection NEMA rating of the enclosure	NEMA 4x 304 stainless steel enclosure
design of the housing	dustproof, waterproof & resistant to corrosion

### Mounting/wiring

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	120 ... 120 lbf-in
type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded	1x (14 ... 2/0 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	Box lug
tightening torque [lbf-in] for load-side outgoing feeder	120 ... 120 lbf-in
type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded	1x (14 ... 2/0 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 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	7 ... 10 lbf·in
type of connectable conductor cross-sections at overload relay at 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
breaking capacity maximum short-circuit current (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?mfb=US2:83IUH95WJ>

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

<https://support.industry.siemens.com/cs/US/en/ps/US2:83IUH95WJ>

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

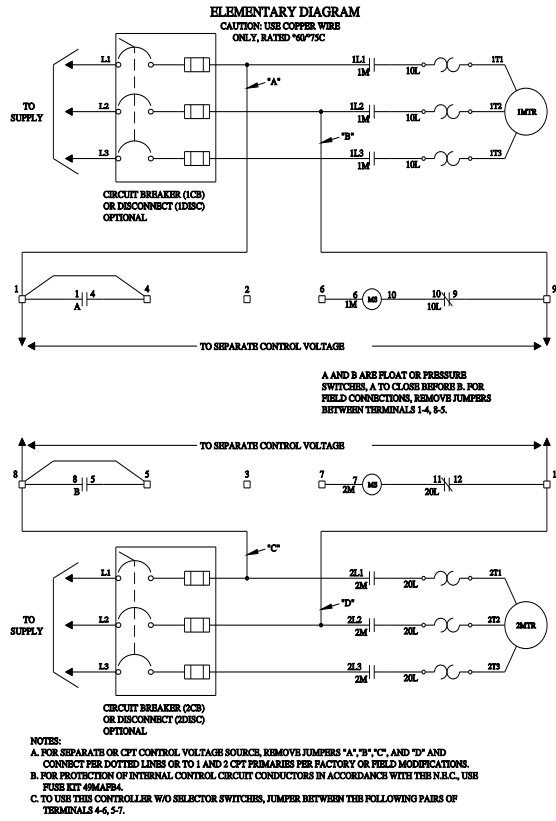
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=US2:83IUH95WJ&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=US2:83IUH95WJ&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:83IUH95WJ/certificate>

# SCHEMATIC DIAGRAM

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



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