



Figure similar

Duplex starter with alternator Size 1 Three phase full voltage Solid-state overload relay OLR amp range 3-12A 110VAC 50Hz / 120VAC 60Hz Coil Combination type Two 30A disconnect switches Enclosure NEMA type 1 Indoor general purpose use

product brand name	Class 84
design of the product	Duplex controller with two non-fusible disconnect switches with alternator
special product feature	ESP200 overload relay
General technical data	
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
Horsepower ratings	
yielded mechanical performance [hp] for 3-phase AC motor	
• at 200/208 V rated value	2 hp
• at 220/230 V rated value	2 hp
• at 460/480 V rated value	5 hp
• at 575/600 V rated value	5 hp
Contactor	
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
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"> • at DC rated value • at AC at 50 Hz rated value • at AC at 60 Hz rated value 	0 ... 0 V 110 ... 110 V 120 ... 120 V
holding power at AC minimum		8.6 W
apparent pick-up power of magnet coil at AC		218 VA
apparent holding power of magnet coil at AC		25 VA
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 %
ON-delay time		19 ... 29 ms
OFF-delay time		10 ... 24 ms
Overload relay		
product function	<ul style="list-style-type: none"> • overload protection • phase failure detection • asymmetry detection • ground fault detection • test function • external reset 	Yes Yes Yes Yes Yes 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		3 ... 12 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	<ul style="list-style-type: none"> • at AC at 600 V • at DC at 250 V 	5 A 1 A
contact rating of auxiliary contacts of overload relay according to UL		5A@600VAC (B600), 1A@250VDC (R300)
insulation voltage (Ui)	<ul style="list-style-type: none"> • with single-phase operation at AC rated value • with multi-phase operation at AC rated value 	600 V 300 V
Disconnect Switch		
response value of switch disconnecter		30A / 600V
design of fuse holder		non-fusible
operating class of the fuse link		non-fusible
Enclosure		
degree of protection NEMA rating of the enclosure		NEMA Type 1
design of the housing		indoors, usable on a general basis
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		35 ... 35 lbf·in
type of connectable conductor cross-sections at line-side at AWG cables 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		35 ... 35 lbf·in
type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded		1x (14 ... 2 AWG)
temperature of the conductor for load-side outgoing feeder		75 °C

maximum permissible	
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)
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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:84DUC92BDF>

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

<https://support.industry.siemens.com/cs/US/en/ps/US2:84DUC92BDF>

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

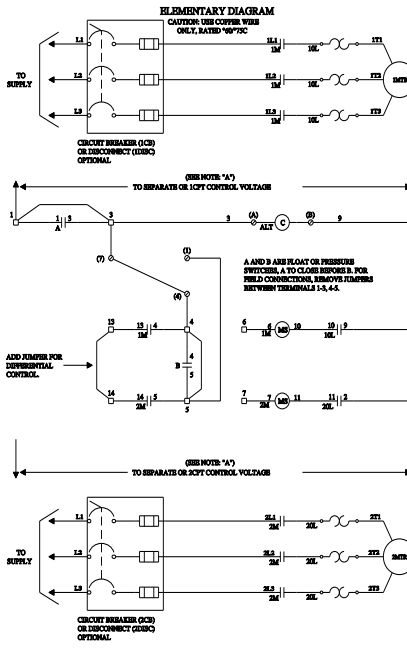
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:84DUC92BDF&lang=en

Certificates/approvals

<https://support.industry.siemens.com/cs/US/en/ps/US2:84DUC92BDF/certificate>

SCHEMATIC DIAGRAM

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



NOTES:
A. FOR SEPARATE OR CFT CONTROL VOLTAGE SOURCE.
 CONNECT PER DOTTED LINES OR TO 1 AND 3 CFT TERMINALS PER FACTORY OR FIELD MODIFICATIONS.
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE I.E.C., USE
 SIZE 14 AWG MINIMUM.
C. TO USE THIS CONTROLLER TWO SELECTOR SWITCHES, FINGER BETWEEN THE FOLLOWING PAIRS OF
 TERMINALS 4-4, 5-5, AND 6-6.
D. FOR TWO POSITION SELECTOR SWITCHES, WIRE AS SHOWN ALSO ADD REMOVAL BETWEEN TERMINALS 9-9.
E. SEPARATE SOURCE CONNECTIONS TO TERMINALS 8 AND 12 ARE REQUIRED ONLY WHEN THESE
 POSITION SELECTOR SWITCH IS BUILT IN.

D68077001

last modified:

1/25/2022