



Figure similar

Duplex starter w/ alternator, Size 2, Three phase full voltage, Amb compensate bimetal OLrelay Contactor amp rating 45Amp 110V 50HZ / 120V 60HZ coil, Combination type, Two 60A disconnect switches Enclosure NEMA type 12, Dust/drip proof for indoors

product brand name	Class 84
design of the product	Duplex controller with two non-fusible disconnect switches with alternator
special product feature	Gravity dropout contacts; 45 degree, wedge action contacts; Self-rising pressure type control terminals; Encapsulated coil
General technical data	
weight [lb]	70 lb
Height x Width x Depth [in]	56 × 29 × 10 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	10 hp
• at 220/230 V rated value	15 hp
• at 460/480 V rated value	25 hp
• at 575/600 V rated value	25 hp
Contactors	
size of contactor	NEMA controller size 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	45 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	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"> • 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 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"> • overload protection • test function • external reset 	Yes Yes 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"> • at AC at 600 V • at DC at 250 V 	10 A 5 A
contact rating of auxiliary contacts of overload relay according to UL	10A@600VAC (A600), 5A@250VDC (P300)
Disconnect Switch	
response value of switch disconnecter	60A / 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 12
design of the housing	Dust tight and drip proof for indoors
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 ... 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 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=US2:84FP920DF81>

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

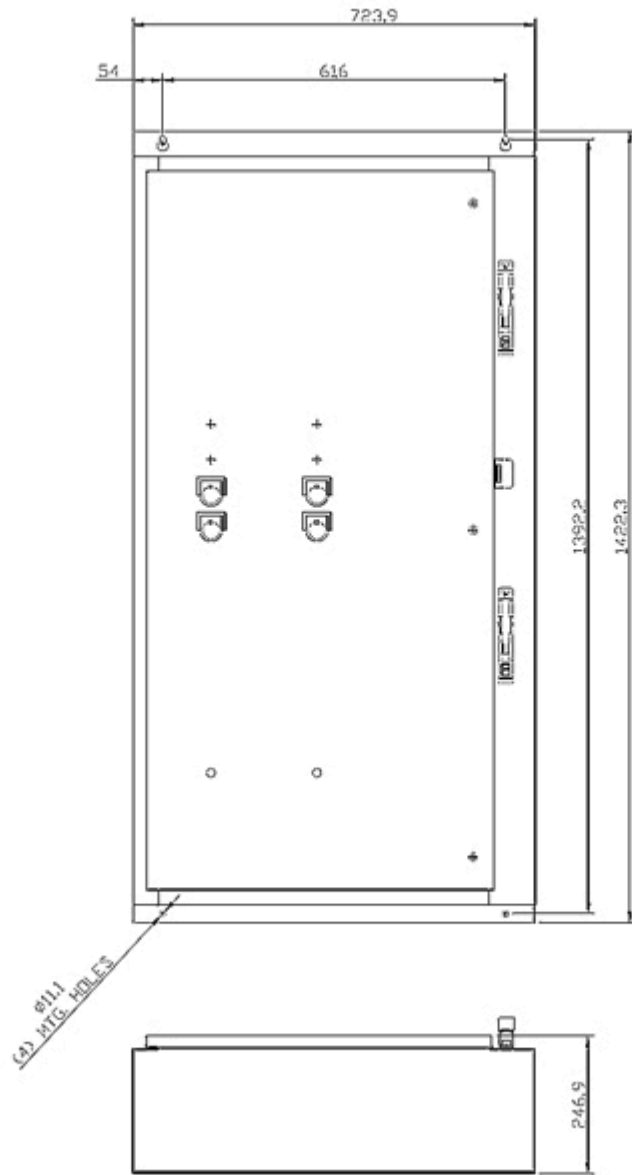
<https://support.industry.siemens.com/cs/US/en/ps/US2:84FP920DF81>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:84FP920DF81&lang=en

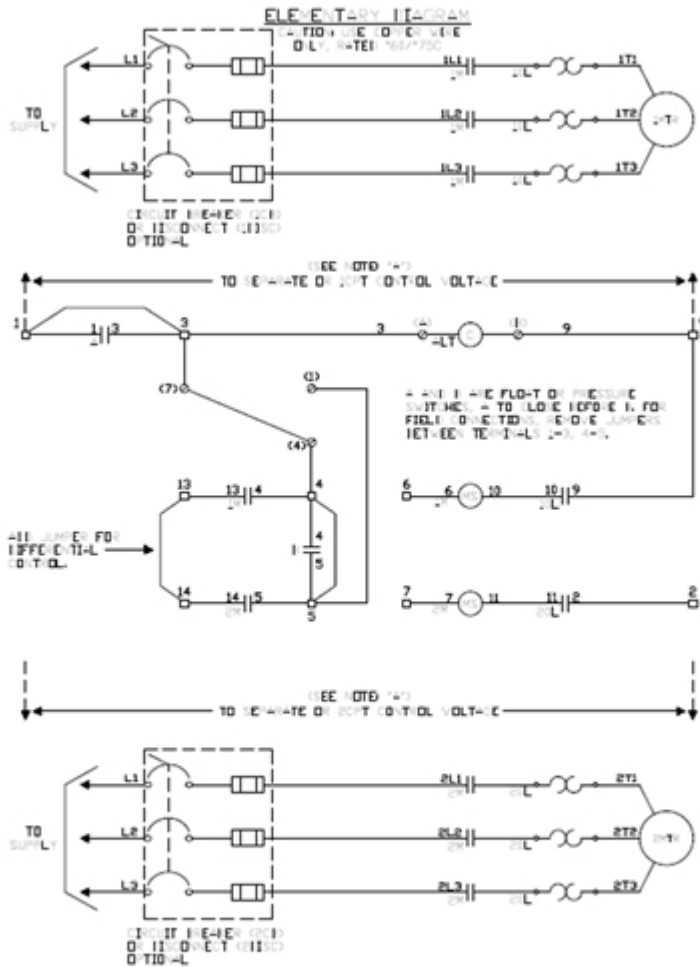
Certificates/approvals

<https://support.industry.siemens.com/cs/US/en/ps/US2:84FP920DF81/certificate>



SCHEMATIC DIAGRAM

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



- NOTES:**
- A. FOR SEPARATE OR OPT. CONTROL VOLTAGE SOURCE.
 - B. SET THE LOTTER LINES TO 2 AND 3 SET TERMINALS PER FACTORY OR FIELD DISPOSITION.
 - C. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C. USE FUSE #12 4504P14.
 - D. TO USE THIS CONTROLLER W/O SELECTOR SWITCH JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS (1-2, 3-4, 5-6, 7-8, 9-10, 11-12).
 - E. FOR T.O. CONTROL SELECTOR SWITCH WIRE AS SHOWN ALSO ADD JUMPER BETWEEN TERMINALS 9-10.
 - F. SEPARATE SOURCE CONNECTIONS TO TERMINALS 8 AND 12 ARE REQUIRED ONLY WHEN THREE POSITION SELECTOR SWITCH IS INSTALLED.

last modified:

3/10/2020