SIEMENS

Data sheet US2:84DUD92EMF

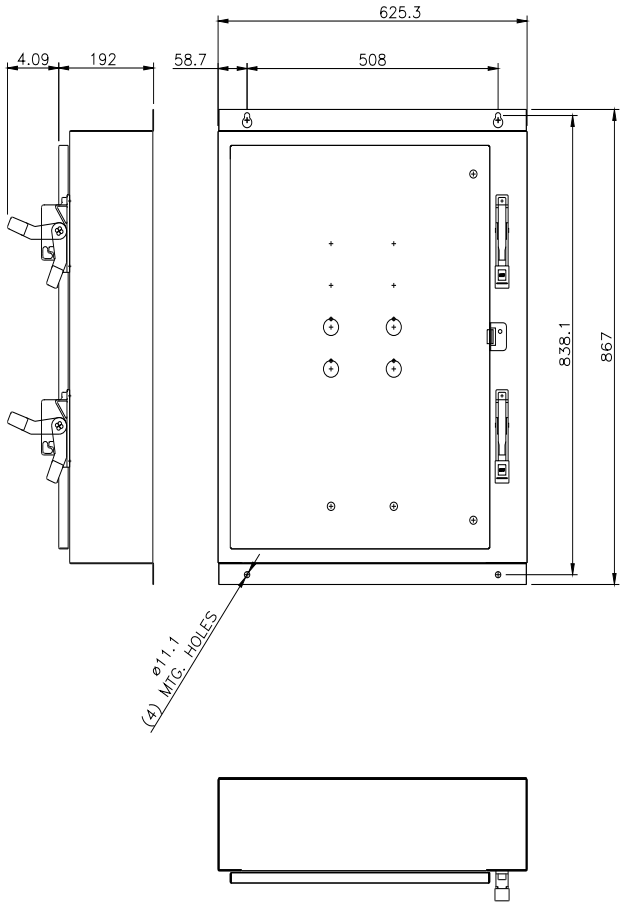
Duplex starter w/ alternator, Size 1, Three phase full voltage, Solid-state overload relay, OLR amp range 5.5-22A, 110V 50Hz / 120V 60Hz coil, Combination type, Two 25A circuit breakers, Enc NEMA type 4 painted steel, Water/dust tight for outdoors

product brand name	Class 84
design of the product	Duplex controller with two MCPs 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	3 hp
● at 220/230 V rated value	3 hp
● at 460/480 V rated value	10 hp
● at 575/600 V rated value	10 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 (operating 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	
● at DC rated value	0 ... 0 V
● at AC at 50 Hz rated value	110 ... 110 V
● at AC at 60 Hz rated value	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	
● overload protection	Yes
● phase failure detection	Yes
● asymmetry detection	Yes
● ground fault detection	Yes
● test function	Yes
● external reset	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	5.5 ... 22 A
tripping 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
operational current of auxiliary contacts of overload relay	
● at AC at 600 V	5 A
● at DC at 250 V	1 A
contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 1A@250VDC (R300)
insulation voltage (Ui)	
● with single-phase operation at AC rated value	600 V
● with multi-phase operation at AC rated value	300 V
Enclosure	
degree of protection NEMA rating of the enclosure	NEMA Type 4
design of the housing	dustproof, waterproof & weatherproof
Circuit Breaker	
type of the motor protection	Motor circuit protector (magnetic trip only)
operational current of motor circuit breaker rated value	25 A
adjustable current response value current of instantaneous short-circuit trip unit	55 ... 180 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 for 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 ... 35 lbf·in
type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded	1x (14 ... 2 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 for 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

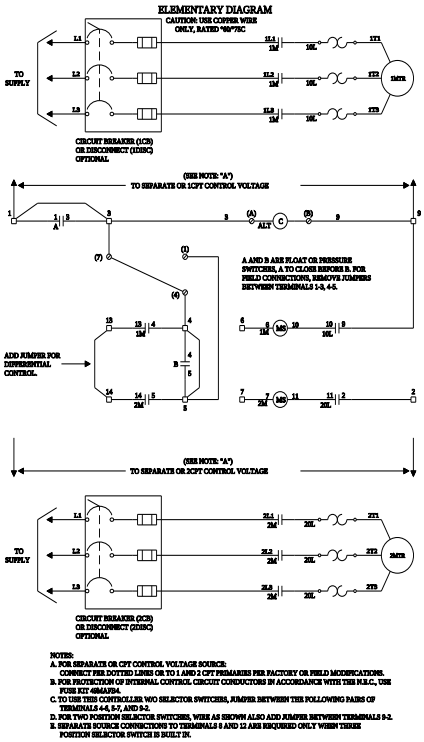
type of electrical connection at contactor for auxiliary contacts	Screw-type terminals
tightening torque [lbf·in] at contactor for auxiliary contacts	10 ... 15 lbf·in
type of connectable conductor cross-sections at contactor for AWG cables for auxiliary contacts single or multi-stranded	1x (12 AWG), 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 for 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 short-circuit trip	Instantaneous trip circuit breaker
maximum short-circuit current breaking capacity (Icu)	
● at 240 V	100 kA
● at 480 V	100 kA
● at 600 V	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
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:84DUD92EMF
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/US/en/ps/US2:84DUD92EMF
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:84DUD92EMF&lang=en
Certificates/approvals
https://support.industry.siemens.com/cs/US/en/ps/US2:84DUD92EMF/certificate



SCHEMATIC DIAGRAM

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



NOTES:
A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE: CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT REMARKS PER FACTORY OR FIELD MODIFICATIONS.
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT #30AAF04.
C. TO USE YES CONTROLLER W/O SELECTOR SWITCHES, JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS 4-6, 5-7, AND 8-2.
D. FOR TWO POSITION SELECTOR SWITCHES, WIRE AS SHOWN ALSO ADD JUMPER BETWEEN TERMINALS 8-2.
E. SEPARATE SOURCE CONNECTIONS TO TERMINALS 8 AND 12 ARE REQUIRED ONLY WHEN THREE POSITION SELECTOR SWITCH IS BUILT IN.

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