## **SIEMENS**

Data sheet US2:84GUG950DD



Duplex starter w/o alternator Size 2.5 Three phase full voltage Solid-state overload relay OLR amp range 25-100A 208VAC 60Hz Coil Combination type Two 100A disconnect switches Enclosure NEMA type 4/12 Water/dust tight weather proof

product brand name	Class 84	
design of the product	Duplex controller with two non-fusible disconnect switches without alternator	
special product feature	ESP200 overload relay; Half-size controller	
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]		
<ul> <li>during storage</li> </ul>	-22 +149 °F	
during operation	-4 +104 °F	
ambient temperature		
<ul> <li>during storage</li> </ul>	-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	15 hp	
• at 220/230 V rated value	20 hp	
• at 460/480 V rated value	30 hp	
• at 575/600 V rated value	30 hp	
Contactor		
size of contactor	Controller half size 2 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	60 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	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		
at DC rated value	0 0 V	
<ul> <li>at AC at 50 Hz rated value</li> </ul>	0 0 V	
at AC at 60 Hz rated value	208 208 V	
holding power at AC minimum	8.6 W	

apparent pick-up power of magnet coil at AC  apparent holding power of magnet coil at AC  operating range factor control supply voltage rated value of magnet coil  percental drop-out voltage of magnet coil related to the input voltage  ON-delay time  OFF-delay time  Overload relay  product function  o overload protection  phase failure detection  ground fault detection  e ground fault detection  test function  e external reset  218 VA  25 VA  0.85 1.1  50 %  0.85 1.1  50 %  Ves  50 %  Ves  40 24 ms  50 %  Ves  40 24 ms  70 24 ms	
operating range factor control supply voltage rated value of magnet coil  percental drop-out voltage of magnet coil related to the input voltage  ON-delay time  OFF-delay time  Overload relay  product function  overload protection  phase failure detection  ground fault detection  test function  Ves  test function  O.85 1.1  0.85 1.1  0.85 1.1  10 29 ms  10 24 ms  Ves  Yes  Yes  Yes  Yes  Yes  Yes  Ye	
magnet coil  percental drop-out voltage of magnet coil related to the input voltage  ON-delay time  OFF-delay time  10 24 ms  Overload relay  product function  overload protection phase failure detection asymmetry detection ground fault detection test function  test function  Yes  test function  Yes	
voltage  ON-delay time  19 29 ms  OFF-delay time  10 24 ms  Overload relay  product function  • overload protection • phase failure detection • asymmetry detection • ground fault detection • test function  Yes • test function  Yes	
OFF-delay time  Overload relay  product function  overload protection  phase failure detection  asymmetry detection  ground fault detection  test function  10 24 ms  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y	
Overload relay       product function     Yes       • overload protection     Yes       • phase failure detection     Yes       • asymmetry detection     Yes       • ground fault detection     Yes       • test function     Yes	
product function  • overload protection  • phase failure detection  • asymmetry detection  • ground fault detection  • test function  Yes  • yes	
<ul> <li>overload protection</li> <li>phase failure detection</li> <li>asymmetry detection</li> <li>ground fault detection</li> <li>test function</li> </ul> Yes  Yes  Yes	
<ul> <li>phase failure detection</li> <li>asymmetry detection</li> <li>ground fault detection</li> <li>test function</li> </ul> Yes  Yes  Yes	
<ul> <li>asymmetry detection</li> <li>ground fault detection</li> <li>test function</li> </ul> Yes  Yes  Yes	
• ground fault detection  • test function  Yes  • test function	
• test function Yes	
external reset	
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	
tripping time at phase-loss maximum 3 s	
relative repeat accuracy 1 %	
number of NC contacts of auxiliary contacts of overload relay	
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	
Disconnect Switch	
response value of switch disconnector 100A / 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 dustproof and drip-proof for indoor use	
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 for AWG cables single or multi-stranded  1x (14 1/0 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 45 45 lbf-in	
type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded	
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 75 °C permissible	

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 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

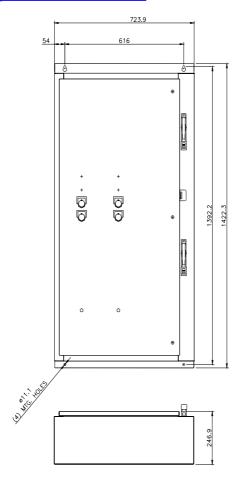
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:84GUG950DD

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

https://support.industry.siemens.com/cs/US/en/ps/US2:84GUG950DD

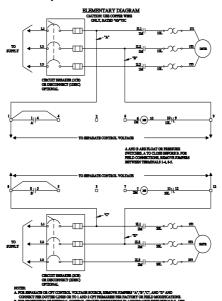
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:84GUG950DD&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:84GUG950DD&lang=en</a>

Certificates/approvals
https://support.industry.siemens.com/cs/US/en/ps/US2:84GUG950DD/certificate



## SCHEMATIC DIAGRAM

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



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