## SIEMENS

## Data sheet

## US2:84HUG920MF



Duplex starter w/ alternator, Size 3, Three phase full voltage, Solid-state overload relay, OLR amp range 25-100A, 110V 50Hz / 120V 60Hz coil, Combination type, Two 100A circuit breakers, Enclosure NEMA type 12, Dust/drip proof for indoors

product brand name	Class 84
product brand name	
design of the product	Duplex controller with two MCPs with alternator
special product feature	ESP200 overload relay
General technical data	400 1
weight [lb]	106 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	
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	20 hp
<ul> <li>at 220/230 V rated value</li> </ul>	25 hp
<ul> <li>at 460/480 V rated value</li> </ul>	50 hp
• at 575/600 V rated value	50 hp
Contactor	
size of contactor	NEMA controller size 3
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	90 A
mechanical service life (operating cycles) of the main contacts typical	500000
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
• 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	14 W

	0/01/1
apparent pick-up power of magnet coil at AC	310 VA
apparent holding power of magnet coil at AC	26 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	26 41 ms
OFF-delay time	14 19 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
	CLASS 5 / 10 / 20 (factory set) / 30
trip class	25 100 A
adjustable current response value current of the current- dependent overload release	
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)	
<ul> <li>with single-phase operation at AC rated value</li> </ul>	600 V
<ul> <li>with multi-phase operation at AC rated value</li> </ul>	300 V
Enclosure	
degree of protection NEMA rating of the enclosure	NEMA Type 12
design of the housing	dustproof and drip-proof for indoor use
design of the housing Circuit Breaker	dustproof and drip-proof for indoor use
	dustproof and drip-proof for indoor use Motor circuit protector (magnetic trip only)
Circuit Breaker	
Circuit Breaker type of the motor protection	Motor circuit protector (magnetic trip only)
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous	Motor circuit protector (magnetic trip only) 100 A
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring	Motor circuit protector (magnetic trip only) 100 A
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical Surface mounting and installation
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical Surface mounting and installation Box lug 1x (10 AWG 1/0 AWG)
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical Surface mounting and installation Box lug 1x (10 AWG 1/0 AWG) 75 °C
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical Surface mounting and installation Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical Surface mounting and installation Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug
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Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf-in] for load-side outgoing feeder type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded	Motor circuit protector (magnetic trip only) 100 A 315 1000 A Vertical Surface mounting and installation Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug 120 120 lbf·in 1x (14 2/0 AWG)
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Circuit Breaker         type of the motor protection         operational current of motor circuit breaker rated value         adjustable current response value current of instantaneous short-circuit trip unit         Mounting/wiring         mounting position         fastening method         type of electrical connection for supply voltage line-side         type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded         temperature of the conductor for supply maximum permissible         material of the conductor for supply         type of electrical connection for load-side outgoing feeder         tightening torque [lbf·in] for load-side outgoing feeder         type of connectable conductor for load-side outgoing feeder         tightening torque of the conductor for load-side outgoing feeder         type of connectable conductor for load-side outgoing feeder         type of connectable conductor for load-side outgoing feeder         tightening torque [lbf·in] for load-side outgoing feeder         type of clectrical connection for load-side outgoing feeder         type of electrical connection for load-side outgoing feeder         tightening torque [lbf·in] at magnet coil         type of connectable conductor cross-sections of magnet coil for	Motor circuit protector (magnetic trip only)         100 A         315 1000 A         Vertical         Surface mounting and installation         Box lug         1x (10 AWG 1/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in
Circuit Breaker type of the motor protection operational current of motor circuit breaker rated value adjustable current response value current of instantaneous short-circuit trip unit Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply type of electrical connection for load-side outgoing feeder tightening torque [lbf-in] for load-side outgoing feeder type of connectable conductor for load-side outgoing feeder type of electrical connection of magnet coil tightening torque [lbf-in] at magnet coil type of connectable conductor cross-sections of magnet coil for AWG cables single or multi-stranded temperature of the conductor at magnet coil maximum	Motor circuit protector (magnetic trip only)         100 A         315 1000 A         Vertical         Surface mounting and installation         Box lug         1x (10 AWG 1/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in         2x (16 12 AWG)

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=US2:84HUG920ME

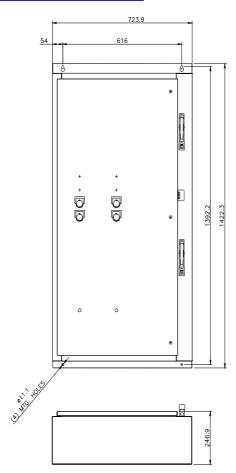
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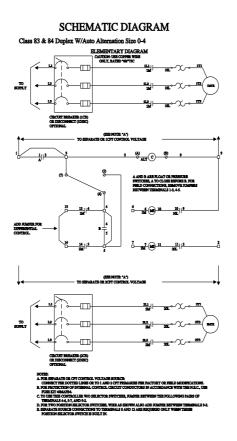
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Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:84HUG920MF&lang=en

Certificates/approvals

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