SIEMENS

Data sheet US2:84HUG95BMD



Duplex starter w/o alternator, Size 3, Three phase full voltage, Solid-state overload relay, OLR amp range 25-100A, 208VAC 60Hz coil, Combination type, Two 100A circuit breakers, Enclosure NEMA type 1, Indoor general purpose use

Figure similar

design of the product seture ESP200 overload relay Seneral technical data	product brand name	Class 84
Weight [b] 106 lb 107 lb 108 lb 108 lb 109 l	design of the product	Duplex controller with two MCPs without alternator
Meight x Width x Depth [in] 56 x 29 x 10 in	special product feature	ESP200 overload relay
Height x Width x Depth [in] touch protection against electrical shock Installation altitude [ft] at height above sea level maximum ambient temperature [°F] • during storage • during operation ambient temperature • during storage • during storage • during operation - 20 +40 °F • during operation - 20 +65 °C • during operation - 20 +40 °C country of origin WSA WHOREOPOWER TRAINGS yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 220/230 V rated value • at 450/480 V rated value • at 575/600 V rated value • at 575/600 V rated value • operating voltage for main contacts size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at	General technical data	
touch protection against electrical shock installation altitude [ft] at height above sea level maximum ambient temperature ["F] • during storage	weight [lb]	106 lb
installation altitude [ft] at height above sea level maximum ambient temperature [*F] • during storage • during operation -4+104 *F ambient temperature • during storage • during operation -20+45 *C -20+40 *C country of origin USA Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 4575/600 V rated value • at 4575/600 V rated value • at 575/600 V rated value • at 575/600 V rated value • at 575/600 V rated value operation giving for main contacts operating voltage for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value number of NO contacts at contactor for auxiliary contacts number of	Height x Width x Depth [in]	56 × 29 × 10 in
ambient temperature [*F] • during storage • during operation ambient temperature • during storage • during operation • during storage • during operation • during storage • during operation • usA Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 460/480 V rated value • at 460/480 V rated value • at 575/600 V rated value • at 575/600 V rated value • at 575/600 V rated value • operating voltage for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operation of NO contacts of main contacts operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operational current at AC at 600 V rated value operation of NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts maximum 7 contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage	touch protection against electrical shock	NA for enclosed products
 during storage during operation during operation during storage during operation 20 +65 °C during operation 20 +40 °C Country of origin Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value 50 hp at 460/480 V rated value 50 hp Contactor size of contactor main contacts operating voltage for main current circuit at AC at 60 Hz maximum operating voltage for main current circuit at AC at 60 Hz maximum operating service life (switching cycles) of the main contacts typical Auxiliary contact at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of voltage of the control supply voltage 	installation altitude [ft] at height above sea level maximum	6560 ft
during operation ambient temperature during operation during operation during operation during operation country of origin USA Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V rated value at 200/208 V rated value at 460/480 V rated value at 460/480 V rated value at 4575/600 V rated value size of contactor size of contactor number of NO contacts for main current circuit at AC at 60 Hz maximum operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value poperational	ambient temperature [°F]	
ambient temperature • during storage • during operation country of origin Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 460/480 V rated value • at 575/600 V rated value 50 hp • at 575/600 V rated value Size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts 1 10A@600VAC (A600), 5A@600VDC (P600) type of voltage of the control supply voltage AC	during storage	-22 +149 °F
• during storage • during operation 20 +40 °C country of origin Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 4575/600 V rated value • at 575/600 V rated value 50 hp Contactor size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value poperational current at AC at 600 V rated value number of NO contacts for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value poperational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum 7 contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC	during operation	-4 +104 °F
outring operation country of origin Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor outring of a table of the control of a table of the control	ambient temperature	
country of origin Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 460/480 V rated value • at 575/600 V rated value Size of contactor size of contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxillary contact number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC	during storage	-30 +65 °C
yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 420/230 V rated value • at 4575/600 V rated value 50 hp • at 575/600 V rated value 50 hp Contactor size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value 90 A mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum 7 contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC	during operation	-20 +40 °C
yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 460/480 V rated value • at 460/480 V rated value • at 575/600 V rated value • 50 hp • at 575/600 V rated value Size of contactor size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of total auxiliary contacts at contactor for auxiliary contacts number of total auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC	country of origin	USA
e at 200/208 V rated value 20 hp e at 220/230 V rated value 25 hp e at 460/480 V rated value 50 hp e 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 operational current at AC at 600 V rated value 90 A mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 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 Coil type of voltage of the control supply voltage AC	Horsepower ratings	
 at 220/230 V rated value at 460/480 V rated value 50 hp at 575/600 V rated value 50 hp Contactor size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value operational current elife (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC AC AC AC 		
at 460/480 V rated value at 575/600 V rated value 50 hp Contactor size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value operational service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage Summary contact NEMA controller size 3 3 600 V 600	• at 200/208 V rated value	20 hp
otatactor size of contactor size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value operational service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage NEMA controller size 3 NEMA controller size 3 3 600 V 600 V 5000000 contact size 3 contact valier (switching cycles) of the main contacts of contacts contacts to auxiliary contacts 1 10A@600VAC (A600), 5A@600VDC (P600) AC	• at 220/230 V rated value	25 hp
Size of contactor Size of contactor NEMA controller size 3 number of NO contacts for main contacts Operating voltage for main current circuit at AC at 60 Hz maximum Operational current at AC at 600 V rated value Mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum Contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage NEMA controller size 3 NEMA controller size 3 3 600 V 600 V 7 5000000 5000000 5000000 5000000 5000000	• at 460/480 V rated value	50 hp
size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage NEMA controller size 3 3 600 V 600 V 7 5000000 5000000 5000000 5000000 5000000	at 575/600 V rated value	50 hp
number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value operational service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage 3 600 V 600 V 600 V 7 5000000 5000000 6000000 7 10A@600VAC (A600), 5A@600VDC (P600)	Contactor	
operating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum recontact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage 600 V 600	size of contactor	NEMA controller size 3
maximum operational current at AC at 600 V rated value mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of total auxiliary contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum recontact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage 90 A 5000000 5000000 1000000 1000000 1000000 1000000	number of NO contacts for main contacts	3
mechanical service life (switching cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage 5000000 7 10A@600VAC (A600), 5A@600VDC (P600)		600 V
contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC	operational current at AC at 600 V rated value	90 A
number of NC contacts at contactor for auxiliary contacts number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage O 10A@600VAC (A600), 5A@600VDC (P600)	· · · · · · · · · · · · · · · · · · ·	5000000
number of NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage 1 10A@600VAC (A600), 5A@600VDC (P600) AC	Auxiliary contact	
number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage 7 10A@600VAC (A600), 5A@600VDC (P600) 10A@600VAC (A600), 5A@600VDC (P600)	number of NC contacts at contactor for auxiliary contacts	0
contact rating of auxiliary contacts of contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) to UL Coil type of voltage of the control supply voltage AC	number of NO contacts at contactor for auxiliary contacts	1
to UL Coil type of voltage of the control supply voltage AC	number of total auxiliary contacts maximum	7
type of voltage of the control supply voltage AC		10A@600VAC (A600), 5A@600VDC (P600)
37	Coil	
control supply voltage	type of voltage of the control supply voltage	AC
	control supply voltage	

a at DC rated value	0 0 0
at DC rated value at AC at 50 Hz rated value	0 0 V
	0 0 V 208 208 V
at AC at 60 Hz rated value holding power at AC minimum	208 208 V
holding power at AC minimum 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	0.85 1.1
of magnet coil	0.03 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
trip class	CLASS 5 / 10 / 20 (factory set) / 30
adjustable current response value current of the current- dependent overload release	25 100 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 1
design of the housing	indoors, usable on a general basis
Circuit Breaker	
type of the motor protection	Motor circuit protector (magnetic trip only)
operational current of motor circuit breaker rated value	100 A
adjustable current response value current of	315 1000 A
instantaneous short-circuit trip unit	
Mounting/wiring	
mounting position	Vertical
fastening method	Surface mounting and installation
	Carrage meaning and metallation
type of electrical connection for supply voltage line-side	Box lug
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded	Box lug 1x (10 AWG 1/0 AWG)
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible	Box lug 1x (10 AWG 1/0 AWG) 75 °C
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible material of the conductor for supply	Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at 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	Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at 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	Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug 120 120 lbf·in
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at 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	Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug
type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side at 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 at AWG cables for load-side outgoing feeder single or multi-	Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug 120 120 lbf·in

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 short-circuit trip	Instantaneous trip circuit breaker
breaking capacity maximum short-circuit current (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=US2:84HUG95BMD

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

https://support.industry.siemens.com/cs/US/en/ps/US2:84HUG95BMD

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:84HUG95BMD&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:84HUG95BMD/certificate

ast modified:	1/25/2022	7
asi modilied:	1/25/2022 (-