## **SIEMENS**

Data sheet US2:84DUB95BMD



Duplex starter w/o alternator, Size 1, Three phase full voltage, Solid-state overload relay, OLR amp range 0.75-3.4A, 208VAC 60Hz coil, Combination type, Two 3A circuit breakers, Enclosure NEMA type 1, Indoor general purpose use

Figure similar

design of the product special product feature ESP200 overload relay   General technical data   weight [[b] 70 lb  Height x Width x Depth [in] 34 × 25 × 8 in  NA for enclosed products  installation altitude [it] at height above sea level maximum ambient temperature [*F] 4 + 104 *F	product brand name	Class 84
Weight [b] 70 lb Height x Width x Depth [in] 34 x 25 x 8 in touch protection against electrical shock installation altitude [ft] at height above sea level maximum ambient temperature ["F] 4 uring storage 22 +149 "F 4 during storage -22 +149 "F 4 during storage -22 +149 "F 4 during operation -4 +104 "F ambient temperature 6 during storage -30 +65 "C 6 during operation -20 +40 "C country of origin USA  Weight and the storage -30 +65 "C 7 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 8 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage -30 +65 "C 9 during operation -20 +40 "C Country of origin USA  Weight and the storage of the origin of origin origin of the storage of the control or origin or origin origin origin or origin origin or origin origin or origin or origin origin origin origin or origin or origin origin origin origin or origin origin or origin	design of the product	Duplex controller with two MCPs without alternator
Weight [Ib]	special product feature	ESP200 overload relay
Height x Width x Depth [in]  10	General technical data	
touch protection against electrical shock installation allitude [ft] at height above sea level maximum ambient temperature [*F]  • during storage	weight [lb]	70 lb
installation altitude [ft] at height above sea level maximum ambient temperature [*F]  • during storage • during operation ambient temperature • during operation -22 +149 *F  ambient temperature • during operation -30 +65 *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 575/600 V rated value • at 600 V cand or value  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  amechanical 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 auxilia	Height x Width x Depth [in]	34 × 25 × 8 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 200/208 V rated value • at 200/208 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  • at 575/600 V rated value  poperating 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  poper	touch protection against electrical shock	NA for enclosed products
<ul> <li>during storage</li> <li>during operation</li> <li>during operation</li> <li>during storage</li> <li>during operation</li> <li>20 +65 °C</li> <li>during operation</li> <li>20 +40 °C</li> <li>country of origin</li> <li>USA</li> <li>Horsepower ratings</li> <li>yielded mechanical performance [hp] for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>at 220/230 V rated value</li> <li>at 460/480 V rated value</li> <li>at 575/600 V rated value</li> <li>at 575/600 V rated value</li> <li>2 hp</li> </ul> Contactor <ul> <li>size of contacts for main contacts</li> <li>operating voltage for main current circuit at AC at 60 Hz maximum</li> <li>operating voltage for main current circuit at AC at 60 Hz maximum</li> <li>operatincal service life (switching cycles) of the main contacts typical</li> </ul> Auxiliary contact <ul> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of Not contacts at contactor for auxiliary contacts</li> <li>number of Not contacts at contactor for auxiliary contacts</li> <li>number of vol contacts at contactor for auxiliary contacts</li> <li>number of vol contacts at contactor for auxiliary contacts</li> <li>number of vol contacts at contactor for auxiliary contacts</li> <li>number of vol contacts at contactor for auxiliary contacts</li> <li>number of voltage of the control supply voltage</li> </ul>	installation altitude [ft] at height above sea level maximum	6560 ft
during operation     ambient temperature     during storage     during operation     during operation     country of origin  Horsepower ratings  yielded mechanical performance [hp] for 3-phase AC motor     at 200/208 V rated value     at 200/230 V rated value     at 460/480 V rated value     at 4576/600 V rated value     at 575/600 V rated value     ize 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  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  poperational current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value  actional current at AC at 600 V rated value	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  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  approximate the provided provid	<ul> <li>during storage</li> </ul>	-22 +149 °F
• 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 8575/600 V rated value     • at 6575/600 V rated value     2 hp  Contactor  size of contactor  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  27 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 NO contacts at contactor for auxiliary contacts  number of NO contacts at contacts maximum  8 contact rating of auxiliary contacts maximum  8 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
• 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 • at 575/600 V rated value    NEMA controller size 1   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 at AC at 600 V rated value   operating voltage for main contacts   10000000   operating voltage for main current original properational current at AC at 600 V rated value   operational current at AC at 600 V rated value   27 A   10000000   operating voltage for main contacts   10000000   operational current at AC at 600 V rated value   27 A   10000000   operational current at AC at 600 V rated value   27 A   10000000   operational current at AC at 600 V rated value   28 AUXIII ary contact   100000000   operational current at AC at 600 V rated value   100000000   100000000000000000000000	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    2 hp  Contactor  size of contactor  size of contacts for main current circuit at AC at 60 Hz maximum  operating voltage for main current circuit at AC at 60 Hz mechanical service life (switching cycles) of the main contacts typical  Auxilliary contact  number of NO contacts at contactor for auxilliary contacts number of NO contacts at contactor for auxilliary contacts number of NO contacts at contactor for auxilliary contacts number of NO contacts at contactor for auxilliary contacts number of NO contacts at contactor for auxilliary contacts number of NO contacts at contactor for auxilliary 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	<ul> <li>during storage</li> </ul>	-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 460/480 V rated value • at 575/600 V rated value  2 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  27 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 NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according 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 • 2 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  perational 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 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 e at 220/230 V rated value 0.75 hp e at 460/480 V rated value 1.5 hp e at 575/600 V rated value 2 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  prechanical 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 contact trating 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 at 575/600 V rated value 2 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  prechanical 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  contact rating of auxiliary contacts of contactor according to UL  Coil  type of voltage of the control supply voltage  0.75 hp 1.5 hp 2.15 hp 1.5 hp 2.16 hp 1.5 hp 2.17 hp 1.5 h		
at 460/480 V rated value  at 575/600 V rated value  2 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  1.5 hp  2 hp  1.5 hp  2 hp  1.600 V  1000	• at 200/208 V rated value	0.5 hp
at 575/600 V rated value      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      AC	• at 220/230 V rated value	0.75 hp
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 NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum sontact rating of auxiliary contacts of contactor according to UL  Coil type of voltage of the control supply voltage  NEMA controller size 1  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	• at 460/480 V rated value	1.5 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 1  3  00  00  10000000  27 A  100000000  10000000  100000000  1000000	• at 575/600 V rated value	2 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	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  contact rating of auxiliary contacts of contactor according to UL  Coil  type of voltage of the control supply voltage  600 V  600 V	size of contactor	NEMA controller size 1
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 contact rating of auxiliary contacts of contactor according to UL  Coil type of voltage of the control supply voltage  AC	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  10000000  10000000  100000000  1000000		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	27 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)	, , ,	10000000
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  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  8  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  Coil  type of voltage of the control supply voltage  10A@600VAC (A600), 5A@600VDC (P600)  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	8
type of voltage of the control supply voltage AC		10A@600VAC (A600), 5A@600VDC (P600)
77	Coil	
control supply voltage	type of voltage of the control supply voltage	AC
	control supply voltage	

at DC rated value	0 0 0 1
at AC at 50 Hz rated value	0 0 V
	0 0 V
at AC at 60 Hz rated value    halding navyaget AC resistences	208 208 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	
<ul> <li>overload protection</li> </ul>	Yes
<ul> <li>phase failure detection</li> </ul>	Yes
<ul> <li>asymmetry detection</li> </ul>	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	0.75 3.4 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)	
<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 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	3 A
adjustable current response value current of	10 35 A
instantaneous short-circuit trip unit	10 00 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	1x (14 AWG 10 AWG) or 1x (12 AWG 10 AWG)
at AWG cables single or multi-stranded temperature of the conductor for supply maximum	75 °C
permissible	
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	20 24 lbf·in
type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi- stranded	2x (14 10 AWG)
temperature of the conductor for load-side outgoing feeder	75 °C
temperature of the conductor for load-side outgoing feeder	75 C

maximum permissible	
material of the conductor for load-side outgoing feeder	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=US2:84DUB95BMD

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

https://support.industry.siemens.com/cs/US/en/ps/US2:84DUB95BMD

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=US2:84DUB95BMD&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:84DUB95BMD&lang=en</a>

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:84DUB95BMD/certificate

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