SIEMENS

US2:22DUD32AE **Data sheet**



Figure similar

Reversing motor starter Size 1 Three phase full voltage Solid-state overload relay OLRelay amp range 5.5-22A 550/575-600 50/60HZ coil Non-combination type Enclosure type (open)

design of the product special product feature ESP200 overload relay Seperal technical data	product brand name	Class 22
weight [Ib] 6 lb Height x Width x Depth [in] 7.69 x 10.5 x 3.92 in touch protection against electrical shock installation altitude [ft] at height above sea level maximum ambient temperature [*Ft] 4 uring storage 2 *149 *Ft	design of the product	Full-voltage reversing motor starter
weight [ib] Height x Width x Depth [in] touch protection against electrical shock installation altitude [ft] at height above sea level maximum ambient temperature ["F] during operation	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 number of NC 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 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 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 NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of NC contacts at contacts of contact according to UL Coil type of voltage of the control supply voltage AC	General technical data	
touch protection against electrical shock installation altitude [ft] at height above sea level maximum ambient temperature [°F] • during storage • during operation	weight [lb]	6 lb
installation allitude [ft] at height above sea level maximum ambient temperature [*F] • during storage • during operation -4 +104 *F ambient temperature • during storage • during operation -20 +40 *C country of origin Mexico 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 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 appearating voltage for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value appearating soltage for main current circuit at AC at 600 V appearating soltage for main current circuit at	Height x Width x Depth [in]	7.69 × 10.5 × 3.92 in
ambient temperature (°F) • during storage • during operation ambient temperature • during storage • during operation ambient temperature • during storage • during operation -20 +65 °C -20 +40 °C country of origin Mexico 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 in the provided of the control supply voltage MEMA controller size 1 number of NO contacts 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 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 voltage of the control supply voltage AC	touch protection against electrical shock	Not finger-safe
 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 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 20 operating voltage for 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 voltage for main current circuit 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 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 operational current at AC at 600 V rated value <	installation altitude [ft] at height above sea level maximum	6560 ft
during operation ambient temperature during storage during operation during operation country of origin Mexico Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V rated value at 4200/208 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 izie of contactor size of contactor number of NO contacts for main current circuit at AC at 60 Hz maximum operational current at AC at 600 V rated value rechanical 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 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 of contactor according to UL Coil type of voltage of the control supply voltage 4 AC	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 10 hp • at 575/600 V rated value 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 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 NO contacts at contactor for auxiliary contacts number of No contact	 during storage 	-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 460/480 V rated value at 575/600 V rated value at 675/600 V rated value at 757/600 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 poperational 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 Cotil type of voltage of the control supply voltage AC	during operation	-4 +104 °F
• during operation country of origin Mexico Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value	ambient temperature	
country of origin Mexico 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 10 hp • at 575/600 V rated value 10 hp Contactor size of 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 contacts at contactor for auxiliary contacts 1 number of NO contacts at contactor for auxiliary contacts 1 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 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 460/480 V rated value • at 460/480 V rated value • at 575/600 V rated value 10 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 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 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 • 10 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 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 maximum contact rating of auxiliary contacts of contactor according to UL Coil type of voltage of the control supply voltage AC	country of origin	Mexico
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 4575/600 V rated value 10 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 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	Horsepower ratings	
at 220/230 V rated value at 460/480 V rated value 10 hp at 575/600 V rated value 10 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 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		
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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 products 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 0 000 V 000	• at 220/230 V rated value	3 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 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 NEMA controller size 1 0000 V 0000 V 0000 V 100000000 27 A 100000000 100000000 100000000 1000000	• at 460/480 V rated value	10 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 3 600 V 100000000 27 A 100000000 100000000 100000000 1000000	• at 575/600 V rated value	10 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 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 3 600 V 60	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 27 A 100000000 10000000 10000000 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 10000000 10000000 100000000 1000000	, , ,	600 V
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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)	, <u> </u>	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 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	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		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)
- Special Control of the Control of	Coil	
control supply voltage	type of voltage of the control supply voltage	AC
	control supply voltage	

• at AC at 50 Hz rated value	550 V
at AC at 60 Hz rated value	575 600 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	No
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
make time with automatic start after power failure 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	Open device (no enclosure)
design of the housing	NA
Mounting/wiring	
	Vertical
mounting position fastening method	Surface mounting and installation
type of electrical connection for supply voltage line-side	
	Screw-type terminals 35 35 lbf·in
tightening torque [lbf·in] for supply type of connectable conductor cross-sections at line-side	1x (14 2 AWG)
at AWG cables single or multi-stranded temperature of the conductor for supply maximum	75 °C
permissible	AL or CII
material of the conductor for supply	AL or CU
type of electrical connection for load-side outgoing feeder	Screw-type terminals 35 35 lbf·in
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- 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	2x (16 12 AWG)
The or commentation or additional or magnet	

coil at AWG cables single or multi-stranded	
temperature of the conductor at magnet coil maximum permissible	75 °C
material of the conductor at magnet coil	CU
type of electrical connection 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 fuse link for short-circuit protection of the main circuit required	10kA@600V (Class H or K); 100kA@600V (Class R or J)
design of the short-circuit trip	Thermal magnetic circuit breaker
breaking capacity maximum short-circuit current (Icu)	
● at 240 V	14 kA
● at 480 V	10 kA
● at 600 V	10 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=US2:22DUD32AE

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/US/en/ps/US2:22DUD32AE

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:22DUD32AE&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22DUD32AE/certificate

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