SIEMENS

Data sheet

US2:22CUD32AL



Reversing motor starter Size 0 Three phase full voltage Solid-state overload relay OLRelay amp range 5.5-22A 240VAC 50HZ / 277VAC 60HZ coil Non-combination type Enclosure type (open)

product brand name Class 22 design of the product feature ESP200 overload relay General technical data ESP200 overload relay General technical data 6 lb Height X Width X Depth [in] 7.69 × 10.5 × 3.92 in Touch protection against electrical shock Not finger-safe installation altitude [if] at height above sea level maximum 6800 ft ambient temperature [i*F] -22 +149 "F • during operation -4 +104 "F ambient temperature -30 +65 °C • during operation -20 +40 "C ocourtry of origin Mexico Horsepower ratings -30 +65 °C vielded mechanical performance [hp] for 3-phase AC Mexico motor - at 200/208 V rated value 3 hp • at 200/208 V rated value 3 hp - at 3 57:600 V rated value • at 200/208 V rated value 0 hp - at 57:600 V rated value • size of contactor NEMA controller size 0 - runurber of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz 800 V - 1000000 operating voltage for	Figure similar	
special product feature ESP200 overload relay General technical data • weight [b] 6 lb Height X With x Depth [in] 7.69 × 10.5 × 3.92 in touch protection against electrical shock Not finger-safe installation altiude [ft] at height above sea level maximum ambient temperature [FF] • during storage -22 +149 °F • during operation -4 +104 °F ambient temperature -30 +65 °C • 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 3 hp • at 200/208 V rated value 3 hp - • at 200/208 V rated value 0 hp - • at 200/208 V rated value 0 hp - • at 200/208 V rated value 0 hp - • at 200/208 V rated value 0 hp - • at 257/800 V rated value 0 hp - operating voltage for main contacts 3 - operating voltage for main current ci	product brand name	Class 22
General technical data 6 lb weight [b] 6 lb Height x Width x Depth [n] 7.69 × 10.5 × 3.92 in touch protection against electrical shock Not finger-safe installation altitude [fl] at height above sea level maximum 6560 ft ambient temperature [°F] -22 +149 °F • during operation -4 +104 °F ambient temperature -30 +65 °C • during operation -20 +40 °C county of origin Mexico Horspower ratings -20 +40 °C yielded mechanical performance [hp] for 3-phase AC -20 +40 °C motor - at 200/208 V rated value 3 hp • at 200/208 V rated value 3 hp • at 250/200 V rated value 0 hp • at 575/600 V rated value 0 hp contactor 3 size of contactor 10000000 number of NC contacts for main contacts 3 operating voltage for main current circuit at AC at 60 Hz -30 +60 °C operating voltage for main current circuit at AC at 60 Hz -30 +60 °C operating voltage for main current circuit at AC at 60 V rated value 18 A	design of the product	Full-voltage reversing motor starter
weight [tb] 6 lb Height x Width x Depth [in] 7.69 × 10.5 × 3.92 in touch protection against electrical shock Not finger-safe installation altitude [t] at height above sea level maximum 6660 ft ambient temperature [*F] -22 +149 °F • during storage -22 +149 °F • during operation -4 +104 °F ambient temperature -30 +65 °C • during operation -20 +40 °C country of origin Mexico Hosepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value 3 hp • at 200/208 V rated value 0 hp • at 400/480 V rated value 0 hp • at 575/600 V rated value 0 hp • at 575/600 V rated value 0 hp operating voltage for main current circuit at AC at 60 Hz 600 V maximum 0 10000000 operating voltage for main current dircuit at AC at 60 Hz 10000000 Auxiliary contact 1 10000000 number of NC contacts at contactor for auxiliary contacts 0 1 number of NC contacts at contactor for auxiliary conta	special product feature	ESP200 overload relay
Height X Width X Depth [in] 7.69 × 10.5 × 3.92 in touch protection against electrical shock Not finger-safe installation altitude [ft] at height above sea level maximum 6560 ft ambient temperature ['F] -22 +149 "F • during operation -4 +104 °F ambient temperature -30 +65 °C • during operation -20 +40 °C county of origin Mexico Horsepower ratings yieldet mechanical performance [hp] for 3-phase AC motor at 2200/208 V rated value 3 hp • at 2200/208 V rated value 3 hp • at 2200/208 V rated value 0 hp • at 460/480 V rated value 0 hp • at 460/480 V rated value 1 hp • at 460/480 V rated value 0 hp • at 460/480 V rated value 0 hp • at 460/480 V rated value 1 hp • at 460/480 V rated value 1 hp • at 200/208 V rated value 0 hp • at 460/480 V rated value 1 hp • at 200/208 V rated value 1 hp • at 460/480 V rated value 1 hp • at 460/480 V rated value 1 hp • o	General technical data	
touch protection against electrical shock Not finger-safe installation altitude [ft] at height above sea level maximum 6560 ft ambient temperature ['F] 6 • during operation -4 - during storage -22 • during storage -30 • during operation -4 • during storage -30 • during operation -20 • at 220/208 V rated value 3 hp • at 220/200 V rated value 0 hp • at 220/200 V rated value 0 hp • at 460/480 V rated value 0 hp • at 460/480 V rated value 0 hp • at 55/600 V rated value 0 hp	weight [lb]	6 lb
installation altitude [ft] at height above sea level maximum 6560 ft ambient temperature ['F] -22 +149 "F • during operation -4 +104 "F ambient temperature -30 +65 °C • during operation -20 +40 °C country of origin Mexico Horsepower ratings yielded mechanical performance [hp] for 3-phase AC motor • at 220/230 V rated value 3 hp • at 220/230 V rated value 3 hp • at 457/600 V rated value 0 hp Contactor NEMA controller size 0 number of NO contacts for main contacts 3 operational current at AC at 600 V rated value 18 A mechanical service life (switching cycles) of the main contacts to protect and sulliary 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 of contactor according to U. 8 contact rating of auxiliary contacts of contactor according to U. 1 operational current at AC at 600 V rated value 1 mechanical service life (switching cycles) of the main contacts to top auxiliary contacts 1 numb	Height x Width x Depth [in]	7.69 × 10.5 × 3.92 in
ambient temperature [°F] -22 +149 °F • during storage -22 +149 °F • during operation -4 +104 °F ambient temperature -30 +65 °C • during operation -20 +40 °C country of origin Mexico Horsepower ratings -yielded mechanical performance [hp] for 3-phase AC wotor • at 200/208 V rated value 3 hp • at 200/208 V rated value 3 hp • at 200/208 V rated value 0 hp • at 200/208 V rated value 0 hp • at 200/208 V rated value 0 hp • at 255/600 V rated value 0 hp • contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum 8 operational current at AC at 600 V rated value 18 A number of NC contacts at contacts for auxiliary contacts 0 number of NC 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 NO contacts at contactor for auxiliary contacts 1 number of NO contacts at cont	touch protection against electrical shock	Not finger-safe
	installation altitude [ft] at height above sea level maximum	6560 ft
• during operation -4 +104 °F ambient temperature -30 +65 °C • during operation -20 +40 °C country of origin Mexico Horsepower ratings	ambient temperature [°F]	
ambient temperature	during storage	-22 +149 °F
• during storage -30 +65 °C • during operation -20 +40 °C country of origin Mexico Horsepower ratings	during operation	-4 +104 °F
• 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 3 hp • at 220/230 V rated value 3 hp • at 460/480 V rated value 0 hp • at 4575/600 V rated value 0 hp contactor NEMA controller size 0 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 18 A mechanical service life (switching cycles) of the main contacts 0 number of NC contacts at contactor for auxiliary contacts 0 number of NO contacts at contactor for auxiliary contacts 1 number of NO contacts at contactor for auxiliary contacts 0 number of NO contacts at contactor for auxiliary contacts 0 number of NO contacts of 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 NO contacts of contactor according to UL 8 contact rating of auxiliary conta	ambient temperature	
country of origin Mexico Horsepower ratings	 during storage 	-30 +65 °C
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 3 hp • at 460/480 V rated value 0 hp • at 4575/600 V rated value 0 hp contactor NEMA controller size 0 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 18 A operational current at AC at 600 V rated value 18 A number of NC contacts at contactor for auxiliary contacts 0 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of total auxiliary contacts of contactor according	during operation	-20 +40 °C
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motor • at 200/208 V rated value 3 hp • at 220/230 V rated value 3 hp • at 220/230 V rated value 0 hp • at 460/480 V rated value 0 hp • at 460/480 V rated value 0 hp • at 575/600 V rated value 0 hp contactor NEMA controller size 0 number of NO contacts for main contacts 3 operating voltage for main current circuit at AC at 60 Hz 600 V maximum 600 V operational current at AC at 600 V rated value 18 A mechanical service life (switching cycles) of the main contacts typical 10000000 Auxiliary contact 0 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of NC contacts at contactor for auxiliary contacts 1 number of total auxiliary contacts maximum 8 contact rating of auxiliary contacts of contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) Coil	Horsepower ratings	
• at 220/230 V rated value 3 hp • at 460/480 V rated value 0 hp • at 575/600 V rated value 0 hp Contactor 0 hp size of contactor NEMA controller size 0 number of NO contacts for main contacts 3 operating voltage for main current circuit at AC at 60 Hz 600 V maximum 600 V operational current at AC at 600 V rated value 18 A mechanical service life (switching cycles) of the main contacts typical 10000000 Auxiliary contacts 0 number of NC contacts at contactor for auxiliary contacts 0 number of NC contacts at contactor for auxiliary contacts 1 number of total auxiliary contacts of contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) coil toUL AC		
• at 460/480 V rated value0 hp• at 575/600 V rated value0 hpContactorsize of contactorNEMA controller size 0number of NO contacts for main contacts3operating voltage for main current circuit at AC at 60 Hz600 Vmaximum18 Aoperational current at AC at 600 V rated value18 Amechanical service life (switching cycles) of the main contacts typical10000000Auxiliary contact0number of NO contacts at contactor for auxiliary contacts1number of NO contacts at contactor for auxiliary contacts1number of NO contacts at contactor for auxiliary contacts1number of total auxiliary contacts of contactor according to UL10A@600VAC (A600), 5A@600VDC (P600)Coiltype of voltage of the control supply voltageAC	• at 200/208 V rated value	3 hp
• at 575/600 V rated value 0 hp Contactor size of contactor number of NO contacts for main contacts 3 operating voltage for main current circuit at AC at 60 Hz 600 V maximum 0 perational current at AC at 600 V rated value 18 A mechanical service life (switching cycles) of the main contacts typical 10000000 Auxiliary contact 0 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 NO contacts at contactor for auxiliary contacts 1 number of NO contacts at contactor for auxiliary contacts 1 number of total auxiliary contacts of contactor according to UL 8 contact rating of auxiliary contacts of contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) coil 4C	• at 220/230 V rated value	3 hp
Contactor NEMA controller size 0 number of NO contacts for main contacts 3 operating voltage for main current circuit at AC at 60 Hz 600 V maximum 600 V operational current at AC at 600 V rated value 18 A mechanical service life (switching cycles) of the main contacts typical 10000000 Auxiliary contact 0 number of NC contacts at contactor for auxiliary contacts 0 number of NO 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 of contacts at contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) Coil 4 type of voltage of the control supply voltage AC	• at 460/480 V rated value	0 hp
size of contactor NEMA controller size 0 number of NO contacts for main contacts 3 operating voltage for main current circuit at AC at 60 Hz 600 V maximum 600 V operational current at AC at 600 V rated value 18 A mechanical service life (switching cycles) of the main contacts typical 10000000 Auxiliary contact 0 number of NC contacts at contactor for auxiliary contacts 0 number of NO 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 10A@600VAC (A600), 5A@600VDC (P600) Coil Kpe of voltage of the control supply voltage AC	 at 575/600 V rated value 	0 hp
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maximumoperational current at AC at 600 V rated value18 Amechanical service life (switching cycles) of the main contacts typical10000000Auxiliary contact10000000number of NC contacts at contactor for auxiliary contacts0number of NO contacts at contactor for auxiliary contacts1number of total auxiliary contacts maximum8contact rating of auxiliary contacts of contactor according to UL10A@600VAC (A600), 5A@600VDC (P600)CoilAC	number of NO contacts for main contacts	3
mechanical service life (switching cycles) of the main contacts typical 1000000 Auxiliary contact 1000000 number of NC contacts at contactor for auxiliary contacts 0 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 10A@600VAC (A600), 5A@600VDC (P600) Coil type of voltage of the control supply voltage AC		600 V
contacts typical 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 8 contact rating of auxiliary contacts of contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) Coil 4C	operational current at AC at 600 V rated value	18 A
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 8 contact rating of auxiliary contacts of contactor according to UL 10A@600VAC (A600), 5A@600VDC (P600) Coil 4 type of voltage of the control supply voltage AC		1000000
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 10A@600VAC (A600), 5A@600VDC (P600) Coil type of voltage of the control supply voltage AC	Auxiliary contact	
number of total auxiliary contacts maximum 8 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	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) 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	8
type of voltage of the control supply voltage AC		10A@600VAC (A600), 5A@600VDC (P600)
	Coil	
control supply voltage	type of voltage of the control supply voltage	AC
	control supply voltage	

	24014
at AC at 50 Hz rated value	240 V
at AC at 60 Hz rated value	277 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 operating range factor control supply voltage rated value	25 VA 0.85 1.1
of magnet coil	
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	1
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	5A@600VAC (B600), 1A@250VDC (R300)
according to UL	
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	
mounting position	Vertical
fastening method	Surface mounting and installation
type of electrical connection for supply voltage line-side	Screw-type terminals
tightening torque [lbf·in] for supply	20 20 lbf-in
type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded	1x (14 2 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	Screw-type terminals
tightening torque [lbf·in] for load-side outgoing feeder	20 20 lbf-in
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)

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, Brochu www.usa.siemens.com/iccatalog Industry Mall (Online ordering system)	ures,)

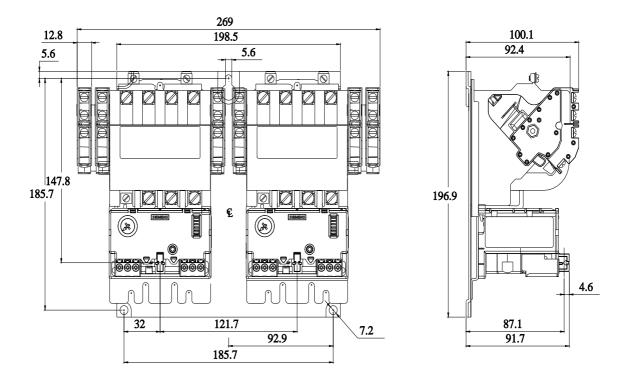
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:22CUD32AL

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/US/en/ps/US2:22CUD32AL

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:22CUD32AL&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22CUD32AL/certificate



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