## **SIEMENS**

Data sheet US2:22CUA320H



Reversing motor starter, Size 0, Three phase full voltage, Solid-state overload relay, OLR amp range 0.25-1A, Non-combination type, Enclosure type 12, Dust/drip proof for indoors, Standard width enclosure

Figure similar

design of the product seature ESP200 overload relay     Seperal broduct feature   ESP200 overload relay	product brand name	Class 22
weight [b] 17 lb 18 leght x Width x Depth [in] 13 x 13 x 5 in 18 louch protection against electrical shock 18 leght x Width x Depth [in] 13 x 13 x 5 in 18 louch protection against electrical shock 18 leght x Width x Depth [in] 18 x 13 x 5 in 18 leght x Width x Depth [in] 18 x 13 x 5 in 18 leght x Width x Depth [in] 18 x 13 x 5 in 18 leght x Width x Depth [in] 18 x 13 x 5 in 18 leght x Width x Depth [in] 18 x 13 x 5 in 18 leght x 13 x 13 x 13 x 13 x 13 x 13 x 15 in 18 leght x 13 x 1	design of the product	Full-voltage reversing motor starter
Meight x Width x Depth [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 [FT]  • during storage • during operation ambient temperature • during storage • during storage • during operation - 4+104 °F  ambient temperature • during storage • during operation - 20+65 °C • during operation - 20+40 °C  country of origin  WSA  WHOSEOPOWER TAILINGS  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 • obstitution of NO contacts for main contacts 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  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 number of NO contacts at contacts of contactor 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	weight [lb]	17 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+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  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 18 A 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 f	Height x Width x Depth [in]	13 × 13 × 5 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  • at 575/600 V rated value  • at 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  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 contac	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>0.17 hp</li> <li>at 2575/600 V rated value</li> <li>0.33 hp</li> <li>at 575/600 V rated value</li> <li>0.5 hp</li> </ul> Contactor size of contactor main contacts <ul> <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>operating 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 NC 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 NO contacts at contactor for auxiliary contacts</li> <li>number of NO contacts at contactor for auxiliary contacts</li> <li>number of total auxiliary contacts maximum</li> <li>contact rating of auxiliary contacts of contactor according to UL</li> <li>Coil</li> <li>type 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 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     o.5 hp  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  noperational current at AC at 600 V rated value  poperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  noperational current at AC at 600 V rated value  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 total auxiliary contacts maximum  contact rating of auxiliary contacts of contactor according to UL  Coil  type of voltage of the control supply voltage  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  0.17 hp  • at 675/600 V rated value  0.5 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 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 0000000  100/06000VAC (A600), 5A@600VDC (P600)  type of voltage of the control supply voltage  AC	<ul> <li>during storage</li> </ul>	-22 +149 °F
• during storage     • during operation     20 +40 °C     country of origin     USA  Horsepower ratings  yielded mechanical performance [hp] for 3-phase AC motor     • at 200/208 V rated value     • at 220/230 V rated value     • at 4575/600 V rated value     • at 4575/600 V rated value     • 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  nechanical 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 to UL  Coil  type of voltage of the control supply voltage  AC	during operation	-4 +104 °F
Ountry of origin     USA  Horsepower ratings  yielded mechanical performance [hp] for 3-phase AC motor     out 200/208 V rated value     out 200/208 V rated value     out 460/480 V rated value     out 575/600 V rated value     out 575/600 V rated value     ize 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	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 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 480/480 V rated value • at 575/600 V rated value  5ize 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 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 • 0.5 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 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 0.17 hp e at 460/480 V rated value 0.33 hp e at 575/600 V rated value 0.5 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	Horsepower ratings	
<ul> <li>at 220/230 V rated value</li> <li>at 460/480 V rated value</li> <li>0.33 hp</li> <li>at 575/600 V rated value</li> <li>0.5 hp</li> </ul> Contactor <ul> <li>size of contactor</li> <li>number of NO contacts for main contacts</li> <li>operating voltage for main current circuit at AC at 60 Hz maximum</li> <li>operational current at AC at 600 V rated value</li> <li>mechanical service life (switching cycles) of the main contacts typical</li> </ul> Auxiliary contact <ul> <li>number of NC contacts at contactor for auxiliary contacts</li> <li>number of NC contacts at contactor for auxiliary contacts</li> <li>number of total auxiliary contacts maximum</li> <li>contact rating of auxiliary contacts of contactor according to UL</li> </ul> Coil <ul> <li>type of voltage of the control supply voltage</li> </ul> AC <ul> <li>AC</li> </ul> AC <ul> <li>AC</li> </ul> AC <ul> <li>AC</li> </ul>		
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  mechanical service life (switching cycles) of the main contacts typical  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  NEMA controller size 0  3  00 V  1000 V  18 A  10000000  10000000  10000000  10000000	• at 200/208 V rated value	0.17 hp
otatactor     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 0  NEMA controller size 0  1 000 V  18 A  10000000  10000000  10000000  10000000	<ul> <li>at 220/230 V rated value</li> </ul>	0.17 hp
Size of contactor  Size of contactor  NEMA controller size 0  NEMA controller	• at 460/480 V rated value	0.33 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 0  3 600 V  10000000  100000000  100000000  1000000	<ul><li>at 575/600 V rated value</li></ul>	0.5 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 6000	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  600 V  600 V  100000000  100000000  100000000000	size of contactor	NEMA controller size 0
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  18 A  10000000  10000000  10000000  10000000	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	18 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  1  1  1  1  1  1  1  1  1  1  1	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  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	8
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	

• at AC at 50 Hz rated value	380 440 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	Yes
reset function	
	Manual, automatic and remote
trip class	CLASS 5 / 10 / 20 (factory set) / 30 0.25 1 A
adjustable current response value current of the current- dependent overload release	
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	
<ul><li>at AC at 600 V</li></ul>	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
with multi-phase operation at AC rated value	300 V
Enclosure	
degree of protection NEMA rating	12
design of the housing	dustproof and drip-proof for indoor use
	ממאניויסטו מווע עוויף-יףויסטו וטו ווועטטו עאכ
Mounting/wiring	Vertical
mounting position	Vertical Conference and in stall-time
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 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 maximum permissible	75 °C
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 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=US2:22CUA320H

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/US/en/ps/US2:22CUA320H

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=US2:22CUA320H&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:22CUA320H&lang=en</a>

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22CUA320H/certificate

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