## **SIEMENS**

Data sheet US2:22CUB32FD



Reversing motor starter, Size 0, Three phase full voltage, Solid-state overload relay, OLR amp range 0.75-3.4A, 208VAC 60Hz coil, Noncombination type, Enclosure type 4X fiberglass, Water/dust tight noncorrosive, Standard width enclosure

Figure similar

design of the product special product feature SP200 overload relay  General technical data  weight [lb] Height x Width x Depth [n] 17 lb 24 x 15 x 7 in N for enclosed products installation altitude [lt] at height above sea level maximum ambient temperature ["F] • during storage • during operation aduring operation 40 uring operation 4	product brand name	Class 22
weight [Ib] 17 lb Height x Width x Depth [in] 24 x 15 x 7 in touch protection against electrical shock installation attitude [ft] at height above sea level maximum ambient temperature ["F] 6 during storage 6 during operation 7 4 +104 "F 7 8 4 +104 "F 8 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	design of the product	Full-voltage reversing motor starter
weight [ib] Height x Width x Depth [in] 10	special product feature	ESP200 overload relay
Height x Width x Depth [in]  touch protection against electrical shock installation altitude [ft] at height above sea level maximum ambient temperature [*F]  • during storage • during operation ambient temperature • during storage • during operation country of origin  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 575/600 V rated value • at 575/600 V rated value • at 575/600 V rated value • at 600 V rated value • at 600 V rated value  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	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 storage • during storage • during operation -20 +40 °C  Country of origin  Horsepower ratings  yielded mechanical performance [hp] for 3-phase AC motor • at 200/208 V rated value • at 220/230 V rated value • at 460/480 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 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 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 total auxiliary contacts maximum  contact rating of auxiliary contacts of contactor according to UL  Coil	Height x Width x Depth [in]	24 × 15 × 7 in
ambient temperature ("F"]  • during storage • during operation  ambient temperature  • during storage • during storage • during operation  -20 +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 220/230 V rated value • at 575/600 V rated value • at 575/600 V rated value • at 575/600 V rated value  -20 +40 °C  Description of the performance in	touch protection against electrical shock	NA for enclosed products
during storage     during operation     during storage     during storage     during operation     during storage     during operation     during opera	installation altitude [ft] at height above sea level maximum	6560 ft
during operation     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     at 575/600 V rated value     at 575/600 V rated value     inumber 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     number of NC contacts at contactor for auxiliary contacts     number of NO 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 total auxiliary contacts maximum     source at a food of contacts and food of contacts and food of contacts and contacts an	ambient temperature [°F]	
ambient temperature  • during storage • during operation  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 460/480 V rated value • at 575/600 V rated value  isize of contactor  size of contactor  size of contactor NEMA controller size 0  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 total auxiliary contacts maximum  contact rating of auxiliary contacts of contactor according to UL  Cotil	<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 480/480 V rated value     • at 575/600 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  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  10000000  1000000000000000000000000	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     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  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 NC contacts at contactor for auxiliary contacts number of NC contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum  total contact rating of auxiliary contacts of contactor according to UL  Coil  Coil	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 • 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  mechanical service life (switching cycles) of the main contacts typical  Auxillary 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	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 575/600 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  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	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 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 NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact trating of auxiliary contacts of contactor according to UL  Coil	country of origin	USA
motor  • at 200/208 V rated value • at 220/230 V rated value • at 460/480 V rated value • at 4575/600 V rated value • at 575/600 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 NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum  contact rating of auxiliary contacts of contactor according to UL  Coil	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 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 maximum contact rating of auxiliary contacts of contactor according to UL  Coil		
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	• 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 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	• at 220/230 V rated value	0.75 hp
Size of contactor  Size of contactor  NEMA controller size 0  NEMA controller	• 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  NEMA controller size 0  3 600 V  18 A 100000000  100000000  100000000  1000000	<ul><li>at 575/600 V rated value</li></ul>	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  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  600 V  18 A  10000000  10000000  100000000  1000000	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  600 V  18 A  10000000  10000000  100000000  1000000	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 NO contacts at contactor for auxiliary contacts number of total auxiliary contacts maximum contact rating of auxiliary contacts of contactor according to UL  Coil  18 A 100000000  100000000  100000000000000	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  10000000  10000000  0  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	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  0  1  1  1  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  1  10A@600VAC (A600), 5A@600VDC (P600)	Auxiliary contact	
number of total auxiliary contacts maximum  contact rating of auxiliary contacts of contactor according to UL  Coil  8  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  10A@600VAC (A600), 5A@600VDC (P600)	number of NO contacts at contactor for auxiliary contacts	1
to UL  Coil	number of total auxiliary contacts maximum	8
		10A@600VAC (A600), 5A@600VDC (P600)
type of voltage of the control supply voltage AC	Coil	
71 G FF 7 - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G - " G -	type of voltage of the control supply voltage	AC
control supply voltage	control supply voltage	

at AC at 60 Hz rated value	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	0.85 1.1
of magnet coil percental drop-out voltage of magnet coil related to the	50 %
input voltage	
ON-delay time	19 29 ms
OFF-delay time	10 24 ms
Overload relay	
product function	
<ul> <li>overload protection</li> </ul>	Yes
phase failure detection	Yes
asymmetry detection	Yes
ground fault detection	Yes
• test function	Yes
external reset	Yes
reset function	Manual, automatic and remote
trip class	CLASS 5 / 10 / 20 (factory set) / 30
adjustable current response value current of the current-	0.75 3.4 A
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	
• 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	0.16000 v.10 (2000), 1.162200 v.20 (1.000)
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	4X, fiber glass
design of the housing	dustproof, waterproof & resistant to corrosion
	dustproof, waterproof & resistant to corrosion
Mounting/wiring	Vertical
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 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	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, Brochures,...)

www.usa.siemens.com/iccatalog

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:22CUB32FD

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/US/en/ps/US2:22CUB32FD

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=US2:22CUB32FD&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:22CUB32FD&lang=en</a>

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22CUB32FD/certificate

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