## SIEMENS

## Data sheet

## US2:22CUD32FJ



Reversing motor starter, Size 0, Three phase full voltage, Solid-state overload relay, OLR amp range 5.5-22A, 24VAC 50-60Hz coil, Non-combination type, Enclosure type 4X fiberglass, Water/dust tight noncorrosive, Standard width enclosure

product brand name	Class 22
design of the product	Full-voltage reversing motor starter
special product feature	ESP200 overload relay
General technical data	
weight [lb]	17 lb
Height x Width x Depth [in]	24 × 15 × 7 in
touch protection against electrical shock	NA for enclosed products
installation altitude [ft] at height above sea level maximum	6560 ft
ambient temperature [°F]	
during storage	-22 +149 °F
during operation	-4 +104 °F
ambient temperature	
during storage	-30 +65 °C
<ul> <li>during operation</li> </ul>	-20 +40 °C
country of origin	USA
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 575/600 V rated value	0 hp
Contactor	
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 maximum	600 V
operational current at AC at 600 V rated value	18 A
mechanical service life (operating cycles) of the main contacts typical	1000000
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	
type of voltage of the control supply voltage	AC
control supply voltage	
• at AC at 50 Hz rated value	24 V
• at AC at 60 Hz rated value	24 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	0.85 1.1
magnet coil	0.00 1.1
percental drop-out voltage of magnet coil related to the input voltage	50 %
ON-delay time	19 29 ms
OFF-delay time	10 24 ms
Overload relay	
product function	
<ul> <li>overload protection</li> </ul>	Yes
<ul> <li>phase failure detection</li> </ul>	Yes
<ul> <li>asymmetry detection</li> </ul>	Yes
<ul> <li>ground fault detection</li> </ul>	Yes
test function	Yes
external reset	Yes
reset function	Manual, automatic and remote
trip class	CLASS 5 / 10 / 20 (factory set) / 30
adjustable current response value current of the current- dependent overload release	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	5 A
• at AC at 600 V	5 A
• at DC at 250 V	1 A
contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 1A@250VDC (R300)
insulation voltage (Ui)	
<ul> <li>with single-phase operation at AC rated value</li> </ul>	600 V
with multi-phase operation at AC rated value	300 V
	300 V
with multi-phase operation at AC rated value	300 V 4X, fiber glass
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing	
with multi-phase operation at AC rated value Enclosure degree of protection NEMA rating	4X, fiber glass
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical
with multi-phase operation at AC rated value Enclosure degree of protection NEMA rating design of the housing Mounting/wiring mounting position fastening method	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation
with multi-phase operation at AC rated value  Enclosure  degree of protection NEMA rating design of the housing  Mounting/wiring  mounting position fastening method type of electrical connection for supply voltage line-side	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals
with multi-phase operation at AC rated value  Enclosure  degree of protection NEMA rating  design of the housing  Mounting/wiring  mounting position fastening method type of electrical connection for supply voltage line-side tightening torque [lbf-in] for supply	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in
with multi-phase operation at AC rated value  Enclosure  degree of protection NEMA rating design of the housing  Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side tightening torque [lbf-in] for supply type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in 1x (14 2 AWG)
with multi-phase operation at AC rated value  Enclosure  degree of protection NEMA rating design of the housing  Mounting/wiring  mounting position fastening method type of electrical connection for supply voltage line-side tightening torque [lbf-in] for supply type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in 1x (14 2 AWG) 75 °C
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for supply	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in 1x (14 2 AWG) 75 °C AL or CU
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for supply     type of electrical connection for load-side outgoing feeder	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in 1x (14 2 AWG) 75 °C AL or CU Screw-type terminals
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for supply     type of electrical connection for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in 1x (14 2 AWG) 75 °C AL or CU Screw-type terminals 20 20 lbf-in
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with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf·in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for supply     type of electrical connection for load-side outgoing feeder     tightening torque [lbf·in] for load-side outgoing feeder     tightening torque feeder single or multi-stranded     temperature of the conductor for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of load-side outgoing feeder     top permissible     material of the conductor for load-side outgoing feeder     maximum permissible	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf-in 1x (14 2 AWG) 75 °C AL or CU Screw-type terminals 20 20 lbf-in 1x (14 2 AWG) 75 °C AL or CU
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with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil	4X, fiber glass         dustproof, waterproof & resistant to corrosion         Vertical         Surface mounting and installation         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for load-side outgoing feeder     type of connectable conductor cross-sections for AWG cables     for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque fibrin] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of the conductor for load-side outgoing feeder     type of the conductor for load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     type of the conductor for load-side outgoing feeder     type of electrical connection for load-side outgoing feeder	4X, fiber glass         dustproof, waterproof & resistant to corrosion         Vertical         Surface mounting and installation         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in         2x (16 12 AWG)
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of electrical connection of magnet coil	4X, fiber glass         dustproof, waterproof & resistant to corrosion         Vertical         Surface mounting and installation         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of connectable conductor rorss-sections of magnet coil     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of connectable conductor cross-sections of magnet coil for     AWG cables single or multi-stranded     temperature of the conductor at magnet coil maximum	4X, fiber glass         dustproof, waterproof & resistant to corrosion         Vertical         Surface mounting and installation         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in         2x (16 12 AWG)
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     tightening torque [lbf-in] at magnet coil     type of connectable conductor at magnet coil maximum     permissible	4X, fiber glass dustproof, waterproof & resistant to corrosion Vertical Surface mounting and installation Screw-type terminals 20 20 lbf·in 1x (14 2 AWG) 75 °C AL or CU Screw-type terminals 20 20 lbf·in 1x (14 2 AWG) 75 °C AL or CU Screw-type terminals 5 12 lbf·in 2x (16 12 AWG) 75 °C
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf·in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for supply     type of connectable conductor cross-sections for AWG cables     for load-side outgoing feeder     tightening torque [lbf·in] for load-side outgoing feeder     tightening torque [lbf·in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of connectable conductor cross-sections of magnet coil for     AWG cables single or multi-stranded     temperature of the conductor at magnet coil maximum     permissible     material of the conductor at magnet coil maximum     permissible     material of the conductor at magnet coil     type of electrical connection for auxiliary contacts     tightening torque [lbf-in] at contactor for auxiliary contacts     tightening torque [lbf-in] at contactor for auxiliary contacts	4X, fiber glass         dustproof, waterproof & resistant to corrosion         Vertical         Surface mounting and installation         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in         2x (16 12 AWG)         75 °C         CU         Screw-type terminals         10 15 lbf in
with multi-phase operation at AC rated value     Enclosure     degree of protection NEMA rating     design of the housing     Mounting/wiring     mounting position     fastening method     type of electrical connection for supply voltage line-side     tightening torque [lbf-in] for supply     type of connectable conductor cross-sections at line-side for     AWG cables single or multi-stranded     temperature of the conductor for supply maximum permissible     material of the conductor for supply     type of electrical connection for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of connectable conductor at magnet coil maximum     permissible     material of the conductor at magnet coil     type of electrical connection for auxiliary contacts	4X, fiber glass         dustproof, waterproof & resistant to corrosion         Vertical         Surface mounting and installation         Screw-type terminals         20 20 lbf-in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf-in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         20 20 lbf-in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in         2x (16 12 AWG)         75 °C         CU         Screw-type terminals         5 12 lbf-in         2x (16 12 AWG)

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 for 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
maximum short-circuit current breaking capacity (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
Eurthor information	

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=US2:22CUD32FJ

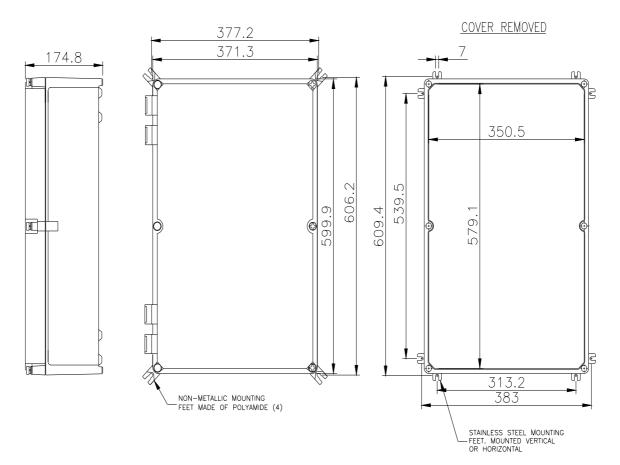
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/US/en/ps/US2:22CUD32FJ

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:22CUD32FJ&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22CUD32FJ/certificate





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