## SIEMENS

## Data sheet

## US2:22HUG32AC



Reversing motor starter Size 3 Three phase full voltage Solid-state overload relay OLRelay amp range 25-100A 220-240/440-480VAC 60HZ coil Non-combination type Enclosure type (open)

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]	14 lb
Height x Width x Depth [in]	11.44 × 12.75 × 5.65 in
touch protection against electrical shock	Not finger-safe
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
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	25 hp
• at 220/230 V rated value	30 hp
• at 460/480 V rated value	50 hp
• at 575/600 V rated value	50 hp
Contactor	
size of contactor	NEMA controller size 3
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	90 A
mechanical service life (operating cycles) of the main contacts typical	500000
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	7
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	
<ul> <li>at AC at 60 Hz rated value</li> </ul>	220 480 V
holding power at AC minimum	14 W
apparent pick-up power of magnet coil at AC	310 VA
apparent holding power of magnet coil at AC	26 VA

operating range factor control supply voltage rated value of	0.85 1.1
magnet coil	
percental drop-out voltage of magnet coil related to the input voltage	50 %
ON-delay time	26 41 ms
OFF-delay time	14 19 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	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	25 100 A
make time with automatic start after power failure maximum	3 s
relative repeat accuracy	1 %
product feature protective coating on printed-circuit board	Yes
number of NC contacts of auxiliary contacts of overload relay	1
number of NO contacts of auxiliary contacts of overload relay	1
operational current of auxiliary contacts of overload relay	
• at AC at 600 V	5 A
• at DC at 250 V	1 A
contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 1A@250VDC (R300)
insulation voltage (Ui)	
<ul> <li>with single-phase operation at AC rated value</li> </ul>	600 V
<ul> <li>with multi-phase operation at AC rated value</li> </ul>	300 V
Enclosure	
· · · ·	NA
Enclosure	NA
Enclosure design of the housing	NA Vertical
Enclosure design of the housing Mounting/wiring	
Enclosure design of the housing Mounting/wiring mounting position	Vertical
Enclosure design of the housing Mounting/wiring mounting position fastening method	Vertical Surface mounting and installation
Enclosure design of the housing Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side	Vertical Surface mounting and installation Box lug
Enclosure 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	Vertical Surface mounting and installation Box lug 120 120 lbf·in
Enclosure 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	Vertical Surface mounting and installation Box lug 120 120 lbf·in 1x (14 2/0 AWG)
Enclosure 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	Vertical Surface mounting and installation Box lug 120 120 lbf·in 1x (14 2/0 AWG) 75 °C
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Enclosure 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 type of connectable conductor cross-sections for AWG cables	Vertical Surface mounting and installation Box lug 120 120 lbf·in 1x (14 2/0 AWG) 75 °C AL or CU Box lug 120 120 lbf·in
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Enclosure         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         tightening torque [lbf·in] for load-side outgoing feeder         type of connectable conductor cross-sections for AWG cables         for load-side outgoing feeder single or multi-stranded         temperature of the conductor for load-side outgoing feeder         maximum permissible         material of the conductor for load-side outgoing feeder         maximum permissible         material of the conductor for load-side outgoing feeder         type of electrical connection of magnet coil	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals
Enclosure         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         type of connectable conductor cross-sections for AWG cables         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 connectable conductor for load-side outgoing feeder         type of the conductor for load-side outgoing feeder         maximum permissible         material of the conductor for load-side outgoing feeder         type of electrical connection of magnet coil         tightening torque [lbf-in] at magnet coil         tightening torque [lbf-in] at magnet coil	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in
Enclosure         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 connectable conductor for load-side outgoing feeder         type of connectable conductor for load-side outgoing feeder         maximum permissible         material of the conductor for load-side outgoing feeder         type of electrical connection of magnet coil         tightening torque [lbf·in] at 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	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in         2x (16 12 AWG)
Enclosure         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 supply         type of connectable conductor cross-sections for AWG cables         for load-side outgoing feeder         type of connectable conductor for load-side outgoing feeder         maximum permissible         material of the conductor for load-side outgoing feeder         type of electrical connection of magnet coil         tightening torque [lbf-in] at 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	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in         2x (16 12 AWG)         75 °C
Enclosure 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 type of connectable conductor cross-sections for AWG cables for load-side outgoing 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 electrical connection of magnet coil temperature of the conductor for load-side outgoing feeder material of the 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 material of the conductor at magnet coil material of the conductor at magnet coil	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf-in         2x (16 12 AWG)         75 °C         CU
Enclosure 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 type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder type of connectable conductor for load-side outgoing feeder maximum permissible material of the 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 material of the conductor at magnet coil temperature of the conductor at magnet coil type of electrical connection for auxiliary contacts	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 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)         75 °C         CU         Screw-type terminals
Enclosure 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 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 type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder maximum permissible material of the 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 material of the conductor at magnet coil aximum 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 type of connectable conductor at magnet coil	VerticalSurface mounting and installationBox lug120 120 lbf in1x (14 2/0 AWG)75 °CAL or CUBox lug120 120 lbf in1x (14 2/0 AWG)75 °CAL or CUScrew-type terminals5 12 lbf in2x (16 12 AWG)75 °CCUScrew-type terminals10 15 lbf in
Enclosure         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 cross-sections for AWG cables         for load-side outgoing feeder single or multi-stranded         temperature of the conductor for load-side outgoing feeder         maximum permissible         material of the conductor for load-side outgoing feeder         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         type of electrical connection for auxiliary contacts         tightening torque [lbf-in] at contactor for auxiliary contacts         tightening torque [lbf-in] at contactor for auxiliary contact	Vertical         Surface mounting and installation         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 AWG)         75 °C         AL or CU         Box lug         120 120 lbf-in         1x (14 2/0 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         1x (12 AWG), 2x (16 14 AWG), 2x (18 16 AWG)

contacts	
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	none
design of the short-circuit trip	none
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	0 kA
• at 480 V	0 kA
• at 600 V	0 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/iccatalo

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:22HUG32AC

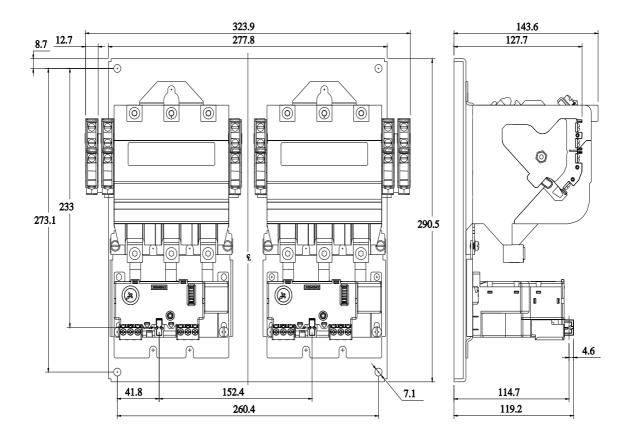
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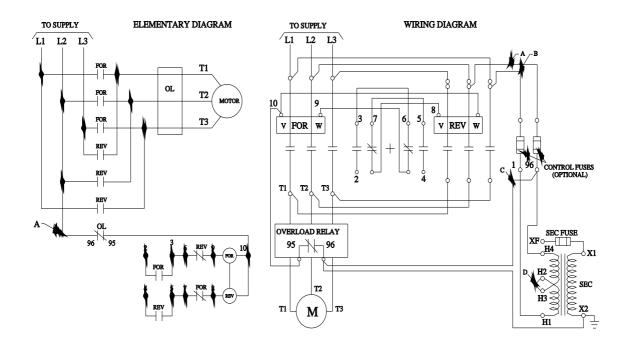
https://support.industry.siemens.com/cs/US/en/ps/US2:22HUG32A0

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:22HUG32AC&lang=en

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