## SIEMENS

## Data sheet

## US2:22GUG32AJ



Reversing motor starter Size 2 1/2 Three phase full voltage Solid-state overload relay OLRelay amp range 25-100A 24VAC 50-60HZ 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; Half-size starter
General technical data	
weight [lb]	8 lb
Height x Width x Depth [in]	8.94 × 10.5 × 4.17 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	15 hp
• at 220/230 V rated value	20 hp
• at 460/480 V rated value	30 hp
• at 575/600 V rated value	30 hp
Contactor	
size of contactor	Controller half size 2 1/2
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	60 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	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 50 Hz rated value</li> </ul>	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	
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
phase failure detection	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
<ul> <li>operational current of auxiliary contacts of overload relay</li> <li>at AC at 600 V</li> </ul>	5 A
• at DC at 250 V	1A
contact rating of auxiliary contacts of overload relay according to	5A@600VAC (B600), 1A@250VDC (R300)
UL	57@0000770 (2000), 17@250020 (1000)
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
with multi-phase operation at AC rated value     Enclosure	300 V
Enclosure degree of protection NEMA rating	Open device (no enclosure)
Enclosure degree of protection NEMA rating design of the housing	
Enclosure degree of protection NEMA rating design of the housing Mounting/wiring	Open device (no enclosure) NA
Enclosure degree of protection NEMA rating design of the housing Mounting/wiring mounting position	Open device (no enclosure) NA Vertical
Enclosure degree of protection NEMA rating design of the housing Mounting/wiring mounting position fastening method	Open device (no enclosure) NA Vertical Surface mounting and installation
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	Open device (no enclosure) NA Vertical Surface mounting and installation Box lug
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	Open device (no enclosure) NA Vertical Surface mounting and installation Box lug 45 45 lbf-in
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	Open device (no enclosure) NA Vertical Surface mounting and installation Box lug 45 45 lbf-in 1x (14 2 AWG)
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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	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf-in         1x (14 2 AWG)         75 °C         AL or CU
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	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf-in         1x (14 2 AWG)         75 °C         AL or CU         Box lug
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	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf-in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf-in
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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 cross-sections for AWG cables         for load-side outgoing feeder single or multi-stranded         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	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals
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 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 temperature of the conductor for load-side outgoing feeder type of electrical connection of magnet coil tightening torque [lbf-in] at magnet coil	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in
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 maximum permissible material of the conductor 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 clectrical connection for load-side outgoing feeder temperature of the conductor for load-side outgoing feeder type of electrical connection 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	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in         2x (16 12 AWG)
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 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	Open device (no enclosure)         NA         Vertical         Surface mounting and installation         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Box lug         45 45 lbf in         1x (14 2 AWG)         75 °C         AL or CU         Screw-type terminals         5 12 lbf in
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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
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=US2:22GUG32AJ

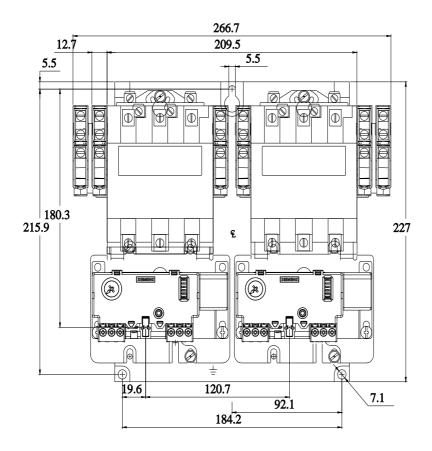
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

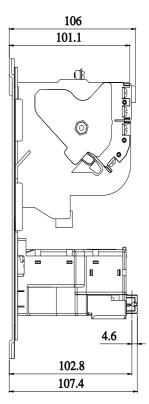
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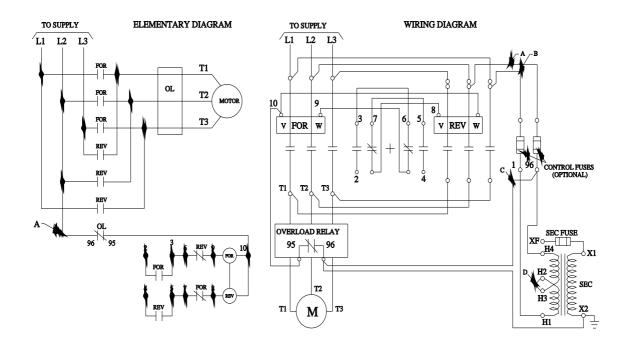
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:22GUG32AJ&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22GUG32AJ/certificate







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