SIEMENS

Data sheet

US2:22LPU32AD



Reversing motor starter Size 5 Three phase full voltage Solid-state overload relay OLRelay amp range 55-250A 200-220V 50-60HZ/DC coil Non-combination type Enclosure type (open)

product brand name	Class 22
design of the product	Full-voltage reversing motor starter
General technical data	
weight [lb]	41 lb
touch protection against electrical shock	Main circuit (not finger-safe); Control circuit (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	USA
Horsepower ratings	·
yielded mechanical performance [hp] for 3-phase AC motor	
• at 200/208 V rated value	75 hp
• at 220/230 V rated value	100 hp
• at 460/480 V rated value	200 hp
• at 575/600 V rated value	200 hp
Contactor	
size of contactor	NEMA controller size 5
	NEMA controller size 5 3
size of contactor	
size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz	3
size of contactor number of NO contacts for main contacts operating voltage for main current circuit at AC at 60 Hz maximum	3 600 V
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 (operating cycles) of the main contacts	3 600 V 270 A
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 (operating cycles) of the main contacts typical	3 600 V 270 A
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 (operating cycles) of the main contacts typical Auxiliary contact	3 600 V 270 A 1000000
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 (operating cycles) of the main contacts typical Auxiliary contact number of NC contacts at contactor for auxiliary contacts	3 600 V 270 A 10000000 2
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 (operating 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	3 600 V 270 A 10000000 2 2 2
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 (operating 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	3 600 V 270 A 10000000 2 2 2 8
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 (operating 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	3 600 V 270 A 10000000 2 2 2 8
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 (operating 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	3 600 V 270 A 10000000 2 2 2 8 10A@240VAC (A300), 2.5A@250VDC (Q300)
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 (operating 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 270 A 10000000 2 2 2 8 10A@240VAC (A300), 2.5A@250VDC (Q300)
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 (operating 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 control supply voltage	3 600 V 270 A 10000000 2 2 8 10A@240VAC (A300), 2.5A@250VDC (Q300) AC/DC
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 (operating 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 control supply voltage • at DC rated value	3 600 V 270 A 10000000 2 2 2 8 10A@240VAC (A300), 2.5A@250VDC (Q300) AC/DC 200 220 V
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 (operating 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 control supply voltage • at DC rated value • at AC at 50 Hz rated value	3 600 V 270 A 10000000 2 2 2 8 10A@240VAC (A300), 2.5A@250VDC (Q300) AC/DC 200 220 V 200 220 V

apparent holding power of magnet coil at AC	6.7 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	60 %
ON-delay time	30 95 ms
OFF-delay time	40 80 ms
Overload relay	
product function	
 overload protection 	Yes
 phase failure detection 	Yes
 asymmetry detection 	Yes
 ground fault detection 	No
test function	Yes
external reset	No
reset function	Manual and automatic
trip class	CLASS 20
adjustable current response value current of the current- dependent overload release	55 250 A
product feature protective coating on printed-circuit board	No
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)	
 with single-phase operation at AC rated value 	600 V
 with multi-phase operation at AC rated value 	300 V
Enclosure	
degree of protection NEMA rating	Open device (no enclosure)
design of the housing	NA
Mounting/wiring	
mounting position	Vertical
fastening method	Surface mounting and installation
type of electrical connection for supply voltage line-side	Box lug
tightening torque [lbf·in] for supply	180 195 lbf·in
type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded	3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2x 2/0 AWG 2x 500 MCM (both front & back)
temperature of the conductor for supply maximum permissible	75 °C
	75 C
type of electrical connection for load-side outgoing feeder	Box lug
tightening torque [lbf·in] for load-side outgoing feeder	
	Box lug
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for	Box lug 180 220 lbf-in
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder	Box lug 180 220 lbf·in 2x 2/0 AWG 500 MCM
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded temperature of the conductor for load-side outgoing feeder maximum permissible	Box lug 180 220 lbf·in 2x 2/0 AWG 500 MCM 75 °C
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf-in
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at AWG cables single or multi-stranded temperature of the conductor at magnet coil maximum	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf-in 2x (18 14 AWG)
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at AWG cables single or multi-stranded temperature of the conductor at magnet coil maximum permissible	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf-in 2x (18 14 AWG) 75 °C
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at AWG cables single or multi-stranded temperature of the conductor at magnet coil maximum permissible material of the conductor at magnet coil	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf-in 2x (18 14 AWG) 75 °C CU
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at AWG cables single or multi-stranded temperature of the conductor at magnet coil maximum permissible material of the conductor at magnet coil type of electrical connection for auxiliary contacts	Box lug 180 220 lbf·in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf·in 2x (18 14 AWG) 75 °C CU Screw-type terminals
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at AWG cables single or multi-stranded temperature 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 type of connectable conductor cross-sections at contactor at	Box lug 180 220 lbf-in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf-in 2x (18 14 AWG) 75 °C CU Screw-type terminals 7 10 lbf-in 2x (18 14 AWG) 75 °C CU Screw-type terminals 7 10 lbf-in
tightening torque [lbf·in] for load-side outgoing feeder type of connectable conductor cross-sections at 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 cross-sections of magnet coil at 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 type of connectable conductor cross-sections at contactor at AWG cables for auxiliary contacts single or multi-stranded temperature of the conductor at contactor for auxiliary contacts	Box lug 180 220 lbf·in 2x 2/0 AWG 500 MCM 75 °C CU Screw-type terminals 7 10 lbf·in 2x (18 14 AWG) 75 °C CU Screw-type terminals 7 10 lbf·in 2x (18 14 AWG) 2x (20 16 AWG), 2x (18 14 AWG)

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	14kA@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	14 kA
• at 600 V	14 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=US2:22LPU32AD

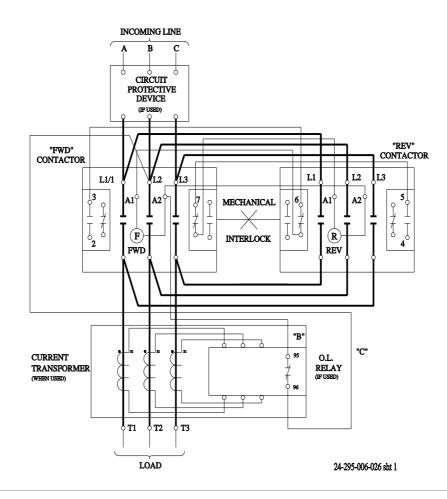
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/US/en/ps/US2:22LPU32AE

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:22LPU32AD&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22LPU32AD/certificate



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