SIEMENS

Data sheet

US2:22LPU32AG



Reversing motor starter Size 5 Three phase full voltage Solid-state overload relay OLRelay amp range 55-250A 220-240V 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
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	270 A
mechanical service life (operating cycles) of the main contacts typical	1000000
Auxiliary contact	
number of NC contacts at contactor for auxiliary contacts	2
number of NO contacts at contactor for auxiliary contacts	2
number of total auxiliary contacts maximum	8
contact rating of auxiliary contacts of contactor according to UL	10A@240VAC (A300), 2.5A@250VDC (Q300)
Coil	
type of voltage of the control supply voltage	AC/DC
control supply voltage	
• at DC rated value	220 240 V
• at AC at 50 Hz rated value	220 240 V
• at AC at 60 Hz rated value	220 240 V
holding power at AC minimum	7.4 W
apparent pick-up power of magnet coil at AC	590 VA
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- 55 250 A 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)	
degree of protection NEMA rating Open device (no enclosure)	
degree of protection NEMA rating Open device (no enclosure) design of the housing NA	
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring NA	
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring Vertical	
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring Vertical mounting position Vertical fastening method Surface mounting and installation	
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring Vertical mounting position Vertical fastening method Surface mounting and installation type of electrical connection for supply voltage line-side Box lug	x 2/0
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring	x 2/0
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring	x 2/0
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring Vertical 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 for AWG cables single or multi-stranded 3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 temperature of the conductor for supply maximum permissible 75 °C	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG 2x 500 MCM (both front & back)temperature of the conductor for supply maximum permissible type of electrical connection for load-side outgoing feeder75 °C	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG 2x 500 MCM (both front & back)type of electrical connection for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder180 220 lbf-intype of connectable conductor cross-sections for AWG cables2x 2/0 AWG 500 MCM	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG cables single or multi-strandedtype of electrical connection for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder80x lugtightening torque [lbf-in] for load-side outgoing feeder80x lugtightening torque [lbf-in] for load-side outgoing feeder180 220 lbf-intype of connectable conductor for load-side outgoing feeder2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder2x 2/0 AWG 500 MCM	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringNAmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG 2x 500 MCM (both front & back)temperature of the conductor for supply maximum permissible75 °Ctype of connectable conductor cross-sections for AWG cables for load-side outgoing feeder180 220 lbf-intype of connectable conductor cross-sections for AWG cables for load-side outgoing feeder2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder for load-side outgoing feeder2x 2/0 AWG 500 MCM	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringNAmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG 2x 500 MCM (both front & back)temperature of the conductor for supply maximum permissible tightening torque [lbf-in] for load-side outgoing feeder180 220 lbf-intype of connectable conductor cross-sections for AWG cables for load-side outgoing feeder2x 2/0 AWG 500 MCMtype of connectable conductor cross-sections for AWG cables for load-side outgoing feeder2x 2/0 AWG 500 MCMtupe of connectable conductor for load-side outgoing feeder maximum permissible2x 2/0 AWG 500 MCMtupe of the conductor for load-side outgoing feeder maximum permissibleCU	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringMamounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AVVG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG 2x 500 MCM (both front & back)type of electrical connection for load-side outgoing feeder tightening torque [lbf-in] for load-side outgoing feeder180 220 lbf-intype of connectable conductor cross-sections for AWG cables for load-side outgoing feeder80x lugtightening torque [lbf-in] for load-side outgoing feeder tor load-side outgoing feeder180 220 lbf-intype of connectable conductor for load-side outgoing feeder maximum permissible2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder maximum permissible75 °Ctemperature of the conductor for load-side outgoing feeder maximum permissible2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder maximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder maximum permissibleCUtype of electrical connection of magnet coilScrew-type terminals	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAMounting/wiringNAmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG 2x 500 MCM (both front & back)temperature of the conductor for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder2x 2/0 AWG 500 MCMtwpe of connectable conductor for load-side outgoing feeder2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feederCUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil7 10 lbf-intype of connectable conductor cross-sections of magnet coil2x (18 14 AWG)	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNANonting/wiringmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf in] for supply180 195 lbf intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG cables single or multi-strandedtightening torque [lbf in] for load-side outgoing feederBox lugtightening torque [lbf in] for load-side outgoing feeder2x 2/0 AWG 500 MCMtype of connectable conductor for load-side outgoing feeder2x 2/0 AWG 500 MCMtype of electrical connection for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feederCUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf in] at magnet coil75 °Cwaterial of the conductor cross-sections of magnet coil for AWG cables single or multi-strandedtorpe of connectable conductor cross-sections of magnet coil or AWG cables single or multi-strandedtightening torque [lbf in] at magnet coil75 °C <td>x 2/0</td>	x 2/0
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Aounting/wiring NA mounting position Vertical fastening method Surface mounting and installation type of electrical connection for supply voltage line-side Box lug tightening torque [Ibf-in] for supply 180 195 lbf-in XWG cables single or multi-stranded A/WG 600 MCM (front only) or 250 500 MCM (back only) or 2 temperature of the conductor for supply maximum permissible 75 °C type of connectable conductor rors-sections for AWG cables 2x 2/0 AWG 500 MCM temperature of the conductor for load-side outgoing feeder 180 220 lbf in type of connectable conductor rors-sections for AWG cables 2x 2/0 AWG 500 MCM for load-side outgoing feeder 75 °C maximum permissible 75 °C maximum permissible 75 °C tightening torque [Ibf-in] at magnet coil Screw-type terminals tightening torque [Ibf-in] at magnet coil 2x (18 14 AWG) AWG cables single or multi-stranded 2x (18 14 AWG)	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAHounting/wiringNAmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [IbF in] for supply180 195 IbF intype of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG cables single or multi-strandedtightening torque [IbF in] for load-side outgoing feederBox lugtightening torque [IbF in] for load-side outgoing feederBox lugtightening torque [IbF in] for load-side outgoing feeder180 220 IbF intype of connectable conductor cross-sections for AWG cables for load-side outgoing feeder2x 2/0 AWG 500 MCMtightening torque [IbF in] for load-side outgoing feeder180 220 IbF intype of connectable conductor for load-side outgoing feeder2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder2x 2/0 AWG 500 MCMtemperature of the conductor for load-side outgoing feeder2x 2/0 AWG 500 MCMmaximum permissible75 °Cmaximum permissible75 °Ctype of connectable conductor cross-sections of magnet coil5crew-type terminalstightening torque [IbF in] at magnet coil7 10 IbF intype of connectable conductor at magnet coil for AWG cables single or multi-stranded2x (18 14 AWG)tor decircial connectable conductor at magne	x 2/0
degree of protection NEMA ratingOpen device (no enclosure)design of the housingNAAounting/wiringNAmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply180 195 lbf-intype of connectable conductor cross-sections at line-side for3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2AWG cables single or multi-stranded75 °Ctype of electrical connection for supply maximum permissible75 °Ctype of connectable conductor ross-sections for AWG cables22 20 lbf-intype of connectable conductor ross-sections for AWG cables22 20 lbf-intype of connectable conductor for load-side outgoing feeder180 220 lbf-intype of connectable conductor for load-side outgoing feeder75 °Ctype of connectable conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder22 x (18 14 AWG)type of connectable conductor at magnet coil of maximum75 °Cmaterial of the conductor at magnet coil maximum75 °Cmaterial of the conductor at magnet coil maximum75 °Ctype of electrical connection of magnet coil for2x (18 14 AWG)AWG cables single or multi-strandedCUtype of electrical connection for auxiliary contactsScrew-type terminals	x 2/0
degree of protection NEMA rating Open device (no enclosure) design of the housing NA Mounting/wiring NA 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 for AWG cables single or multi-stranded 3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible 75 °C type of electrical connection for load-side outgoing feeder Box lug tightening torque [lbf-in] for load-side outgoing feeder 80 kug temperature of the conductor for load-side outgoing feeder 82 2/0 AWG 500 MCM type of electrical connection of magnet coil 2x 2/0 AWG 500 MCM tightening torque [lbf-in] for load-side outgoing feeder CU type of connectable conductor for load-side outgoing feeder CU type of connectable conductor at magnet coil 7 10 lbf-in type of connectable conductor at magnet coil 2X (18 14 AWG) VWG cables single or multi-stranded CU	x 2/0
degree of protection NEMA rating Open device (no enclosure) Mounting/wiring NA Mounting/wiring mounting position Vertical 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 for 3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG cables single or multi-stranded 75 °C type of connectable conductor for supply maximum permissible 75 °C type of connectable conductor for load-side outgoing feeder 180 192 VaWG 500 MCM tightening torque [lbf-in] for load-side outgoing feeder 180 220 lbf-in type of connectable conductor for load-side outgoing feeder 180 220 lbf-in type of electrical connection of magnet coil 2x 2/0 AWG 500 MCM temperature of the conductor for load-side outgoing feeder 180 220 lbf-in type of electrical connection of magnet coil 75 °C type of electrical connection of magnet coil 75 °C type of electrical connection of magnet coil 75 °C type of electrical connection of magnet coil 75 °C type of electrical	x 2/0
degree of pretection NEMA rating Open device (no enclosure) Mounting/wring NA 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 electrical connection for supply maximum permissible 3/0 AWG 600 MCM (front only) or 250 500 MCM (back only) or 2 AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible 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 Box lug tightening torque [lbf-in] for load-side outgoing feeder Box lug type of connectable conductor for load-side outgoing feeder 2x 2/0 AWG 600 MCM type of electrical connection of magnet coil Screw-type terminals tightening torque [lbf-in] at magnet coil 75 °C material of the conductor at magnet coil 75 °C material of the conductor at magnet coil 75 °C type of electrical connection of magnet coil 75 °C type of electrical connection for auxiliary contacts 5 °C tightening torque [lbf-in] at contactor for auxiliary contacts <td< td=""><td>x 2/0</td></td<>	x 2/0

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	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	

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=US2:22LPU32AG

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

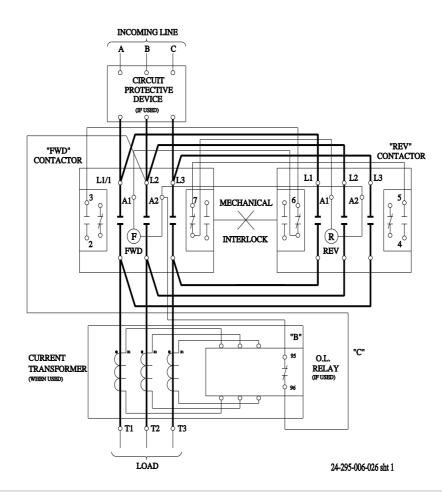
https://support.industry.siemens.com/cs/US/en/ps/US2:22LPU32AG

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:22LPU32AG&lang=en

Certificates/approvals

https://support.industry.siemens.com/cs/US/en/ps/US2:22LPU32AG/certificate



last modified:

11/29/2021 🖸