## SIEMENS

## Data sheet

## US2:14FUF820G



Non-reversing motor starter, Size 2, Three phase full voltage, Solid-state overload relay, OLRelay amp range 13-52a, 190 220/220 240V 50/60HZ coil, Non-combination type, Enclosure type 12, Dust/drip proof for indoors, Extra-wide enclosure

product brand name	Class 14
design of the product	Full-voltage non-reversing motor starter
special product feature	ESP200 overload relay
General technical data	
weight [lb]	19 lb
Height x Width x Depth [in]	16 × 13 × 6 in
touch protection against electrical shock	(NA for enclosed products)
installation altitude [ft] at height above sea level maximum	6560 ft
ambient temperature [°F]	
<ul> <li>during storage</li> </ul>	-22 +149 °F
during operation	-4 +104 °F
ambient temperature	
<ul> <li>during storage</li> </ul>	-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	
<ul> <li>at 200/208 V rated value</li> </ul>	10 hp
• at 220/230 V rated value	15 hp
• at 460/480 V rated value	25 hp
• at 575/600 V rated value	25 hp
Contactor	
size of contactor	NEMA controller size 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	45 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	
• at AC at 50 Hz rated value	190 220 V
• at AC at 60 Hz rated value	220 240 V
holding power at AC minimum	8.6 W
apparent pick-up power of magnet coil at AC	218 VA

apparent holding neuror of magnet coil at AC	25 VA
apparent holding power of magnet coil at AC operating range factor control supply voltage rated value of	25 VA 0.85 1.1
magnet coil	0.05 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	
overload protection	Yes
<ul> <li>phase failure detection</li> </ul>	Yes
<ul> <li>asymmetry detection</li> </ul>	Yes
ground fault detection	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	13 52 A
tripping time at phase-loss 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
with multi-phase operation at AC rated value Enclosure	300 V
· · ·	300 V Extra-wide
Enclosure	
Enclosure design of the housing	Extra-wide
Enclosure design of the housing degree of protection NEMA rating of the enclosure	Extra-wide Extra-wide NEMA Type 12
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Enclosure design of the housing degree of protection NEMA rating of the enclosure design of the housing Mounting/wiring	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors
Enclosure design of the housing degree of protection NEMA rating of the enclosure design of the housing Mounting/wiring mounting position	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical
Enclosure design of the housing degree of protection NEMA rating of the enclosure design of the housing Mounting/wiring mounting position fastening method	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical Surface mounting and installation
Enclosure design of the housing degree of protection NEMA rating of the enclosure design of the housing Mounting/wiring mounting position fastening method type of electrical connection for supply voltage line-side	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical Surface mounting and installation Box lug
Enclosure design of the housing degree of protection NEMA rating of the 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical Surface mounting and installation Box lug 45 45 lbf-in
Enclosure design of the housing degree of protection NEMA rating of the 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical Surface mounting and installation Box lug 45 45 lbf-in 1x(14 - 2 AWG)
Enclosure design of the housing degree of protection NEMA rating of the 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical Surface mounting and installation Box lug 45 45 lbf-in 1x(14 - 2 AWG) 75 °C
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Enclosure design of the housing degree of protection NEMA rating of the 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors Vertical Surface mounting and installation Box lug 45 45 lbf-in 1x(14 - 2 AWG) 75 °C AL or CU Box lug
Enclosure design of the housing degree of protection NEMA rating of the 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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         design of the housing         degree of protection NEMA rating of the 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         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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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
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Enclosure         design of the housing         degree of protection NEMA rating of the 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 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         maximum permissible         material of the 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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
Enclosure design of the housing degree of protection NEMA rating of the 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 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	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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 2 x (16 - 12 AWG)
Enclosure design of the housing degree of protection NEMA rating of the 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 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 tightening torque [lbf·in] at 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 dro supply feeder 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	Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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 screw-type terminals 5 12 lbf-in 2 x (16 - 12 AWG) 75 °C
Enclosure         design of the housing         degree of protection NEMA rating of the 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         type of connectable conductor rorss-sections for AWG cables         for load-side outgoing feeder single or multi-stranded         temperature 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 for load-side outgoing feeder         type of electrical connection of magnet coil         tightening torque [lbf·in] at magnet coil         type of connectable conductor	Extra-wide Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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 Sorew-type terminals 5 12 lbf-in 2 x (16 - 12 AWG) 75 °C CU
Enclosure         design of the housing         degree of protection NEMA rating of the 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         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 cross-sections of magnet coil for         AWG cables single or multi-stranded         temperature of the conductor for load-side outgoing feeder         type of electrical connection of magnet coil         tighte	Extra-wide NEMA Type 12 Dust tight and drip proof for indoors 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 Screw-type terminals 5 12 lbf in 2 x (16 - 12 AWG) 75 °C CU Screw-type terminals

maximum permissible	
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	2 x (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

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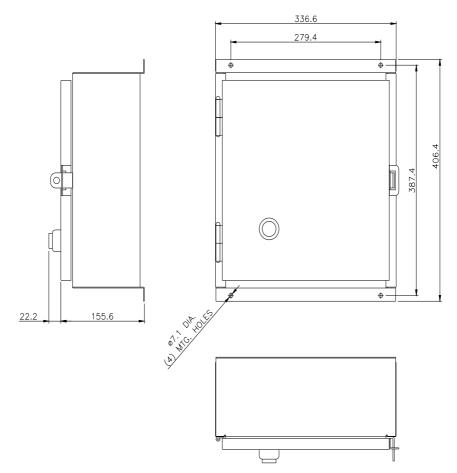
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