## **SIEMENS**

Data sheet US2:18FUF82WF



Non-reversing motor starter, Size 2, Three phase full voltage, Solid-state overload relay, OLR amp range 13-52A, 110V 50Hz / 120V 60Hz coil, Combination type, 50A circuit breaker, Encl NEMA type 4X 304 S-Steel, Water/dust tight noncorrosive, Extra-wide enclosure

product brand name	Class 18 & 26
design of the product	Full-voltage non-reversing motor starter with motor circuit protector
special product feature	ESP200 overload relay
General technical data	
Height x Width x Depth [in]	24 × 20 × 8 in
touch protection against electrical shock	NA for enclosed products
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
<ul> <li>during operation</li> </ul>	-20 +40 °C
Horsepower ratings	
yielded mechanical performance [hp] for 3-phase AC motor	
• at 200/208 V rated value	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	
<ul> <li>at AC at 50 Hz rated value</li> </ul>	110 V
at AC at 60 Hz rated value	120 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	
magnet coil percental drop-out voltage of magnet coil related to the input	50 %
voltage	50 /0
ON-delay time	19 29 ms
OFF-delay time	10 24 ms
Overload relay	
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
make time with automatic start after power failure maximum	3 s
relative repeat accuracy	1 %
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
with multi-phase operation at AC rated value	300 V
Enclosure	
degree of protection NEMA rating	4X, 304 stainless steel
design of the housing	dustproof, waterproof & resistant to corrosion
Circuit Breaker	
type of the motor protection	Motor circuit protector (magnetic trip only)
operational current of motor circuit breaker rated value	50 A
adjustable current response value current of instantaneous short-circuit trip unit	180 600 A
Mounting/wiring	
mounting position	Vertical
fastening method	Surface mounting and installation
	Surface mounting and installation  Box lug
fastening method	
fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for	Box lug
fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded	Box lug 1x (10 AWG 1/0 AWG)
fastening method type of electrical connection for supply voltage line-side type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded temperature of the conductor for supply maximum permissible	Box lug 1x (10 AWG 1/0 AWG) 75 °C
fastening method type of electrical connection for supply voltage line-side 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	Box lug  1x (10 AWG 1/0 AWG)  75 °C  AL or CU
fastening method type of electrical connection for supply voltage line-side 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	Box lug  1x (10 AWG 1/0 AWG)  75 °C  AL or CU  Box lug
fastening method  type of electrical connection for supply voltage line-side  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 maximum permissible	Box lug  1x (10 AWG 1/0 AWG)  75 °C  AL or CU  Box lug  45 45 lbf·in  1x (14 2 AWG)  75 °C
fastening method  type of electrical connection for supply voltage line-side  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 maximum permissible  material of the conductor for load-side outgoing feeder	Box lug 1x (10 AWG 1/0 AWG) 75 °C AL or CU Box lug 45 45 lbf·in 1x (14 2 AWG)
fastening method  type of electrical connection for supply voltage line-side  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 maximum permissible  material of the conductor for load-side outgoing feeder  type of electrical connection of magnet coil	Box lug  1x (10 AWG 1/0 AWG)  75 °C  AL or CU  Box lug  45 45 lbf·in  1x (14 2 AWG)  75 °C  AL or CU  Screw-type terminals
fastening method  type of electrical connection for supply voltage line-side  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 maximum permissible  material of the conductor for load-side outgoing feeder	Box lug  1x (10 AWG 1/0 AWG)  75 °C  AL or CU  Box lug  45 45 lbf·in  1x (14 2 AWG)  75 °C  AL or CU
fastening method  type of electrical connection for supply voltage line-side  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 maximum permissible  material of the conductor for load-side outgoing feeder  type of electrical connection of magnet coil	Box lug  1x (10 AWG 1/0 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)
fastening method  type of electrical connection for supply voltage line-side  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  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	Box lug  1x (10 AWG 1/0 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)
fastening method  type of electrical connection for supply voltage line-side  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  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  material of the conductor at magnet coil	Box lug  1x (10 AWG 1/0 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)  75 °C  CU
fastening method  type of electrical connection for supply voltage line-side  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  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  material of the conductor at magnet coil	Box lug  1x (10 AWG 1/0 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)  75 °C  CU  Screw-type terminals
fastening method  type of electrical connection for supply voltage line-side  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  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  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	Box lug  1x (10 AWG 1/0 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)  75 °C  CU  Screw-type terminals  10 15 lbf·in
fastening method  type of electrical connection for supply voltage line-side  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 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  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	Box lug  1x (10 AWG 1/0 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)  75 °C  CU  Screw-type terminals  10 15 lbf·in  1x (12 AWG), 2x (16 14 AWG), 2x (18 16 AWG)
fastening method  type of electrical connection for supply voltage line-side  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 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  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 cross-sections at contactor for  AWG cables for auxiliary contacts single or multi-stranded  temperature of the conductor at contactor for auxiliary contacts  maximum permissible	Box lug  1x (10 AWG 1/0 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)  75 °C  CU  Screw-type terminals  10 15 lbf-in  1x (12 AWG), 2x (16 14 AWG), 2x (18 16 AWG)  75 °C
fastening method  type of electrical connection for supply voltage line-side  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 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  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 cross-sections at contactor for  AWG cables for auxiliary contacts single or multi-stranded  temperature of the conductor at contactor for auxiliary contacts  maximum permissible  material of the conductor at contactor for auxiliary contacts  maximum permissible  material of the conductor at contactor for auxiliary contacts  maximum permissible	Box lug  1x (10 AWG 1/0 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)  75 °C  CU  Screw-type terminals  10 15 lbf-in  1x (12 AWG), 2x (16 14 AWG), 2x (18 16 AWG)  75 °C  CU
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fastening method  type of electrical connection for supply voltage line-side  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 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  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 for AWG cables for auxiliary contacts single or multi-stranded  temperature of the conductor at contactor for auxiliary contacts maximum permissible  material of the conductor at contactor for auxiliary contacts maximum permissible  material of the conductor at contactor for auxiliary contacts maximum permissible	Box lug  1x (10 AWG 1/0 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)  75 °C  CU  Screw-type terminals  10 15 lbf-in  1x (12 AWG), 2x (16 14 AWG), 2x (18 16 AWG)  75 °C  CU

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 short-circuit trip	Instantaneous trip circuit breaker
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	100 kA
• at 480 V	100 kA
● at 600 V	25 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)

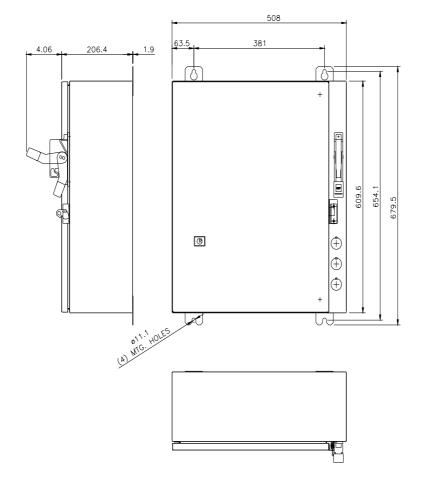
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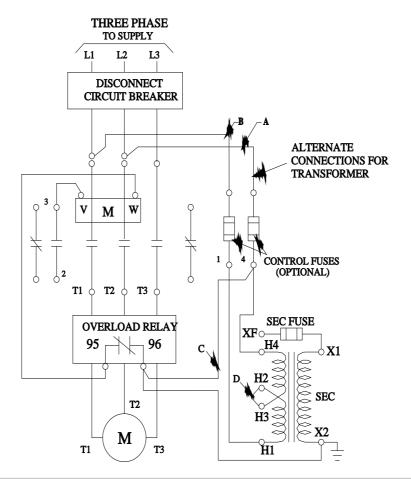
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Certificates/approvals

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