## **SIEMENS**

Data sheet US2:22FUF32AL



Reversing motor starter Size 2 Three phase full voltage Solid-state overload relay OLRelay amp range 13-52a 240VAC 50HZ / 277VAC 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                |
| 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  | 10 hp                                |
| • at 220/230 V rated value  | 15 hp                                |
| <ul><li>at 460/480 V rated value</li></ul>                              | 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 | 10000000                             |
| 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>                          | 240 V                                |
| at AC at 60 Hz rated value  | 277 V                                |
| holding power at AC minimum   |                                      |
| notating power at 7 to minimum.   | 8.6 W                                |

| annount holding nouses of second out of A.A.  | 25.1/4  |
|---|---|
| apparent holding power of magnet coil at AC   | 25 VA   |
| operating range factor control supply voltage rated value of magnet coil  | 0.85 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  |   |
| <ul> <li>overload protection</li> </ul>   | Yes   |
| <ul> <li>phase failure detection</li> </ul>   | 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-<br>dependent overload release   | 13 52 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   |
| 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   |
| Enclosure   |   |
| degree of protection NEMA rating  | Open device (no enclosure)  |
| design of the housing   | NA  |
| Mounting/wiring   |   |
|   | V   |
| mounting position   | Vertical  |
| mounting position fastening method  | Surface mounting and installation   |
|   |   |
| fastening method  | Surface mounting and installation   |
| fastening method type of electrical connection for supply voltage line-side   | Surface mounting and installation  Box lug  |
| 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   | Surface mounting and installation  Box lug  45 45 lbf·in  |
| 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   | Surface mounting and installation  Box lug  45 45 lbf·in  1x (14 2 AWG)   |
| 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   | Surface mounting and installation  Box lug  45 45 lbf·in  1x (14 2 AWG)  75 °C  |
| 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  | Surface mounting and installation  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 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  | Surface mounting and installation  Box lug  45 45 lbf·in  1x (14 2 AWG)  75 °C  AL or CU  Box lug   |
| 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   | 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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| 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 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   | 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  |
| 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  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  | 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  2x (16 12 AWG)                                  |
| 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  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  | 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  2x (16 12 AWG)  75 °C                           |
| 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  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 | 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  2x (16 12 AWG)  75 °C  CU                       |
| 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  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 maximum permissible                         | 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  2x (16 12 AWG)  75 °C  CU  Screw-type terminals |

| 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  |
| Object along the comment and t |   |
| 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 fuse link for short-circuit protection of the main   | 10kA@600V (Class H or K); 100kA@600V (Class R or J)  Thermal magnetic circuit breaker |
| design of the fuse link for short-circuit protection of the main circuit required  |   |
| design of the fuse link for short-circuit protection of the main circuit required design of the short-circuit trip   |   |
| design of the fuse link for short-circuit protection of the main circuit required design of the short-circuit trip maximum short-circuit current breaking capacity (Icu)   | Thermal magnetic circuit breaker  |
| design of the fuse link for short-circuit protection of the main circuit required design of the short-circuit trip maximum short-circuit current breaking capacity (Icu)  • at 240 V   | Thermal magnetic circuit breaker  14 kA   |
| design of the fuse link for short-circuit protection of the main circuit required design of the short-circuit trip maximum short-circuit current breaking capacity (Icu)  • at 240 V • at 480 V  | Thermal magnetic circuit breaker  14 kA 10 kA   |

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=US2:22FUF32AL

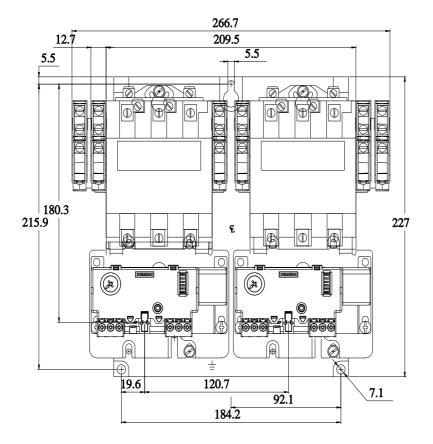
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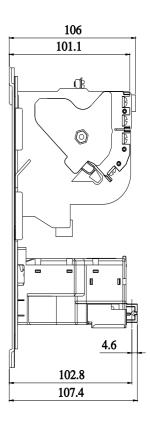
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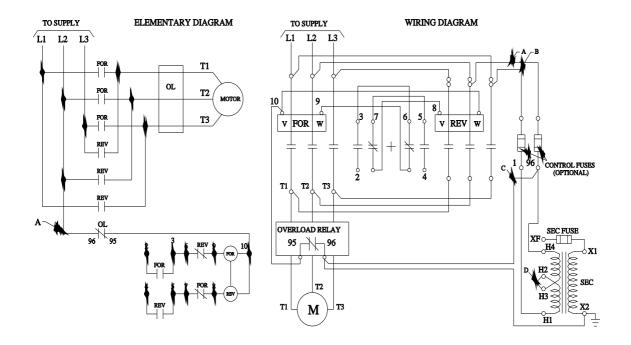
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=US2:22FUF32AL&lang=en

Certificates/approvals

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