



Figure similar

Reversing motor starter, Size 2, Three phase full voltage, Solid-state overload relay, OLR amp range 13-52A, 110V 50Hz / 120V 60Hz coil, Non-combination type, Enclosure type 4X fiberglass, Water/dust tight noncorrosive, Standard width enclosure

|   |                                      |
|---|--------------------------------------|
| product brand name  | Class 22                             |
| design of the product   | Full-voltage reversing motor starter |
| special product feature   | ESP200 overload relay                |
| <b>General technical data</b>   |                                      |
| weight [lb]   | 19 lb                                |
| Height x Width x Depth [in]   | 24 × 15 × 7 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                       |
| • during operation  | -20 ... +40 °C                       |
| country of origin   | USA                                  |
| <b>Horsepower ratings</b>   |                                      |
| 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                                |
| <b>Contactors</b>   |                                      |
| 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 (switching cycles) of the main contacts typical | 10000000                             |
| <b>Auxiliary contact</b>  |                                      |
| 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)  |
| <b>Coil</b>   |                                      |
| type of voltage of the control supply voltage                           | AC                                   |
| control supply voltage  |                                      |

|  |              |
|--|--------------|
| <ul style="list-style-type: none"> <li>• at AC at 50 Hz rated value</li> <li>• at AC at 60 Hz rated value</li> </ul> | 110 V        |
|  | 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 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 style="list-style-type: none"> <li>• overload protection</li> <li>• phase failure detection</li> <li>• asymmetry detection</li> <li>• ground fault detection</li> <li>• test function</li> <li>• external reset</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>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                            |
| 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  |  |
| <ul style="list-style-type: none"> <li>• at AC at 600 V</li> <li>• at DC at 250 V</li> </ul>   | 5 A<br>1 A                             |
| contact rating of auxiliary contacts of overload relay according to UL   | 5A@600VAC (B600), 1A@250VDC (R300)     |
| insulation voltage (Ui)  |  |
| <ul style="list-style-type: none"> <li>• with single-phase operation at AC rated value</li> <li>• with multi-phase operation at AC rated value</li> </ul>  | 600 V<br>300 V                         |

### Enclosure

|                                  |  |
|----------------------------------|--|
| degree of protection NEMA rating | 4X, fiber glass                                |
| design of the housing            | dustproof, waterproof & resistant to corrosion |

### 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   | 45 ... 45 lbf-in                  |
| type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded                  | 1x (14 ... 2 AWG)                 |
| temperature of the conductor for supply maximum permissible   | 75 °C                             |
| material of the conductor for supply  | AL or CU                          |
| type of electrical connection for load-side outgoing feeder   | Box lug                           |
| tightening torque [lbf-in] for load-side outgoing feeder  | 45 ... 45 lbf-in                  |
| type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded | 1x (14 ... 2 AWG)                 |
| temperature of the conductor for load-side outgoing feeder maximum permissible                                    | 75 °C                             |
| material of the conductor for load-side outgoing feeder   | AL or CU                          |
| type of electrical connection of magnet coil  | Screw-type terminals              |
| tightening torque [lbf-in] at magnet coil   | 5 ... 12 lbf-in                   |
| type of connectable conductor cross-sections of magnet  | 2x (16 ... 12 AWG)                |

|  |   |
|--|---|
| coil at AWG cables single or multi-stranded  |   |
| temperature of the conductor at magnet coil maximum permissible  | 75 °C   |
| material of the conductor at magnet coil   | CU  |
| type of electrical connection for auxiliary contacts   | Screw-type terminals                                |
| tightening torque [lbf·in] at contactor for auxiliary contacts   | 10 ... 15 lbf·in                                    |
| type of connectable conductor cross-sections at contactor at AWG cables for auxiliary contacts single or multi-stranded      | 1x (12 AWG), 2x (16 ... 14 AWG), 2x (18 ... 16 AWG) |
| temperature of the conductor at contactor for auxiliary contacts maximum permissible   | 75 °C   |
| 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 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                    | 10kA@600V (Class H or K); 100kA@600V (Class R or J) |
| design of the short-circuit trip   | Thermal magnetic circuit breaker                    |
| breaking capacity maximum short-circuit current (I <sub>cu</sub> )                                   |   |
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul> | 14 kA<br>10 kA<br>10 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](http://www.usa.siemens.com/iccatalog)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:22FUF32FF>

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

<https://support.industry.siemens.com/cs/US/en/ps/US2:22FUF32FF>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:22FUF32FF&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:22FUF32FF&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:22FUF32FF/certificate>

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