## SIEMENS

## Data sheet

## US2:83FUF950D



Duplex starter w/o alternator, Size 2, Three phase full voltage, Solid-state overload relay, OLR amp range 13-52A, 208VAC 60Hz coil, Non-combination type, Enclosure NEMA type 12, Dust/drip proof for indoors

| Figure similar |  |
|----------------|--|
|----------------|--|

| product brand name  | Class 83                             |
|---|--------------------------------------|
| design of the product   | Duplex controller without alternator |
| special product feature   | ESP200 overload relay                |
| General technical data  |                                      |
| weight [lb]   | 57 lb                                |
| Height x Width x Depth [in]   | 25 × 17 × 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]  |                                      |
| <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                           |
| 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  | 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 (switching 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  |                                      |

|   |   | 0 0)//                                  |
|---|---|---|
| • At AC at 60 Hz role value         208. 208 V           holding power at magnet coil at AC         218 VA           apparent holding power of magnet coil at AC         218 VA           apparent holding power of magnet coil at AC         218 VA           apparent holding power of magnet coil at AC         28 VA           operating targe factor control supply voltage rated value         0.8 11           of read coll         50 %           CM-dataly time         50 %           CM-dataly time         10 24 ms           Overload protection         Yes           • least function         Yes           • approver yetection         Yes           • least function         Yes           • least funcod         Yes  | at DC rated value   | 0 0 V                                   |
| India power at AC manymum         8.6 W           apparent holding power of magnet coll at AC         25 VA           operating range factor control supply voltage rated value         0.8 1.1           of magnet coll at AC         25 VA           operating range factor control supply voltage rated value         60 %           ON-delay time         19 29 ms           OVEr-day time         10 24 ms           Overload protection         Yes           • asymmetry detection         Yes           • asto ta sphas   |   |   |
| apparent pick-up power of magnet coll at AC         218 VA           apparent holing power of magnet coll at AC         25 VA           operating range factor control supply voltage rated value<br>of magnet coll         0.85 1.1           protectif dirp-out voltage of magnet coll related to the<br>input voltage         0.9 %           CM-detay time         10 24 ms           Overdaad relay         0.9 %           product function         Yes           • overlaad protection         Yes           • asymmetry detection         Yes           • external reset         Yes           reset function         Yes           • external reset         Yes           tipping time at phase-base maximum         3 s           relative represent action         Manual, automatic and remote           adjustable current response value current of the current-<br>dependent overlad release         13 52 A           tipping time at phase-base maximum         3 s           relative represent acturacity auxiliary contacts of overload relay         14 No           operational current of auxiliary contacts of overload relay         5 A           • at Co at 280 V         1           relative represention at AC rated value         600 V           • at Co at 280 V         1           relative repres   |   |   |
| apparent holding power of magnet coil a AC         25 VA           operating range factor control supply voltage rated value<br>of magnet coil         0.85 1.1           of magnet coil         0.85 1.1           of magnet coil         0.0000           OPE-factor point supply voltage rated value         50 %           OPE-factor point voltage of magnet coil related to the<br>input voltage.         10 28 ms           OPE-factor point         Ves           • asymmetry detection         Yes           reset function         Yes           reset function         Yes           reset function         Yes           reset function         Yes   |   |   |
| operating range factor control supply voltage rated value<br>of magnet coll         0.85 1.1         0.85 1.1           procental drop-out voltage of magnet coll related to the<br>input voltage         0.9 %         0.24 ms           OPEr-delay time         10 24 ms         0.25 1.1           Overload relay         0 24 ms         0 24 ms           Overload protection         Yes         9           • overload protection         Yes         9           • asymmetry detection         Yes         9           • extendar reset         Yes         9           • external reset         Yes         13           • reset function         3 s         1           reset functin         3 s         1   |   |   |
| of magnit call       50 %         precental drop-cut voltage of magnet coll related to the<br>input voltage.       50 %         OH-delay time       10 24 ms         Overfoad relay       product function         • overfoad protection       Yes         • asymmetry detection       Yes         • agound failur detection       Yes         • agound failur detection       Yes         • add to add to add in or printed-circuit board       1         relay       • add to add to add add overefoad       1 <t< td=""><td></td><td></td></t<>  |   |   |
| input voltage         1929 ms           OV-delay time         1024 ms           Overtoad rolay         product function           • overtoad protection         Yes           • phase failure detection         Yes           • asymmetry detection         Yes           • external reset         Yes           • external reset         Yes           reset function         Yes           adjustable current to pome value current of the current-dependent overdoad release         3 s           ripping time at phase-loss maximum         13 52 A           oppenduct feature protective coating on printed-circuit baard         1           rumber of NC contacts of auxiliary contacts of overload         1           rumber of NC contacts of auxiliary contacts of overload         1           opperational current of auxiliary contacts of overload releay         5 A           • at DC at 250 V         <   |   | 0.85 1.1                                |
| OFF-delay time       10 24 ms         Overload relay       product function         • overload protection       Yes         • phase failure detection       Yes         • asymmetry detection       Yes         • esternal reset       Yes         • external reset       Yes         reset function       Manual, automatic and remote         adigitable current response value current of the current-<br>dependent overload relases       3 s         tripping time at phase-loss maximum       3 s         relative repeat accuracy       1 %         product feature protective coating on printed circuit board       1 %         number of NC contacts of auxiliary contacts of overload relay       3 s         contact rating of auxiliary contacts of overload relay       5 A         etablo V       5 A         • at DC at 250 V       1 A         contact rating of auxiliary contacts of overload relay       5 A         econtage to protection NEMA rating of the enclosure       600 V         • with multi-phase operation at AC rated value       00 V         • with multi-phase operation at AC rated value       00 V         • with multi-phase operation at AC rated value       00 V         • with multi-phase operation at AC rated value       10 (412 AVIG)   | input voltage   |   |
| Overload rolay         Yes           product function         Yes           • operload protection         Yes           • asymmetry detection         Yes           • aground fault detection         Yes           • attrant reset         Yes           • external reset         Yes           product facture protective coating on printed-circuit board         1%           product facture protective coating on printed-circuit board         1           operational current of auxiliary contacts of overload relay         5 A           • at DC at 280 V         1 A           contact rating of auxiliary contacts of overload relay         5 A@@00VAC (B600), 1A@250VDC (R300)           execording to U         insultation voltage (U)         • with multi-phase operation at AC rated value           bedinge of protection NEMA   | ON-delay time   | 19 29 ms                                |
| product function         Yes           • overload protection         Yes           • asymmetry detection         Yes           • asymmetry detection         Yes           • estimal fault detection         Yes           • estimal reset         Yes           • external reset         Yes           • external reset         Yes           • external reset         Yes           reset function         Manual, automatic and remote           adjustable current response value current of the current-<br>dependent overload release         13 52 A           releave repeat accuracy         1 %           product feature protective coating on printed-circuit board         Yes           relaive repeat accuracy         1 %           product feature protective coating on printed-circuit board         1           relay         relat 600 V         5 Å           • at DC at 250 V         1 Å           onnater taring of auxiliary contacts of overload relay         5 Å           act DC at 250 V         1 Å           insultation votage (Ui)         • with multi-phase operation at AC rated value         800 V           with multi-phase operation at AC rated value         600 V         300 V           fastening method         Surface mounting and installation<   | OFF-delay time  | 10 24 ms                                |
| • overload protection     • phase failure detection     • phase failure detection     • saymmetry detection     • ges     • asymmetry detection     • yes     • external reset     • external reset     • external reset     • external reset     • yes     • external reset     • yes     • external reset     • exth multi-pha | Overload relay  |   |
|   | product function  |   |
| • saymmetry detection     Yes       • external reset     Yes       • external reset     Yes       • external reset     Yes       reset function     Manual, automatic and remote       adjustable current response value current of the current-<br>dependent overload release     13 52 A       tripping time at phase-toss maximum     3 s       relative repeat accuracy     1%       product feature protective coating on printed-circuit board     1       number of NC contacts of auxiliary contacts of overload<br>relay     1       operational current of auxiliary contacts of overload relay<br>eaccording to UL     5 A       operational current of auxiliary contacts of overload relay<br>eaccording to UL     5 A       insulation voitage (UI)     600 V       • with single-phase operation at AC rated value     600 V       • with single-phase operation at AC rated value     300 V <b>Enclosuro</b> NEMA 12 enclosure       design of the housing     dustproof and disperiod for indoor use <b>Mountingviring</b> Surface mounting and installation       Type of connectable conductor for supply     4545 ifvin       tightening torque [Difin fin for supply     4545 ifvin       tightening torque [Difin for for ad-side outgoing feeder     75 °C       mounting poilon     Yer of connectable conductor for inda-side outgoing feeder       tightening tor   | <ul> <li>overload protection</li> </ul>   | Yes                                     |
|   | <ul> <li>phase failure detection</li> </ul>   | Yes                                     |
| test function         Yes         external reset         Yes         external reset         Yes         external reset         Yes         external reset         Yes         whanual. automatic and remote         adjustable current response value current of the current-         dependent overfoad release         tipping time at phase-loss maximum         3 s         relative repeat accuracy         try         product feature protective coating on printed-circuit board         Yes         rumber of NC contacts of auxiliary contacts of overload         relay         repart of tauxiliary contacts of overload         relay         eperational current of auxiliary contacts of overload         relay         eperational current of auxiliary contacts of overload         relay         eperational current of auxiliary contacts of overload relay         eat DC at 250 V             5 A             eat DC at 250 V             5 A             eat DC at 250 V             5 A             eat DC at 250 V             extremating of the enclosure             designe of protection NEMA rating of the enclosure             designe of protection NEMA rating of the enclosure             designe of protection NEMA rating of the enclosure             dustproof and drip-proof for indoor use             Mounting/wiring             mounting position             Vertical         fastening method             ype of electrical connection for supply voltage line-side             af AWG cables single or multi-stranded         tr (t4 2 AWG)         at AWG cables single or multi-stranded         tranded         temperature of the conductor for supply maximum         per of concetable conductor for supply maximum         per of concetable conductor for load-side outgoing feeder         AL or CU         /ype of electrical connection for load-side outgoing feeder         At Cr CU         /ype of electrical connection for load-side outgoing feeder         material of the conductor for load-side outgoing feeder         /s 45 librlin               | <ul> <li>asymmetry detection</li> </ul>   | Yes                                     |
| • external reset         Yes           reset function         Manual, automatic and remote           adjustable current response value current of the current-<br>dependent overload release         1352 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         1           relay         1           operational current of auxiliary contacts of overload relay         5 A           • at DC at 250 V         1 A           onotact rating of auxiliary contacts of overload relay         5A@OVAC (B600), 1A@250VDC (R300)           according to UL         5A@BOVAC (B600), 1A@250VDC (R300)           according to UL         5A@BOVAC (B600), 1A@250VDC (R300)           according to UL         600 V           with multi-phase operation at AC rated value         600 V           • with multi-phase operation at AC rated value         800 V           • with multi-phase operation at AC rated value         800 V           • with single-phase operation at AC rated value         800 V           • with multi-phase operation at AC rated value         800 V           • with single-phase operation at AC rated value         800 V   | <ul> <li>ground fault detection</li> </ul>  | Yes                                     |
| reset function       Manual, automatic and remote         adjustable current response value current of the current-<br>dependent vertoridar 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       1         operational current of auxiliary contacts of overload relay       1         operational current of auxiliary contacts of overload relay       5 A         • ett C at 250 V       1 A         contact rating of auxiliary contacts of overload relay       5 A@@000VAC (B600), 1A@250VDC (R300)         according to UL       insulation voltage (Ui)         • with single-phase operation at AC rated value       600 V         300 V       200 V         Enclosure       NEMA 12 enclosure         design of the housing       Surface mounting and installation         Mounting/wiring       Surface mounting and installation         Type of electrical connection for supply voltage line-side       1x (14 2 AWG)         tightening torque [bthin] for supply       45 45 Ibf-in         Type of electrical connection for load-side outgoing feeder       45 45 Ibf-in         Type of electrical connection for load-side outgoing feeder <td>test function</td> <td>Yes</td>   | test function   | Yes                                     |
| adjustable current response value current of the current-       13 52 A         ittpping time at phase-loss maximum       3 s         relative repeat accuracy       1 %         product feature protective coaling on printed-circuit board<br>relay       1 %         number of NC contacts of auxiliary contacts of overload<br>relay       1         operational current of auxiliary contacts of overload relay<br>execording to UL       1         operational current of auxiliary contacts of overload relay<br>according to UL       5 A         ininside-phase operation at AC rated value       600 V         with multi-phase operation at AC rated value       600 V         with multi-phase operation at AC rated value       600 V         esign of the housing       dustproof and drip-proof for indoor use         Mounting/wing       Vertical         mounting position       Vertical         fastening method       Surface mounting and installation         type of electrical connection for supply voltage line-side<br>at MVG cables single or multi-stranded       75 °C         material of the conductor for supply maximum<br>permissible       75 °C         vipe of electrical connection for load-side outgoing feeder       75 °C         material of the conductor for load-side outgoing feeder       75 °C         vipe of electrical connection for load-side outgoing feeder       75 °C <td>external reset</td> <td>Yes</td>  | external reset  | Yes                                     |
| dependent overload release     Implied the set of t                      | reset function  | Manual, automatic and remote            |
| relative repeat accuracy       1 %         product feature protective coating on printed-circuit board       Yes         number of NC contacts of auxiliary contacts of overload       1         relay       1         operational current of auxiliary contacts of overload relay       1         eat AC at 600 V       5 A         eat AC at 600 V       5 A         eat CC 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)       600 V         • with single-phase operation at AC rated value       600 V         • with multi-phase operation at AC rated value       300 V         Enclosure       Mexinting/wiring         mounting position       Vertical         fastening method       Surface mounting and installation         tightening torque [Ibf-In] for supply voltage line-side       Ix (14 2 AWG)         tightening torque [Ibf-In] for supply       AL or CU         Lype of electrical connection for load-side outgoing feeder       Box lug         type of electrical consection for load-side outgoing feeder       Tx (14 2 AWG)         tightening torque [Ibf-In] for load-side outgoing feeder       Tx (14 2 AWG)         tightening torque [Ibf-In] for load-side outgoing feeder  | ,   | 13 52 A                                 |
| product feature protective coating on printed-circuit board         Yes           number of NC contacts of auxiliary contacts of overload<br>relay         1           number of NO contacts of auxiliary contacts of overload<br>relay         1           operational current of auxiliary contacts of overload<br>relay         1           operational current of auxiliary contacts of overload relay         5 A           • at DC at 250 V         1 A           contact rating of auxiliary contacts of overload relay<br>according to UL         5 A           insulation voltage (U)         600 V           • with single-phase operation at AC rated value         600 V           Boot voltage (U)         600 V           • with multi-phase operation at AC rated value         600 V           Boot voltage (U)         00 V           • with multi-phase operation at AC rated value         800 V           Boot voltage (U)         600 V           • with multi-phase operation at AC rated value         800 V           Boot voltage (U)         90 V           • with a nousing         dustproof and drip-proof for indoor use           Mounting/wiring         Vertical           mounting voltage (U)         Surface mounting and installation           type of electrical connection for supply voltage line-side         1x (14 2 AWG)           at  | tripping time at phase-loss maximum   | 3 s                                     |
| number of NC contacts of auxiliary contacts of overload<br>relay       1         number of NC contacts of auxiliary contacts of overload<br>relay       1         operational current of auxiliary contacts of overload relay<br>according to UL       1         contact rating of auxiliary contacts of overload relay<br>according to UL       5 A         insulation voltage (U)       5 A         • with single-phase operation at AC rated value       600 V         • with single-phase operation at AC rated value       600 V         • with single-phase operation at AC rated value       600 V         • with single-phase operation at AC rated value       600 V         • with multi-phase operation at AC rated value       600 V         • with multi-phase operation at AC rated value       600 V         • with multi-phase operation at AC rated value       300 V         Enclosure       Mounting/wiring         mounting position       Vertical         fastening method       Sugae mounting and installation         type of electrical connection for supply voltage line-side       Box lug         tightening torque [lbfin] for supply waimum<br>permissible       75 °C         material of the conductor for supply maximum<br>permissible       75 °C         material of the conductor for load-side outgoing feeder       14 (14 2 AWG)         type of electrical connectable c   | relative repeat accuracy  | 1 %                                     |
| relay       1         operational current of auxiliary contacts of overload relay       1         • at AC at 600 V       5 A         • at DC at 250 V       1 A         contact rating of auxiliary contacts of overload relay       5 A         according to UL       5 A         insulation voltage (U)       600 V         • with single-phase operation at AC rated value       600 V         • with multi-phase operation at AC rated value       600 V         • with multi-phase operation at AC rated value       600 V         • degree of protection NEMA rating of the enclosure       NEMA 12 enclosure         degree of protection NEMA rating of the enclosure       NEMA 12 enclosure         mounting writing       Vertical         mounting position       Vertical         fastening method       Surface mounting and installation         type of electrical connection for supply voltage line-side       1x (14 2 AWGC)         at AWG cables single or multi-stranded       1x (14 2 AWGC)         at AWG cables single or multi-stranded       45 45 lbf-in         type of electrical connection for supply maximum       75 °C         material of the conductor for subgion feeder       45 45 lbf-in         type of connectable conductor for sub-sections at AWG       45 45 lbf-in   | product feature protective coating on printed-circuit board   | Yes                                     |
| relay         operational current of auxiliary contacts of overload relay         • at AC at 600 V         • at DC at 250 V         1 A         contact rating of auxiliary contacts of overload relay         according to UL         insulation voltage (Ui)         • with single-phase operation at AC rated value         600 V         • with single-phase operation at AC rated value         000 V         Enclosure         degree of protection NEMA rating of the enclosure         degree of protection NEMA rating of the enclosure         design of the housing         mounting position         fastening method         type of electrical connection for supply voltage line-side         tightening torque [IbFin] for supply         vp of connectable conductor for supply maximum         permissible         material of the conductor for supply maximum         rps ° C         material of the conductor for supply maximum         vp of electrical connection for load-side outgoing feeder         tightening torque [IbFin] for load-side outgoing feeder      <   |   | 1                                       |
| • 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       600 V         • with multi-phase operation at AC rated value       600 V         enclosure       600 V         degree of protection NEMA rating of the enclosure       NEMA 12 enclosure         design of the housing       dustproof and drip-proof for indoor use         Mounting/wiring       mounting position         fastening method       Surface mounting and installation         type of electrical connection for supply voltage line-side       Box lug         tightening torque [IbF-in] for supply       45 45 lbF-in         type of connectable conductor ross-sections at line-side       1x (14 2 AWG)         emperature of the conductor for supply maximum       75 °C         permissible       Box lug       1x (14 2 AWG)         tightening torque [IbF-in] for load-side outgoing feeder       45 45 lbF-in         type of electrical connection for load-side outgoing feeder       45 45 lbF-in         tightening torque [IbF-in] for load-side outgoing feeder       1x (14 2 AWG) </td <td></td> <td>1</td>  |   | 1                                       |
| • 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       600 V         • with multi-phase operation at AC rated value       600 V         enclosure       degree of protection NEMA rating of the enclosure       00 V         design of the housing       dustproof and drip-proof for indoor use         Mounting/wiring       mounting position       Vertical         fastening method       Surface mounting and installation       type of electrical connection for supply voltage line-side         tightening torque [lbf-in] for supply       45 45 lbf-in       tx (14 2 AWG)         twpe of electrical conductor for supply maximum       75 °C         permissible       Box lug       tx (14 2 AWG)         tightening torque [lbf-in] for load-side outgoing feeder       45 45 lbf-in         type of electrical connector for supply maximum       75 °C         permissible       To CU         type of connectable conductor for supply       45 45 lbf-in         tightening torque [lbf-in] for load-side outgoing feeder       45 45 lbf-in <t< td=""><td>operational current of auxiliary contacts of overload relay</td><td></td></t<>   | operational current of auxiliary contacts of overload relay   |   |
| contact rating of auxiliary contacts of overload relay<br>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       500 V <b>Enclosure</b> 600 V         degree of protection NEMA rating of the enclosure<br>design of the housing       NEMA 12 enclosure<br>dustproof and drip-proof for indoor use <b>Mounting/wiring</b> mounting voiting         mounting to rule [Ubin] for supply voltage line-side<br>tightening torque [Ubin] for supply voltage line-side<br>at AWG cables single or multi-stranded       Surface mounting and installation         type of electrical connection for supply maximum<br>permissible       75 °C         material of the conductor for supply maximum<br>permissible       75 °C         tightening torque [Ubin] for load-side outgoing feeder       45 45 lbfin         type of electrical connection for load-side outgoing feeder       50 klug         tightening torque [Ubin] for load-side outgoing feeder       1x (14 2 AWG)         tarnded       1x (14 2 AWG)       1x (14 2 AWG)         temperature of the conductor for load-side outgoing feeder       75 °C         tightening torque [Ubin] at magnet coil       5 45 lbfin         type of electrical connection for load-side outgoing feeder       75 °C         temperature of the conductor f   |   | 5 A                                     |
| according to UL         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 of the enclosure         design of the housing         Mounting/wiring         mounting position         fastening method         surface mounting and installation         type of electrical connection for supply voltage line-side         if the ining 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         temperature of the conductor for supply maximum         permissible         material of the conductor for supply         AL or CU         type of electrical connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder         temperature of the conductor for load-side outgoing feeder         type of electrical connectable conductor for load-side outgoing feeder         type of electrical connectable conductor for load-side outgoing feeder         type of electrical connectable conductor for load-side outgoing feeder         type of electrical connectable conductor for load-side outgoing feeder  | ● at DC at 250 V  | 1 A                                     |
| with single-phase operation at AC rated value     with multi-phase operation at AC rated value     300 V      Fnclosure     degree of protection NEMA rating of the enclosure     design of the housing     dustproof and drip-proof for indoor use     Mounting/wiring     mounting position     fastening method     Surface mounting and installation     type of electrical connection for supply voltage line-side     temperature of the conductor cross-sections at line-side     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque [lbf-in] for load-side outgoing feeder     tightening torque collectrical connection for load-side outgoing feeder     tightening torque fibring tor load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     tightening torque fibring tor load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     tightening torque fibring tor load-side outgoing feeder     tightening torque [lbf-in] at magnet coil     type of connectable conductor cross-sections of magnet     type of connectable conductor cross-sections of magnet     type of connectable conductor for load-side outgoing feeder     tightening torque [lbf-in] at magnet coil     type of connectable conductor cross-sections of magnet     type of connectable conductor cross-sections of magnet     type of connectable conductor cross-sections of magnet     type of electrical connection of magnet coil     type of electrical connection of magnet coil     type of connectable conductor for supply for the coil to the conductor for load-side outgoing feeder     tightening torque [lbf-in] at magnet coil     type of connectable conductor cross-sections of magnet     type of connectable conductor cross-sections of magnet     type of connectable conductor cross-sections of magnet      |   | 5A@600VAC (B600), 1A@250VDC (R300)      |
| with multi-phase operation at AC rated value 300 V      Enclosure      degree of protection NEMA rating of the enclosure     design of the housing     dustproof and drip-proof for indoor use      Mounting/wiring      mounting position     fastening method     Surface mounting and installation     type of electrical connection for supply voltage line-side     at 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 [IbFin] for load-side outgoing feeder     tightening torque [IbFin] for load-side outgoing feeder     tarterial of the conductor for load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     tarterial of the conductor for load-side outgoing feeder     tarterial of the conductor for load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     tarterial of the conductor for load-side outgoing feeder     temperature of the conductor for load-side outgoing feeder     type of connectable 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     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of connectable conductor for load-side outgoing feeder     type of electrical connection of magnet coil     type of connectable conductor for loa | insulation voltage (Ui)   |   |
| Enclosure           degree of protection NEMA rating of the enclosure         NEMA 12 enclosure           design of the housing         dustproof and drip-proof for indoor use           Mounting/wiring         mounting position           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         AL or CU           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         1x (14 2 AWG)           temperature of the conductor for supply         AL or CU           type of connectable conductor for load-side outgoing feeder         75 °C           material of the conductor for load-side outgoing feeder         75 °C           material of the conductor for load-side outgoing feeder         AL or CU           type of electrical connection of magnet coil         5 12 lbf-in           type of electrical connection of magnet coil         5 12 lbf-in  | <ul> <li>with single-phase operation at AC rated value</li> </ul>   | 600 V                                   |
| degree of protection NEMA rating of the enclosure         NEMA 12 enclosure           design of the housing         dustproof and drip-proof for indoor use           Mounting/wiring         Vertical           mounting position         Surface mounting and installation           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         1x (14 2 AWG)           at AWG cables single or multi-stranded         T5 °C           material of the conductor for supply         AL or CU           type of connectable conductor cross-sections at AWG         Box lug           tightening torque [lbf-in] for load-side outgoing feeder         45 45 lbf-in           type of connectable conductor for supply         AL or CU           type of connectable conductor for load-side outgoing feeder         1x (14 2 AWG)           temperature of the conductor for load-side outgoing feeder         75 °C           tightening torque [lbf-in] of load-side outgoing feeder         75 °C           tightening torque [lbf-in] of load-side outgoing feeder         1x (14 2 AWG)           temperature of the conductor for load-side outgoing feeder         75 °C  | <ul> <li>with multi-phase operation at AC rated value</li> </ul>  | 300 V                                   |
| design of the housingdustproof and drip-proof for indoor useMounting/wiringmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf·in] for supply45 45 lbf·intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for load-side outgoing feederBox lugtype of electrical connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder45 45 lbf·intype of electrical connectable conductor for load-side outgoing feederTime for in the conductor for load-side outgoing feedertype of connectable conductor for load-side outgoing feeder45 45 lbf·intype of load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder45 45 lbf·intype of connectable conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Ctype of electrical connection of magnet coil5 12 lbf·intype of connectable conductor cross-sections of magnet5 12 lbf·intype of connectable conductor cross-se   | Enclosure   |   |
| design of the housingdustproof and drip-proof for indoor useMounting/wiringmounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf·in] for supply45 45 lbf·intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for load-side outgoing feederBox lugtype of electrical connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder45 45 lbf·intype of electrical connectable conductor for load-side outgoing feederTime for in the conductor for load-side outgoing feedertype of connectable conductor for load-side outgoing feeder45 45 lbf·intype of load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder45 45 lbf·intype of connectable conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Ctype of electrical connection of magnet coil5 12 lbf·intype of connectable conductor cross-sections of magnet5 12 lbf·intype of connectable conductor cross-se   | degree of protection NEMA rating of the enclosure   | NEMA 12 enclosure                       |
| mounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply45 45 lbf-intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feeder<br>tightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor for supplyAL or CUtype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder1x (14 2 AWG)tightening torque [lbf-in] for load-side outgoing feeder1x (14 2 AWG)type of electrical connection for load-side outgoing feeder1x (14 2 AWG)type of connectable conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Ctype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  |   | dustproof and drip-proof for indoor use |
| mounting positionVerticalfastening methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply45 45 lbf-intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feeder<br>tightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor for supplyAL or CUtype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder1x (14 2 AWG)tightening torque [lbf-in] for load-side outgoing feeder1x (14 2 AWG)type of electrical connection for load-side outgoing feeder1x (14 2 AWG)type of connectable conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Ctype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  | Mounting/wiring   |   |
| fastering methodSurface mounting and installationtype of electrical connection for supply voltage line-sideBox lugtightening torque [lbf-in] for supply45 45 lbf-intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feeder80x lugtightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor rors-sections at AWG<br>cables for load-side outgoing feeder1x (14 2 AWG)tightening torque [lbf-in] for load-side outgoing feeder1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder1x (14 2 AWG)type of electrical connection for load-side outgoing feeder1x (14 2 AWG)tightening torque [lbf-in] for load-side outgoing feeder1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feederAL or CUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  |   | Vertical                                |
| type of electrical connection for supply voltage line-side<br>tightening torque [lbf-in] for supplyBox lugtightening torque [lbf-in] for supply45 45 lbf-intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder at aximum permissible1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder45 45 lbf-intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder at aximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder1x (14 2 AWG)type of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  |   |   |
| tightening torque [lbf-in] for supply45 45 lbf-intype of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder5 45 lbf-intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder75 °Cmaximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder75 °Ctemperature of the conductor for load-side outgoing feeder75 °Cmaximum permissibleAL or CUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  |   | -                                       |
| type of connectable conductor cross-sections at line-side<br>at AWG cables single or multi-stranded1x (14 2 AWG)temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor for supply1x (14 2 AWG)type of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder<br>maximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder<br>side outgoing feeder75 °Cmaterial of the conductor for load-side outgoing feeder<br>maximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder<br>maximum permissibleAL or CUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet<br>tightening torque [lbf-in] at magnet coil2x (16 12 AWG)   |   | 0                                       |
| temperature of the conductor for supply maximum<br>permissible75 °Cmaterial of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feederBox lugtightening torque [lbf·in] for load-side outgoing feeder45 45 lbf·intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder<br>  | type of connectable conductor cross-sections at line-side   | 1x (14 2 AWG)                           |
| material of the conductor for supplyAL or CUtype of electrical connection for load-side outgoing feederBox lugtightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder<br>maximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder<br>material of the conductor of magnet coilAL or CUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  | temperature of the conductor for supply maximum   | 75 °C                                   |
| type of electrical connection for load-side outgoing feederBox lugtightening torque [lbf·in] for load-side outgoing feeder45 45 lbf·intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder<br>maximum permissible75 °Cmaterial of the conductor for load-side outgoing feederAL or CUtype of electrical connection of magnet coil5 12 lbf·intightening torque [lbf·in] at magnet coil2x (16 12 AWG)  | -   | AL or CU                                |
| tightening torque [lbf-in] for load-side outgoing feeder45 45 lbf-intype of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder<br>maximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder<br>magnet coilAL or CUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)   |   |   |
| type of connectable conductor cross-sections at AWG<br>cables for load-side outgoing feeder single or multi-<br>stranded1x (14 2 AWG)temperature of the conductor for load-side outgoing feeder<br>maximum permissible75 °Cmaterial of the conductor for load-side outgoing feeder<br>type of electrical connection of magnet coilAL or CUtype of electrical connection of magnet coil5 12 lbf-intightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)   |   | 5                                       |
| maximum permissible     AL or CU       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)   | type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi- | 1x (14 2 AWG)                           |
| material of the conductor for load-side outgoing feederAL or CUtype of electrical connection of magnet coilScrew-type terminalstightening torque [lbf·in] at magnet coil5 12 lbf·intype of connectable conductor cross-sections of magnet2x (16 12 AWG)   |   | 75 °C                                   |
| type of electrical connection of magnet coilScrew-type terminalstightening torque [lbf·in] at magnet coil5 12 lbf·intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  | material of the conductor for load-side outgoing feeder   | AL or CU                                |
| tightening torque [lbf-in] at magnet coil5 12 lbf-intype of connectable conductor cross-sections of magnet2x (16 12 AWG)  |   | Screw-type terminals                    |
| type of connectable conductor cross-sections of magnet 2x (16 12 AWG)   |   | 5 12 lbf·in                             |
|   | type of connectable conductor cross-sections of magnet  | 2x (16 12 AWG)                          |

| temperature of the conductor at magnet coil maximum permissible  | 75 °C   |  |  |
|--|---|--|--|
| material of the conductor at magnet coil   | CU  |  |  |
| type of electrical connection at contactor for auxiliary<br>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<br>at AWG cables for auxiliary contacts single or multi-<br>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<br>relay at AWG cables for auxiliary contacts single or multi-<br>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<br>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 (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   |  |  |
| Further information  |   |  |  |
| Industrial Controls - Product Overview (Catalogs, Brocht<br>www.usa.siemens.com/iccatalog  | ires,)  |  |  |
| Industry Mall (Online ordering system)<br>https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:83FUF950D  |   |  |  |
| https://support.industry.siemens.com/cs/US/en/ps/US2:83FU  | Service&Support (Manuals, Certificates, Characteristics, FAQs,)<br>https://support.industry.siemens.com/cs/US/en/ps/US2:83FUF950D |  |  |
| Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)<br>http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:83FUF950D⟨=en |   |  |  |
| Certificates/approvals   |   |  |  |

https://support.industry.siemens.com/cs/US/en/ps/US2:83FUF950D/certificate

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