



STARTER,FVNR,S0,3PH,THOLR,120V,N3R/4/12

|                                                                         |                                  |
|-------------------------------------------------------------------------|----------------------------------|
| product brand name                                                      | Siemens                          |
| product designation                                                     | Non-reversing motor starter      |
| special product feature                                                 | No factory installed accessories |
| <b>General technical data</b>                                           |                                  |
| weight [lb]                                                             | 15 lb                            |
| Height x Width x Depth [in]                                             | 12 × 10 × 6 in                   |
| touch protection against electrical shock                               | NA for enclosed products         |
| installation altitude [ft] at height above sea level maximum            | 6 560 ft                         |
| ambient temperature [°F] during storage                                 | -22 ... +149 °F                  |
| ambient temperature [°F] during operation                               | -4 ... +104 °F                   |
| ambient temperature during storage                                      | -30 ... +65 °C                   |
| ambient temperature during operation                                    | -20 ... +40 °C                   |
| country of origin                                                       | Germany                          |
| <b>Power and control electronics</b>                                    |                                  |
| number of poles for main current circuit                                | 3                                |
| type of voltage of the control supply voltage                           | AC                               |
| control supply voltage                                                  |                                  |
| • at AC at 50 Hz rated value                                            | 110 V                            |
| • at AC at 60 Hz rated value                                            | 120 V                            |
| disconnecter functionality                                              | No                               |
| yielded mechanical performance [hp] for 3-phase AC motor                |                                  |
| • at 200/208 V rated value                                              | 10 hp                            |
| • at 220/230 V rated value                                              | 10 hp                            |
| • at 460/480 V rated value                                              | 25 hp                            |
| • at 575/600 V rated value                                              | 25 hp                            |
| <b>Contactor</b>                                                        |                                  |
| number of NO contacts for main contacts                                 | 3                                |
| operating voltage for main current circuit at AC at 60 Hz maximum       | 600 V                            |
| operating voltage at AC-3 rated value maximum                           | 600 V                            |
| mechanical service life (operating cycles) of the main contacts typical | 10 000 000                       |
| <b>Auxiliary contact</b>                                                |                                  |
| number of NC contacts for auxiliary contacts                            | 1                                |
| number of NO contacts for auxiliary contacts                            | 1                                |
| number of total auxiliary contacts maximum                              | 8                                |
| contact rating of auxiliary contacts of contactor according to UL       | 10A@600V(A600), 2.5A@600V(Q600)  |
| <b>Coil</b>                                                             |                                  |
| apparent pick-up power of magnet coil at AC                             | 79 VA                            |
| apparent holding power of magnet coil at AC                             | 8.5 VA                           |
| operating range factor control supply voltage rated value of            | 0.8 ... 1.1                      |

|                                                                                                                               |                                                        |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| magnet coil                                                                                                                   |                                                        |
| ON-delay time                                                                                                                 | 8 ... 40 ms                                            |
| OFF-delay time                                                                                                                | 4 ... 16 ms                                            |
| <b>Overload relay</b>                                                                                                         |                                                        |
| product function                                                                                                              |                                                        |
| • overload protection                                                                                                         | Yes                                                    |
| • test function                                                                                                               | Yes                                                    |
| • external reset                                                                                                              | Yes                                                    |
| reset function                                                                                                                | Manual, automatic and remote (with optional accessory) |
| adjustment range of thermal overload trip unit                                                                                | 11 ... 16                                              |
| number of NC contacts of auxiliary contacts of overload relay                                                                 | 1                                                      |
| number of NO contacts of auxiliary contacts of overload relay                                                                 | 1                                                      |
| contact rating of auxiliary contacts of overload relay according to UL                                                        | 5A@600VAC (B600), 1A@250VDC (R300)                     |
| <b>Enclosure</b>                                                                                                              |                                                        |
| degree of protection NEMA rating of the enclosure                                                                             | NEMA 3/3R/4/12 enclosure                               |
| design of the housing                                                                                                         | Dust- & watertight for outdoor use                     |
| <b>Mounting/wiring</b>                                                                                                        |                                                        |
| mounting position                                                                                                             | vertical                                               |
| fastening method                                                                                                              | Surface mounting and installation                      |
| type of electrical connection for supply voltage line-side                                                                    | Screw-type terminals                                   |
| tightening torque [lbf-in] for supply                                                                                         | 18 ... 21 lbf-in                                       |
| type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded                             | 2x (16 ... 12), 2x (14 ... 8)                          |
| temperature of the conductor for supply maximum permissible                                                                   | 60 °C                                                  |
| material of the conductor for supply                                                                                          | CU                                                     |
| type of electrical connection for load-side outgoing feeder                                                                   | Screw-type terminals                                   |
| tightening torque [lbf-in] for load-side outgoing feeder                                                                      | 18 ... 21 lbf-in                                       |
| type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded            | 2x (16 ... 12), 2x (14 ... 8)                          |
| temperature of the conductor for load-side outgoing feeder maximum permissible                                                | 60 °C                                                  |
| material of the conductor for load-side outgoing feeder                                                                       | CU                                                     |
| type of electrical connection of magnet coil                                                                                  | Screw-type terminals                                   |
| tightening torque [lbf-in] at magnet coil                                                                                     | 7 ... 10 lbf-in                                        |
| type of connectable conductor cross-sections of magnet coil for AWG cables single or multi-stranded                           | 2x (16 ... 12), 2x (14 ... 8)                          |
| 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                                                                | 7 ... 10 lbf-in                                        |
| type of connectable conductor cross-sections at contactor for AWG cables for auxiliary contacts single or multi-stranded      | 2x (20 ... 16), 2x (18 ... 14)                         |
| 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 for AWG cables for auxiliary contacts single or multi-stranded | 2x (20 ... 16), 2x (18 ... 14)                         |
| temperature of the conductor at overload relay for auxiliary contacts maximum permissible                                     | 70 °C                                                  |
| material of the conductor at overload relay for auxiliary contacts                                                            | CU                                                     |
| <b>Short-circuit current rating</b>                                                                                           |                                                        |
| design of the fuse link for short-circuit protection of the main circuit required                                             | Class J                                                |
| design of the short-circuit trip                                                                                              | Thermal magnetic circuit breaker                       |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                            |                                                        |
| • at 240 V                                                                                                                    | 5 kA                                                   |
| • at 480 V                                                                                                                    | 5 kA                                                   |
| • at 600 V                                                                                                                    | 5 kA                                                   |
| certificate of suitability                                                                                                    | UL 60947-4-1                                           |

## 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=3RE4122-8CA31-4AY0>

Search Datasheet in Service&Support (Manuals)

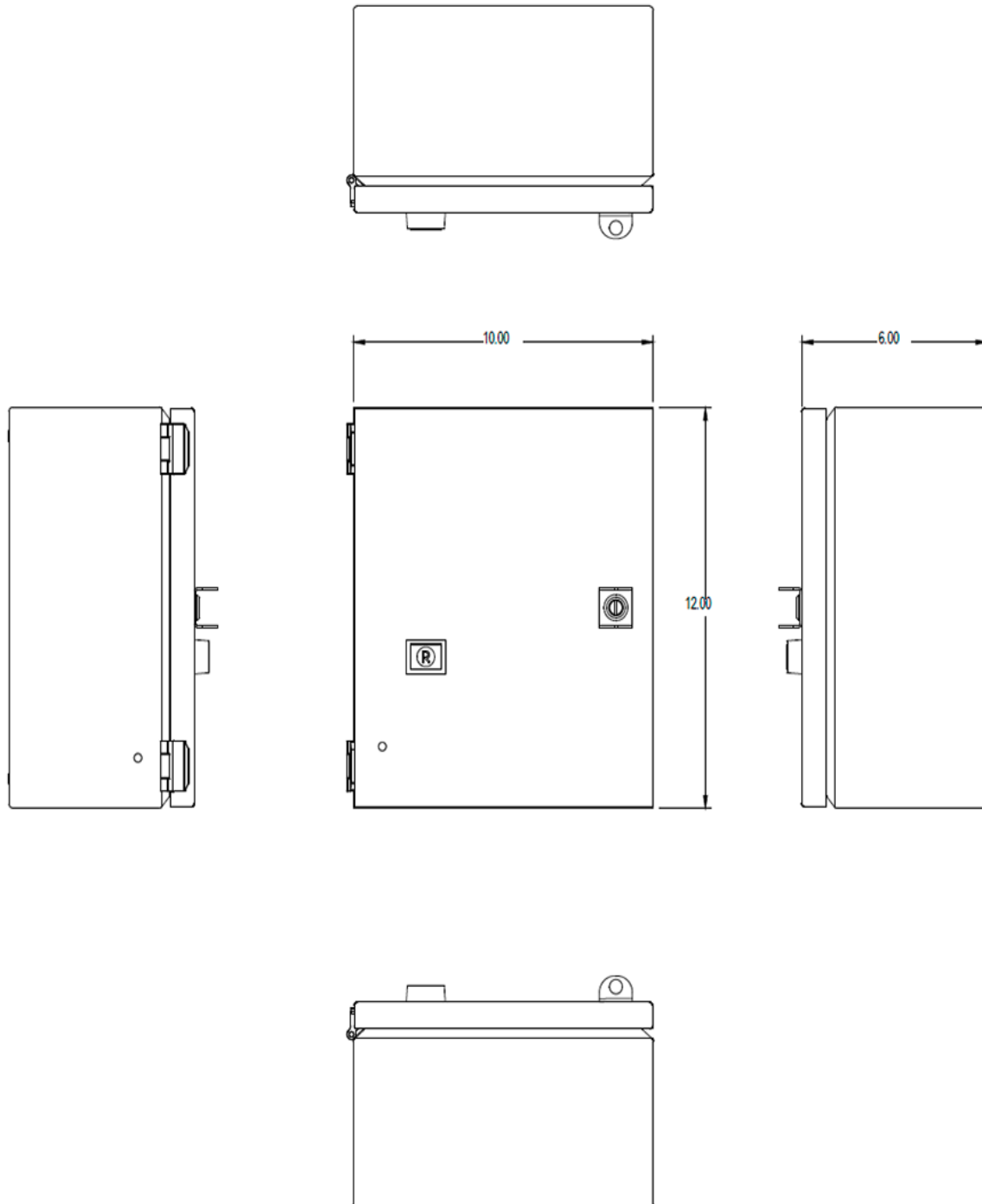
<https://support.industry.siemens.com/cs/US/en/ps/3RE4122-8CA31-4AY0/man>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RE4122-8CA31-4AY0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RE4122-8CA31-4AY0&lang=en)

Certificates/approvals

<https://support.industry.siemens.com/cs/US/en/ps/3RE4122-8CA31-4AY0/certificate>



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