

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 |

### General technical data

|  |                          |
|--|--------------------------|
| Weight [lb]  | 15 lb                    |
| Height x Width x Depth [in]                                  | 12 × 10 × 6 in           |
| 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                  |

### Power and control electronics

|  |       |
|--|-------|
| Number of poles for main current circuit                                     | 3     |
| 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> </ul> | 110 V |

|  |        |
|--|--------|
| <ul style="list-style-type: none"> <li>• at AC at 60 Hz rated value</li> </ul> | 120 V  |
| Disconnecter functionality   | No     |
| Yielded mechanical performance [hp] for three-phase AC motor                   |        |
| <ul style="list-style-type: none"> <li>• at 200/208 V rated value</li> </ul>   | 3 hp   |
| <ul style="list-style-type: none"> <li>• at 220/230 V rated value</li> </ul>   | 3 hp   |
| <ul style="list-style-type: none"> <li>• at 460/480 V rated value</li> </ul>   | 7.5 hp |
| <ul style="list-style-type: none"> <li>• at 575/600 V rated value</li> </ul>   | 10 hp  |

### Contactor

|   |            |
|---|------------|
| 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 (switching cycles) of the main contacts typical | 10 000 000 |

### Auxiliary contact

|   |                                 |
|---|---------------------------------|
| 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) |

### Coil

|  |             |
|--|-------------|
| Apparent pick-up power of magnet coil at AC                              | 67 V·A      |
| Apparent holding power of magnet coil at AC                              | 6.5 V·A     |
| Operating range factor control supply voltage rated value of magnet coil | 0.8 ... 1.1 |
| Switch-on delay time   | 9 ... 38 ms |
| Off-delay time   | 4 ... 16 ms |

### Overload relay

|   |  |
|---|--|
| Product function  |  |
| <ul style="list-style-type: none"> <li>• Overload protection</li> </ul> | Yes  |
| <ul style="list-style-type: none"> <li>• Test function</li> </ul>       | Yes  |
| <ul style="list-style-type: none"> <li>• External reset</li> </ul>      | Yes  |
| Reset function  | Manual, automatic and remote (with optional accessory) |
| Adjustment range of thermal overload trip unit                          | 17 ... 22  |
| 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)                     |

### Enclosure

|   |                                    |
|---|------------------------------------|
| 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                           |
| (mounting type)   | 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 at AWG conductors 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 at AWG conductors 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 at AWG conductors 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 at AWG conductors 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 at AWG conductors 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                             |

#### Short-circuit current rating

|  |                                  |
|--|----------------------------------|
| 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 (Icu) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul> | 5 kA<br>5 kA<br>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=3RE4122-4CA31-4CY0>

**Search Datasheet in Service&Support (Manuals)**

<https://support.industry.siemens.com/cs/US/en/ps/3RE4122-4CA31-4CY0/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=3RE4122-4CA31-4CY0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RE4122-4CA31-4CY0&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/3RE4122-4CA31-4CY0/certificate>



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