

STARTER,FVNR,S0,3PH,THOLR,120VAC,NEMA 1



Figure similar

| | |
|-------------------------|----------------------------------|
| Product brand name | Siemens |
| Product designation | Non-reversing motor starter |
| Special product feature | No factory installed accessories |

General technical data

| | |
|--|--------------------------|
| Weight [lb] | 8 lb |
| Height x Width x Depth [in] | 11 × 7 × 5 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"> • at AC at 50 Hz rated value • at AC at 60 Hz rated value | 110 V 120 V |
| Disconnecter functionality | No |
| Yielded mechanical performance [hp] for three-phase AC motor | |
| <ul style="list-style-type: none"> • at 200/208 V rated value • at 220/230 V rated value • at 460/480 V rated value • at 575/600 V rated value | 10 hp 10 hp 20 hp 25 hp |

Contactors

| | |
|---|------------|
| 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 | 79 V·A |
| Apparent holding power of magnet coil at AC | 8.5 V·A |
| Operating range factor control supply voltage rated value of magnet coil | 0.8 ... 1.1 |
| Switch-on delay time | 8 ... 40 ms |
| Off-delay time | 4 ... 16 ms |

Overload relay

| | |
|--|--|
| Product function | |
| <ul style="list-style-type: none"> • Overload protection • Test function • External reset | Yes Yes Yes |
| Reset function | Manual, automatic and remote (with optional accessory) |
| Adjustment range of thermal overload trip unit | 14 ... 20 |
| 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

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|---|--------------------------------|
| Degree of protection NEMA rating of the enclosure | NEMA 1 standard size enclosure |
| Design of the housing | Indoor general purpose use |

Mounting/wiring

| | |
|---|-----------------------------------|
| (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

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|--|----------------------------------|
| 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 _{cu}) | 5 kA |
| <ul style="list-style-type: none"> • at 240 V • at 480 V • 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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=3RE4122-7AA31-4BY0>

Search Datasheet in Service&Support (Manuals)

<https://support.industry.siemens.com/cs/US/en/ps/3RE4122-7AA31-4BY0/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=3RE4122-7AA31-4BY0&lang=en

Certificates/approvals

<https://support.industry.siemens.com/cs/US/en/ps/3RE4122-7AA31-4BY0/certificate>



| LETTER | KNOCKOUT & CONDUIT SIZE |
|--------|---|
| A | %%C22.2 FOR 12.7 CONDUIT |
| B | %%C22.2 X %%C28.6 FOR 12.7 & 19 CONDUIT |
| C | %%C28.6 X %%C34.9 FOR 19 & 25.4 CONDUIT |

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