



Figure similar

Non-reversing motor starter, Size 3 1/2, Three phase full voltage, Amb. compensate bimetal OLR, Contactor amp rating 115A, Non-combination type, Enclosure type 12, Dust/drip proof for indoors

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| product brand name | Class 14 & 22 |
| design of the product | Full-voltage non-reversing motor starter |
| special product feature | Half-size starter |
| General technical data | |
| weight [lb] | 47.5 lb |
| Height x Width x Depth [in] | 26 × 13 × 8 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 |
| Horsepower ratings | |
| yielded mechanical performance [hp] for 3-phase AC motor | |
| • at 200/208 V rated value | 30 hp |
| • at 220/230 V rated value | 40 hp |
| • at 460/480 V rated value | 75 hp |
| • at 575/600 V rated value | 75 hp |
| Contactor | |
| size of contactor | Controller half size 3 1/2 |
| 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 | 115 A |
| mechanical service life (switching cycles) of the main contacts typical | 5000000 |
| 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 | |

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| <ul style="list-style-type: none"> • at AC at 50 Hz rated value | 380 ... 440 V |
| <ul style="list-style-type: none"> • at AC at 60 Hz rated value | 440 ... 480 V |
| holding power at AC minimum | 14 W |
| apparent pick-up power of magnet coil at AC | 310 VA |
| apparent holding power of magnet coil at AC | 26 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 | 26 ... 41 ms |
| OFF-delay time | 14 ... 19 ms |

Overload relay

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| product function | |
| <ul style="list-style-type: none"> • overload protection | Yes |
| <ul style="list-style-type: none"> • test function | Yes |
| <ul style="list-style-type: none"> • external reset | Yes |
| reset function | Manual and automatic |
| adjustment range of thermal overload trip unit | 0.85 ... 1.15 |
| number of NC contacts of auxiliary contacts of overload relay | 3 |
| number of NO contacts of auxiliary contacts of overload relay | 0 |
| operational current of auxiliary contacts of overload relay | |
| <ul style="list-style-type: none"> • at AC at 600 V | 5 A |
| <ul style="list-style-type: none"> • at DC at 250 V | 5 A |
| contact rating of auxiliary contacts of overload relay according to UL | 5A@600VAC (B600), 5A@250VDC (P300) |

Enclosure

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|----------------------------------|---|
| degree of protection NEMA rating | 12 |
| design of the housing | Extra-wide |
| design of the housing | dustproof and drip-proof for indoor use |

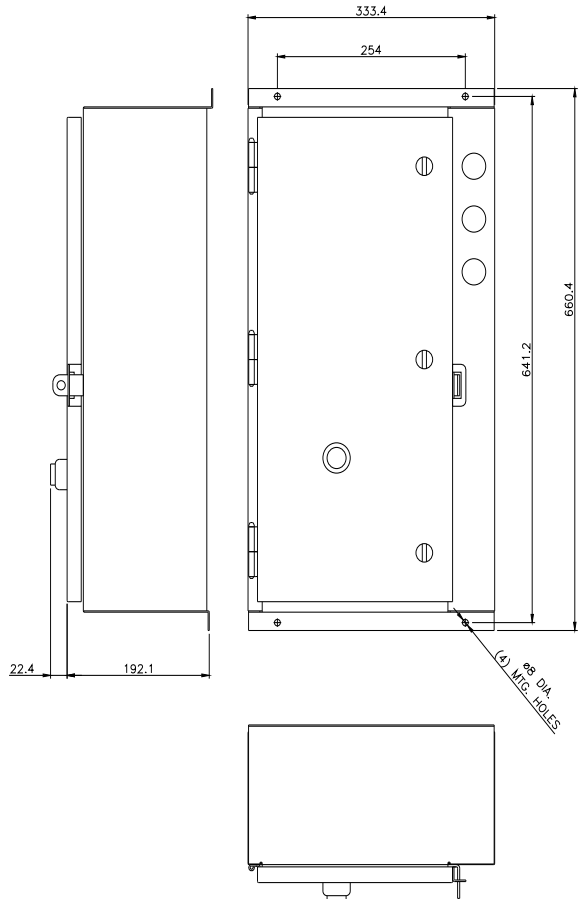
Mounting/wiring

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| 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 | 120 ... 120 lbf-in |
| 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 | Screw-type terminals |
| tightening torque [lbf-in] for load-side outgoing feeder | 35 ... 50 lbf-in |
| 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 coil at AWG cables single or multi-stranded | 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 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 | 5 ... 12 lbf-in |
| type of connectable conductor cross-sections at overload relay at AWG cables for auxiliary contacts single or multi-stranded | 2x (16 ... 12 AWG) |

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| 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 _{cu}) | |
| <ul style="list-style-type: none"> • at 240 V • at 480 V • at 600 V | 14 kA 10 kA 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
Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/us/Catalog/product?mfb=US2:14IP820H81>
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/US/en/ps/US2:14IP820H81>
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=US2:14IP820H81&lang=en
Certificates/approvals
<https://support.industry.siemens.com/cs/US/en/ps/US2:14IP820H81/certificate>



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