



Figure similar

Pump control panel, Size 6, Three phase full voltage, Solid-state overload relay, OLR amp range 160-630A, 240-277V 50-60Hz/DC coil, Standard type contactor, 400A circuit breaker, HOA Sel Sw. <(>&<)> Start P.B., Enclosure NEMA type 3/3R, Weather proof outdoor use

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| product brand name | Class 87 |
| design of the product | Pump control panel with MCP |
| special product feature | Gravity dropout contacts; 45 degree, wedge action contacts; Self-rising pressure type control terminals; Encapsulated coil |
| General technical data | |
| weight [lb] | 240 lb |
| Height x Width x Depth [in] | 79 × 22 × 13 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 | 100 hp |
| • at 220/230 V rated value | 125 hp |
| • at 460/480 V rated value | 250 hp |
| • at 575/600 V rated value | 300 hp |
| Contactor | |
| size of contactor | NEMA controller size 6 |
| 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 | 540 A |
| mechanical service life (switching cycles) of the main contacts typical | 10000000 |
| Auxiliary contact | |
| number of NC contacts at contactor for auxiliary contacts | 2 |
| number of NO contacts at contactor for auxiliary contacts | 2 |
| number of total auxiliary contacts maximum | 8 |
| contact rating of auxiliary contacts of contactor according to UL | 10A@240VAC (A300), 2.5A@250VDC (Q300) |
| Coil | |
| type of voltage of the control supply voltage | AC/DC |

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| control supply voltage | |
| • at DC rated value | 240 ... 277 V |
| • at AC at 50 Hz rated value | 240 ... 277 V |
| • at AC at 60 Hz rated value | 240 ... 277 V |
| holding power at AC minimum | 10 W |
| apparent pick-up power of magnet coil at AC | 830 VA |
| apparent holding power of magnet coil at AC | 9.2 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 | 60 % |
| ON-delay time | 45 ... 100 ms |
| OFF-delay time | 60 ... 100 ms |

Overload relay

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| product function | |
| • overload protection | Yes |
| • phase failure detection | Yes |
| • asymmetry detection | Yes |
| • ground fault detection | No |
| • test function | Yes |
| • external reset | Yes |
| reset function | Manual and automatic |
| trip class | CLASS 10 |
| adjustable current response value current of the current-dependent overload release | 160 ... 630 A |
| product feature protective coating on printed-circuit board | No |
| number of NC contacts of auxiliary contacts of overload relay | 1 |
| number of NO contacts of auxiliary contacts of overload relay | 1 |
| operational current of auxiliary contacts of overload relay | |
| • 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 | 300 V |

Enclosure

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| degree of protection NEMA rating of the enclosure | NEMA Type 3R |
| design of the housing | Weather proof for outdoor use |

Standard Control Devices

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|---|--------------------------------------|
| product component Hand-Off-Auto selector switch | Yes |
| type of Hand-Off-Auto selector switch | 30mm metal housing with matte finish |
| product component start push button | Yes |
| type of start push button | 30mm metal housing with matte finish |

Circuit Breaker

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| type of the motor protection | Motor circuit protector (magnetic trip only) |
| operational current of motor circuit breaker rated value | 400 A |
| adjustable current response value current of instantaneous short-circuit trip unit | 2000 ... 4000 A |

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 |
| type of connectable conductor cross-sections at line-side at AWG cables single or multi-stranded | 2x (3/0 ... 500 kcmil) or 2x (4/0 ... 500 kcmil) |
| 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 | Box lug |
| tightening torque [lbf-in] for load-side outgoing feeder | 180 ... 220 lbf-in |

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| type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded | 2x 2/0 AWG ... 500 MCM |
| temperature of the conductor for load-side outgoing feeder maximum permissible | 75 °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 cables single or multi-stranded | 2x (18 ... 14 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 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 cables for auxiliary contacts single or multi-stranded | 2x (20 ... 16 AWG), 2x (18 ... 14 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 relay at AWG cables for auxiliary contacts single or multi-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

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| design of the short-circuit trip | Instantaneous trip circuit breaker |
| breaking capacity maximum short-circuit current (I _{cu}) | <ul style="list-style-type: none"> • at 240 V 100 kA • at 480 V 100 kA • at 600 V 25 kA |
| certificate of suitability | NEMA ICS 2; UL 508 |

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=US2:87MSW6ML>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/US/en/ps/US2:87MSW6ML>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:87MSW6ML&lang=en

Certificates/approvals

<https://support.industry.siemens.com/cs/US/en/ps/US2:87MSW6ML/certificate>

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