

Reduced voltage pump panel, Auto transformer, Size 3, 460V 3-phase motor voltage, Solid-state overload relay, OLR amp range 25-100A, 380-440/440-480V 50/60Hz coil, 100A fusible disconnect, 100A/600V fuse clip, HOA Sel Sw. <(><>> Start P.B., Enclosure NEMA type 3/3R, Weather proof outdoor use

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| product brand name   | Class 88   |
| design of the product  | Reduced voltage pump panel with fusible disconnect - Auto transformer                      |
| special product feature  | Latest technology in arc quenching to extend contactor life; Same coil voltage is AC or DC |
| <b>General technical data</b>  |  |
| weight [lb]  | 258 lb   |
| Height x Width x Depth [in]  | 55 × 28 × 11 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  |
| <b>Horsepower ratings</b>  |  |
| yielded mechanical performance [hp] for 3-phase AC motor                 |  |
| • at 200/208 V rated value   | 0 hp   |
| • at 220/230 V rated value   | 0 hp   |
| • at 460/480 V rated value   | 50 hp  |
| • at 575/600 V rated value   | 0 hp   |
| <b>Contactors</b>  |  |
| size of contactor  | NEMA controller size 3   |
| number of NO contacts for main contacts                                  | 3  |
| operating voltage for main current circuit at AC at 60 Hz maximum        | 460 V  |
| operational current at AC at 600 V rated value                           | 90 A   |
| mechanical service life (operating cycles) of the main contacts typical  | 5000000  |
| <b>Auxiliary contact</b>   |  |
| 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)  |
| <b>Coil</b>  |  |
| type of voltage of the control supply voltage                            | AC   |
| control supply voltage   |  |
| • at DC rated value  | 0 ... 0 V  |
| • at AC at 50 Hz rated value   | 380 ... 440 V  |
| • 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   |
| percentual drop-out voltage of magnet coil related to the input voltage  | 50 %   |
| ON-delay time  | 26 ... 41 ms   |
| OFF-delay time   | 14 ... 19 ms   |
| <b>Overload relay</b>  |  |

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| product function   |   |
| • overload protection  | Yes   |
| • phase failure detection  | Yes   |
| • asymmetry detection  | Yes   |
| • ground fault detection   | Yes   |
| • test function  | Yes   |
| • external reset   | Yes   |
| reset function   | Manual, automatic and remote                        |
| trip class   | CLASS 5 / 10 (factory set) / 20 / 30                |
| adjustable current response value current of the current-dependent overload release                                      | 25 ... 100 A  |
| tripping time at phase-loss maximum  | 3 s   |
| relative repeat accuracy   | 1 %   |
| product feature protective coating on printed-circuit board  | Yes   |
| 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   |
| <b>Disconnect Switch</b>   |   |
| response value of switch disconnecter  | 100A / 600V   |
| design of fuse holder  | Class R fuse clips                                  |
| operating class of the fuse link   | Class R   |
| <b>Enclosure</b>   |   |
| degree of protection NEMA rating of the enclosure  | NEMA 3/3R   |
| design of the housing  | Weather proof 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   | Box lug   |
| type of connectable conductor cross-sections at line-side for AWG cables single or multi-stranded                        | 1x (14 ... 2/0 AWG)                                 |
| 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   | 120 ... 120 lbf-in                                  |
| type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded       | 1x (14 ... 2/0 AWG)                                 |
| temperature of the conductor for load-side outgoing feeder maximum permissible   | 75 °C   |
| material of the conductor for load-side outgoing feeder  | AL or CU  |
| 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 for 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 at contactor 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 for 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  | 7 ... 10 lbf-in                                     |
| type of connectable conductor cross-sections at overload relay   | 2x (20 ... 14 AWG)                                  |

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| for AWG cables for auxiliary contacts single or multi-stranded                            |   |
| 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  |
| <b>Short-circuit current rating</b>   |   |
| 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) |
| certificate of suitability  | NEMA ICS 2; UL 508; CSA 22.2, No.14                 |
| <b>Further information</b>  |   |

**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=US2:88HUGT4FH>

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

<https://support.industry.siemens.com/cs/US/en/ps/US2:88HUGT4FH>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:88HUGT4FH&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:88HUGT4FH&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:88HUGT4FH/certificate>

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