

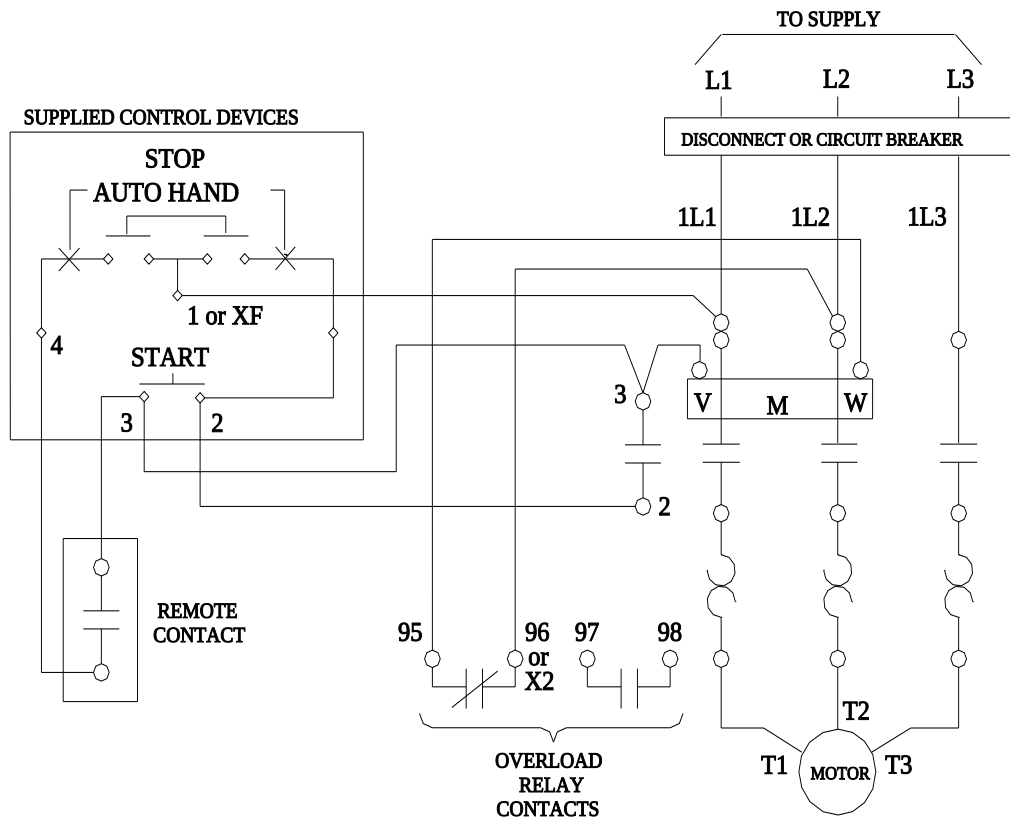
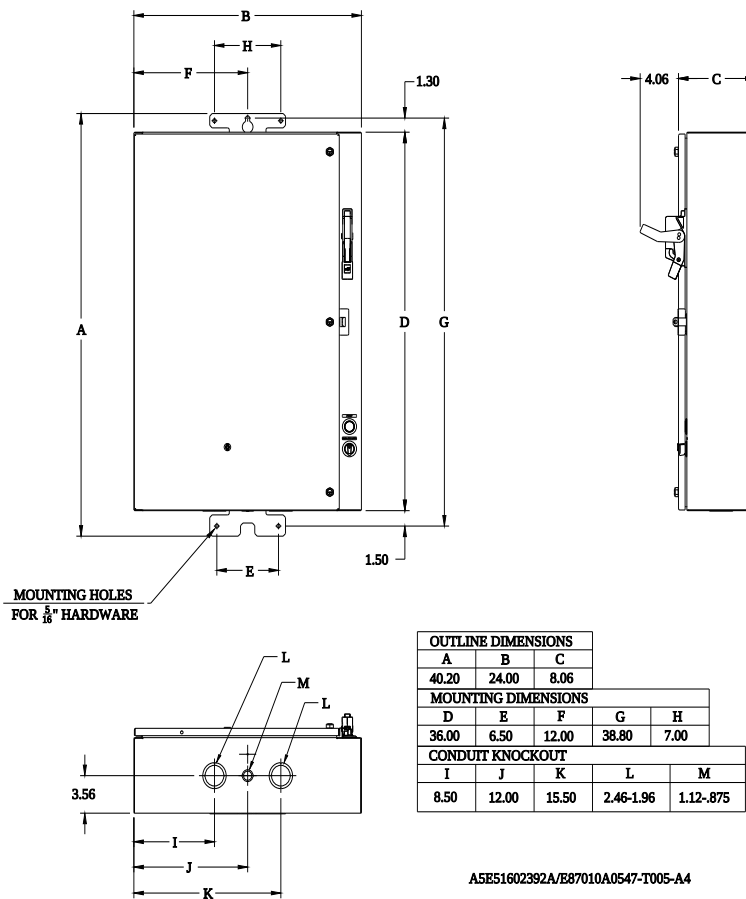


Pump control panel, Size 4, Three phase full voltage, Solid-state overload relay, OLR amp range 50-200A, 24VAC 50-60Hz coil, Standard type contactor, 150A circuit breaker, HOA Sel Sw. <(>&<)> Start P.B., Enclosure NEMA type 3/3R, Weather proof outdoor use

|                                                                         |                                     |
|-------------------------------------------------------------------------|-------------------------------------|
| product brand name                                                      | Class 87                            |
| design of the product                                                   | Pump control panel with MCP         |
| special product feature                                                 | ESP200 overload relay               |
| <b>General technical data</b>                                           |                                     |
| weight [lb]                                                             | 87 lb                               |
| Height x Width x Depth [in]                                             | 41 × 24 × 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                                 |
| <b>Horsepower ratings</b>                                               |                                     |
| yielded mechanical performance [hp] for 3-phase AC motor                |                                     |
| • at 200/208 V rated value                                              | 40 hp                               |
| • at 220/230 V rated value                                              | 50 hp                               |
| • at 460/480 V rated value                                              | 100 hp                              |
| • at 575/600 V rated value                                              | 100 hp                              |
| <b>Contactor</b>                                                        |                                     |
| size of contactor                                                       | NEMA controller size 4              |
| 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                          | 135 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                                            | 24 ... 24 V                         |
| • at AC at 60 Hz rated value                                            | 24 ... 24 V                         |
| holding power at AC minimum                                             | 22 W                                |

|                                                                                                                    |                                                      |
|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| apparent pick-up power of magnet coil at AC                                                                        | 510 VA                                               |
| apparent holding power of magnet coil at AC                                                                        | 51 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                                                                                                      | 18 ... 34 ms                                         |
| OFF-delay time                                                                                                     | 10 ... 12 ms                                         |
| <b>Overload relay</b>                                                                                              |                                                      |
| 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                                | 50 ... 200 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>Enclosure</b>                                                                                                   |                                                      |
| degree of protection NEMA rating of the enclosure                                                                  | NEMA Type 3R                                         |
| design of the housing                                                                                              | Weather proof for outdoor use                        |
| <b>Standard Control Devices</b>                                                                                    |                                                      |
| 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                 |
| <b>Circuit Breaker</b>                                                                                             |                                                      |
| type of the motor protection                                                                                       | Motor circuit protector (magnetic trip only)         |
| operational current of motor circuit breaker rated value                                                           | 150 A                                                |
| adjustable current response value current of instantaneous short-circuit trip unit                                 | 800 ... 1500 A                                       |
| <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 (6 AWG ... 350 Kcmil) or 1x (4 AWG ... 350 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                                                           | 200 ... 200 lbf-in                                   |
| type of connectable conductor cross-sections for AWG cables for load-side outgoing feeder single or multi-stranded | 1x (6 AWG ... 250 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                                                                          | 5 ... 12 lbf-in                                      |

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| 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 for 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                                                  |
| <b>Short-circuit current rating</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                     |
| design of the short-circuit trip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Instantaneous trip circuit breaker                  |
| maximum short-circuit current breaking capacity (Icu)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                     |
| • at 240 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 100 kA                                              |
| • at 480 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 100 kA                                              |
| • at 600 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 25 kA                                               |
| certificate of suitability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NEMA ICS 2; UL 508                                  |
| <b>Further information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                     |
| <b>Industrial Controls - Product Overview (Catalogs, Brochures,...)</b><br><a href="http://www.usa.siemens.com/iccatalog">www.usa.siemens.com/iccatalog</a><br><b>Industry Mall (Online ordering system)</b><br><a href="https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:87JUH6MJ">https://mall.industry.siemens.com/mall/en/us/Catalog/product?mlfb=US2:87JUH6MJ</a><br><b>Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)</b><br><a href="https://support.industry.siemens.com/cs/US/en/ps/US2:87JUH6MJ">https://support.industry.siemens.com/cs/US/en/ps/US2:87JUH6MJ</a><br><b>Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)</b><br><a href="http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:87JUH6MJ&amp;lang=en">http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:87JUH6MJ&amp;lang=en</a><br><b>Certificates/approvals</b><br><a href="https://support.industry.siemens.com/cs/US/en/ps/US2:87JUH6MJ/certificate">https://support.industry.siemens.com/cs/US/en/ps/US2:87JUH6MJ/certificate</a> |                                                     |



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