



Figure similar

Pump control panel, Size 1, Three phase full voltage, Solid-state overload relay, OLR amp range 5.5-22A, 110V 50Hz / 120V 60Hz coil, Standard type contactor, 25A 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]   | 47 lb                               |
| Height x Width x Depth [in]   | 29 × 20 × 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  | 3 hp                                |
| • at 220/230 V rated value  | 3 hp                                |
| • at 460/480 V rated value  | 10 hp                               |
| • at 575/600 V rated value  | 10 hp                               |
| <b>Contactor</b>  |                                     |
| size of contactor   | NEMA controller size 1              |
| 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                          | 27 A                                |
| mechanical service life (switching cycles) of the main contacts typical | 10000000                            |
| <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                              | 8                                   |
| 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  |                                     |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• at DC rated value</li> <li>• at AC at 50 Hz rated value</li> <li>• at AC at 60 Hz rated value</li> </ul> | 0 ... 0 V<br>110 ... 110 V<br>120 ... 120 V |
| holding power at AC minimum   | 8.6 W                                       |
| apparent pick-up power of magnet coil at AC   | 218 VA                                      |
| apparent holding power of magnet coil at AC   | 25 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   | 19 ... 29 ms                                |
| OFF-delay time  | 10 ... 24 ms                                |

### Overload relay

|  |  |
|--|--|
| product function   |  |
| <ul style="list-style-type: none"> <li>• overload protection</li> <li>• phase failure detection</li> <li>• asymmetry detection</li> <li>• ground fault detection</li> <li>• test function</li> <li>• external reset</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>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  | 5.5 ... 22 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  |  |
| <ul style="list-style-type: none"> <li>• at AC at 600 V</li> <li>• at DC at 250 V</li> </ul>   | 5 A<br>1 A                             |
| contact rating of auxiliary contacts of overload relay according to UL   | 5A@600VAC (B600), 1A@250VDC (R300)     |
| insulation voltage (Ui)  |  |
| <ul style="list-style-type: none"> <li>• with single-phase operation at AC rated value</li> <li>• with multi-phase operation at AC rated value</li> </ul>  | 600 V<br>300 V                         |

### Enclosure

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

### Standard Control Devices

|   |                                      |
|---|--------------------------------------|
| 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

|  |  |
|--|--|
| type of the motor protection   | Motor circuit protector (magnetic trip only) |
| operational current of motor circuit breaker rated value                           | 25 A   |
| adjustable current response value current of instantaneous short-circuit trip unit | 55 ... 180 A                                 |

### Mounting/wiring

|  |  |
|--|--|
| 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 | 1x (14 AWG ... 10 AWG) or 1x (12 AWG ... 10 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                                      | Screw-type terminals                             |

|  |   |
|--|---|
| tightening torque [lbf·in] for load-side outgoing feeder   | 35 ... 35 lbf·in                                    |
| type of connectable conductor cross-sections at AWG cables for load-side outgoing feeder single or multi-stranded            | 1x (14 ... 2 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 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 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 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  | 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  |
| <b>Short-circuit current rating</b>  |   |
| design of the short-circuit trip   | Instantaneous trip circuit breaker                  |
| breaking capacity maximum short-circuit current (I <sub>cu</sub> )   |   |
| • 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](http://www.usa.siemens.com/iccatalog)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/us/Catalog/product?mfb=US2:87DUD6MF>

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

<https://support.industry.siemens.com/cs/US/en/ps/US2:87DUD6MF>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=US2:87DUD6MF&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=US2:87DUD6MF&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:87DUD6MF/certificate>



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