



Figure similar

Pump control panel, Size 6, Three phase full voltage, Solid-state overload relay, OLR amp range 160-630A, 110-127V 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

|   |  |
|---|--|
| 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 |
| <b>General technical data</b>   |  |
| 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  |
| <b>Horsepower ratings</b>   |  |
| 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   |
| <b>Contactor</b>  |  |
| 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   |
| <b>Auxiliary contact</b>  |  |
| 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)  |
| <b>Coil</b>   |  |
| type of voltage of the control supply voltage                           | AC/DC  |

|  |               |
|--|---------------|
| control supply voltage   |               |
| • at DC rated value  | 110 ... 127 V |
| • at AC at 50 Hz rated value   | 110 ... 127 V |
| • at AC at 60 Hz rated value   | 110 ... 127 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

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

|   |                               |
|---|-------------------------------|
| 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                           | 400 A  |
| adjustable current response value current of instantaneous short-circuit trip unit | 2000 ... 4000 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 | 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                               |

|  |  |
|--|--|
| 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

|  |  |
|--|--|
| design of the short-circuit trip                                   | Instantaneous trip circuit breaker   |
| breaking capacity maximum short-circuit current (I <sub>cu</sub> ) | <ul style="list-style-type: none"> <li>• at 240 V 100 kA</li> <li>• at 480 V 100 kA</li> <li>• at 600 V 25 kA</li> </ul> |
| 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?mlfb=US2:87MSW6MF>

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

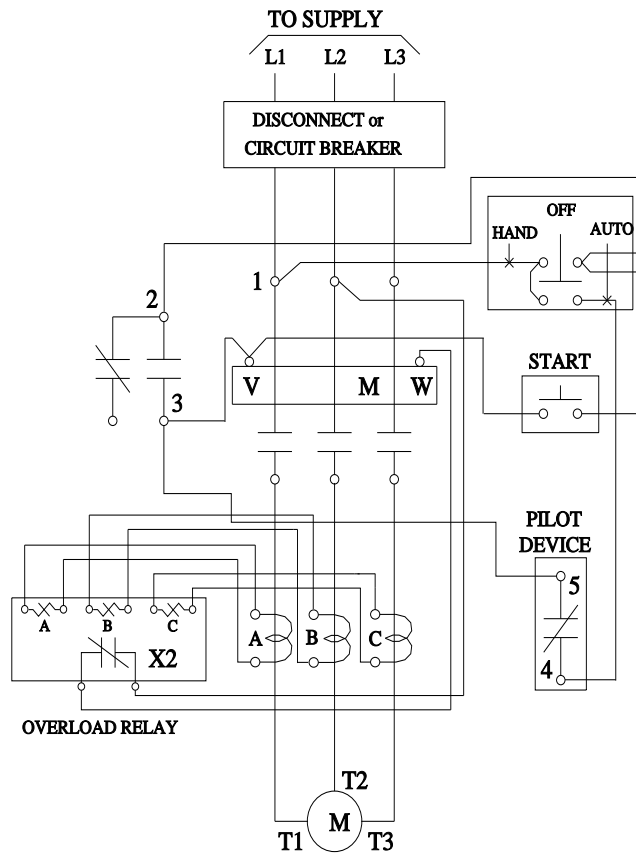
<https://support.industry.siemens.com/cs/US/en/ps/US2:87MSW6MF>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:87MSW6MF&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:87MSW6MF&lang=en)

**Certificates/approvals**

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