

Pump control panel, Size 6, Three phase full voltage, Solid-state overload relay, OLR amp range 160-630A, 23-26V 50-60Hz/DC coil, Standard type contactor, 600A circuit breaker, HOA Sel Sw. & Start P.B., Enclosure NEMA type 3/3R, Weather proof outdoor use



Figure similar

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 x 22 x 13 in
Protection against electrical shock	NA for enclosed products
Installation altitude [ft] at height above sea level maximum	6560 ft
Ambient temperature [°F]	
• during storage maximum	149 °F
• during operation maximum	104 °F
Ambient temperature	
• during storage maximum	65 °C
• during operation maximum	40 °C
Country of origin	USA

## Horsepower ratings

Yielded mechanical performance [hp] for three-phase AC motor	
• at 200/208 V rated value	150 hp
• at 220/230 V rated value	200 hp
• at 460/480 V rated value	400 hp
• at 575/600 V rated value	400 hp

## Contactors

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
Operating 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
Control supply voltage	
• at DC rated value	23 ... 26 V
• at AC at 50 Hz rated value	23 ... 26 V
• at AC at 60 Hz rated value	23 ... 26 V
Holding power at AC minimum	10 W
Apparent pick-up power of magnet coil at AC	830 V·A
Apparent holding power of magnet coil at AC	9.2 V·A
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 %
Switch-on delay time	45 ... 100 ms
Off-delay time	60 ... 100 ms

## Overload relay

Product function	
• Overload protection	Yes
• Phase failure detection	Yes

<ul style="list-style-type: none"> <li>• Phase unbalance</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Ground fault detection</li> </ul>	No
<ul style="list-style-type: none"> <li>• Test function</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• External reset</li> </ul>	Yes
Reset function	Manual and automatic
Trip class	CLASS 10
Adjustable pick-up 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
Operating 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 1 A
Contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 1A@250VDC (R300)
Insulation voltage <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 300 V

#### Enclosure

Degree of protection NEMA rating of the enclosure	NEMA 3/3R
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 chrome finish
Product component Start push button	Yes
Type of start push button	30mm metal housing with chrome finish

#### Motor Circuit Protector (magnetic trip only)

Operating current of motor circuit breaker rated value	600 A
Adjustable pick-up value current of instantaneous short-circuit trip unit	3000 ... 6000 A

#### Mounting/wiring

Mounting position	Vertical
Mounting type	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 conductors 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 conductors 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 conductors 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 conductors 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 conductors 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
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Maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul>	<p>100 kA</p> <p>100 kA</p> <p>25 kA</p>
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=US2:87MSX6MJ>

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

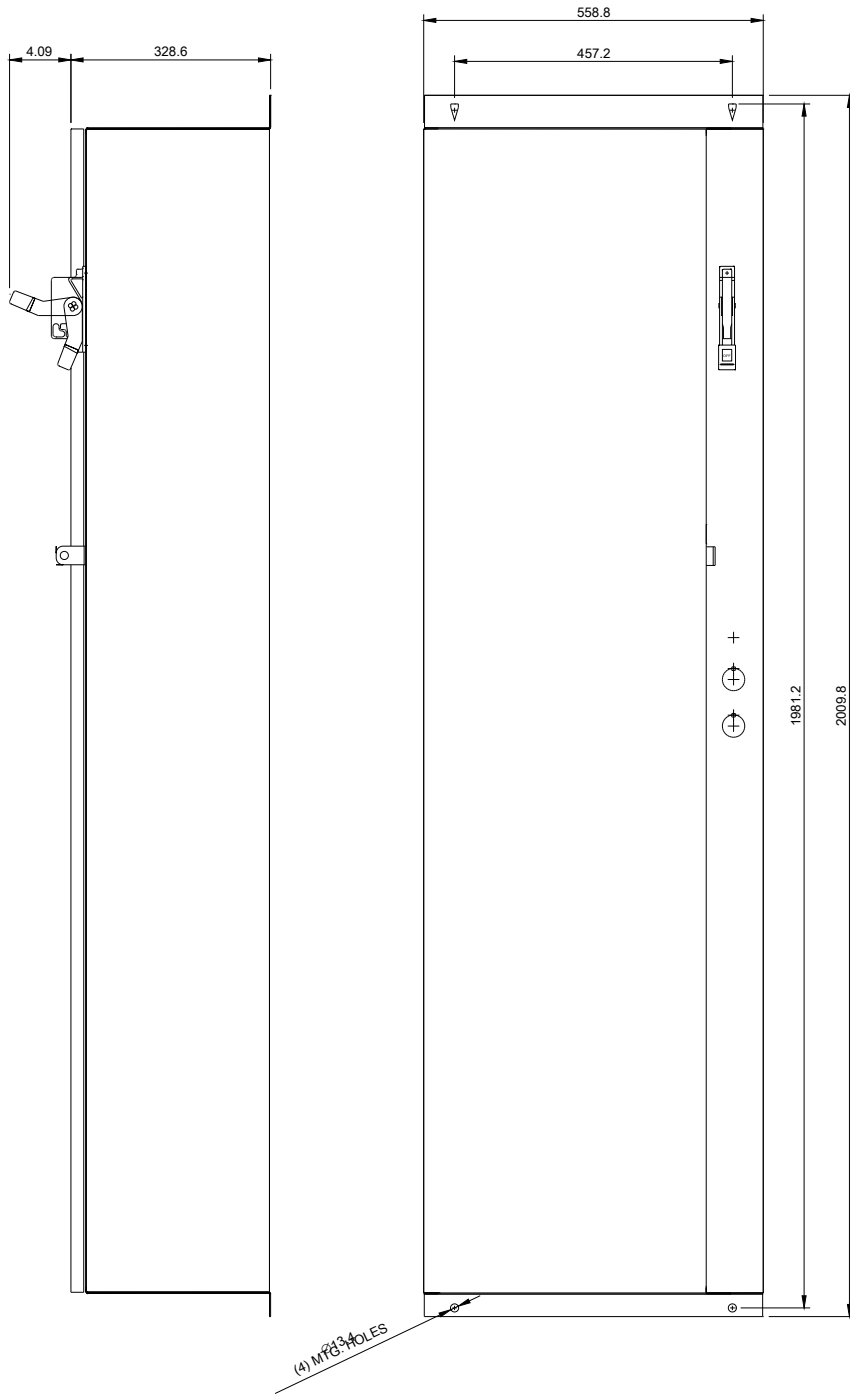
<https://support.industry.siemens.com/cs/US/en/ps/US2:87MSX6MJ>

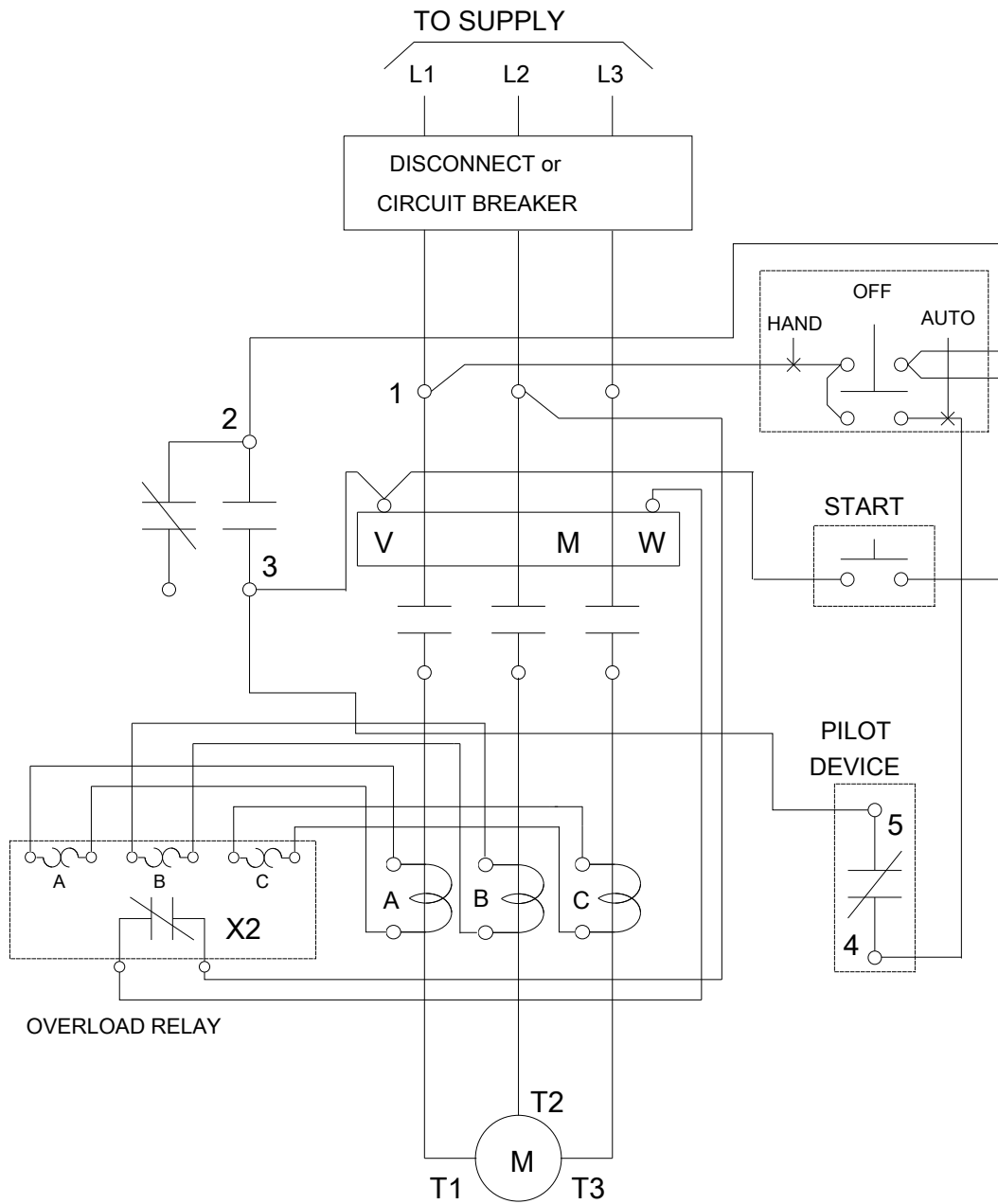
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:87MSX6MJ&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:87MSX6MJ&lang=en)

**Certificates/approvals**

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