

Reversing motor starter Size 3 Three phase full voltage Amb  
 compensate bimetal OLrelay Contactor amp rating 90 AMP 208VAC  
 60HZ coil Non-combination type Encl NEMA type 4X Fiberglass  
 Water/dust tight non-corrosive



Figure similar

General technical data	
Weight [lb]	47 lb
Height x Width x Depth [in]	24 × 24 × 7 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	-22 ... +149 °F
Ambient temperature [°F] during operation	-4 ... +104 °F
Ambient temperature during storage	-30 ... +65 °C
Ambient temperature during operation	-20 ... +40 °C
Country of origin	USA

Horsepower ratings	
Yielded mechanical performance [hp] for three-phase AC motor	
<ul style="list-style-type: none"> <li>• at 200/208 V rated value</li> </ul>	25 hp
<ul style="list-style-type: none"> <li>• at 220/230 V rated value</li> </ul>	30 hp
<ul style="list-style-type: none"> <li>• at 460/480 V rated value</li> </ul>	50 hp

- at 575/600 V rated value

50 hp

### Contactors

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	90 A
Mechanical service life (switching cycles) of the main contacts typical	5000000

### Auxiliary contact

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)

### Coil

Type of voltage of the control supply voltage	AC
Control supply voltage	
<ul style="list-style-type: none"> <li>• at DC rated value</li> </ul>	0 ... 0 V
<ul style="list-style-type: none"> <li>• at AC at 60 Hz rated value</li> </ul>	208 ... 208 V
<ul style="list-style-type: none"> <li>• at AC at 50 Hz rated value</li> </ul>	0 ... 0 V
Holding power at AC minimum	14 W
Apparent pick-up power of magnet coil at AC	310 V·A
Apparent holding power of magnet coil at AC	26 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	50 %
Switch-on delay time	26 ... 41 ms
Off-delay time	14 ... 19 ms

### Overload relay

Product function	
<ul style="list-style-type: none"> <li>• Overload protection</li> </ul>	Yes
<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
Adjustment range of thermal overload trip unit	0.85 ... 1.15
Number of NC contacts of auxiliary contacts of overload relay	3
Number of NO contacts of auxiliary contacts of overload relay	0

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 5 A
Contact rating of auxiliary contacts of overload relay according to UL	5A@600VAC (B600), 5A@250VDC (P300)

#### Enclosure

Degree of protection NEMA rating of the enclosure	NEMA 4X fiberglass enclosure
Design of the housing	Dust-tight, watertight & corrosion resistant

#### Mounting/wiring

Mounting position	Vertical
(mounting type)	Surface mounting and installation
Type of electrical connection for supply voltage line-side	Box lug
Tightening torque [lbf·in] for supply	120 ... 120 lbf·in
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 ... 50 lbf·in
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 conductors 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 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 conductors 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	5 ... 12 lbf·in

Type of connectable conductor cross-sections at overload relay at AWG conductors for auxiliary contacts single or multi-stranded	2x (16 ... 12 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

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>0 kA</p> <p>0 kA</p> <p>0 kA</p>

### 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=US2:22HP32FD81>

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

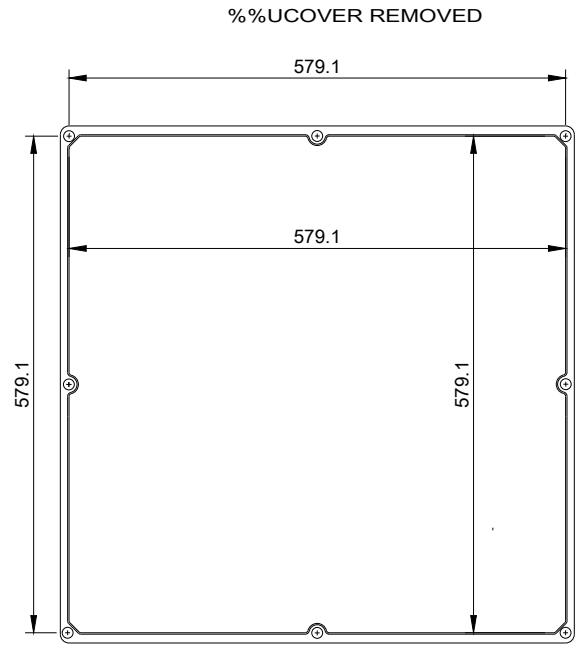
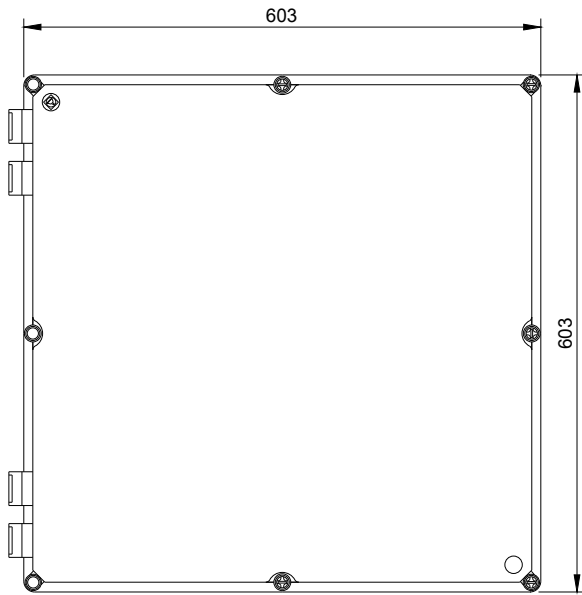
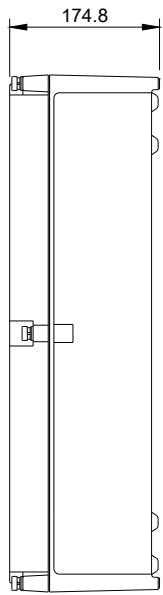
<https://support.industry.siemens.com/cs/US/en/ps/US2:22HP32FD81>

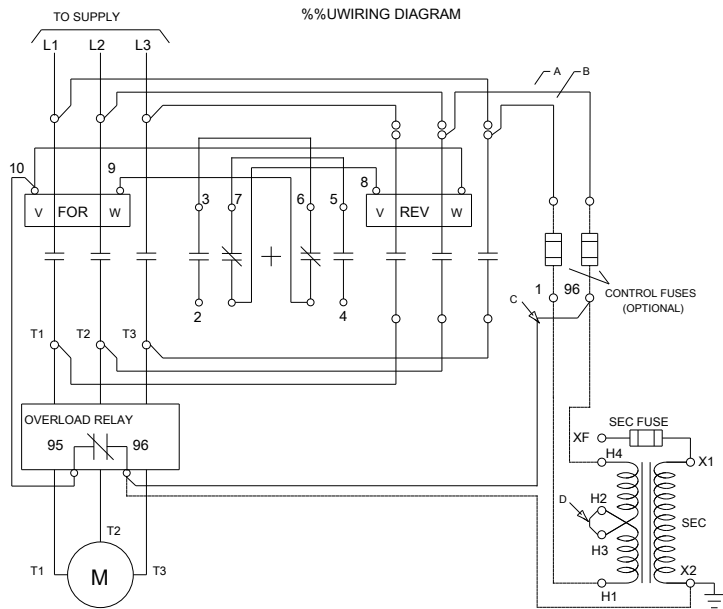
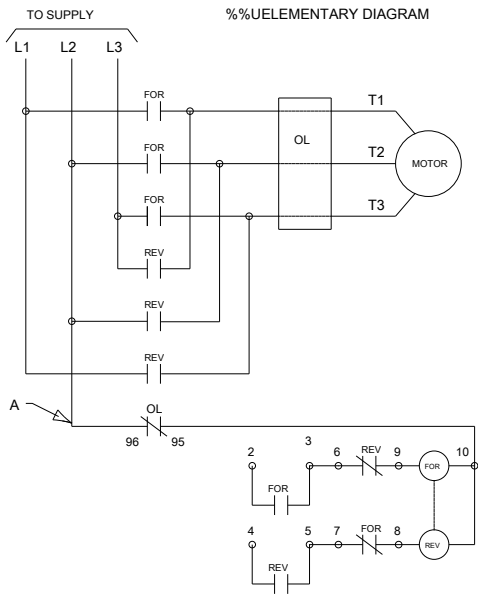
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=US2:22HP32FD81&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=US2:22HP32FD81&lang=en)

**Certificates/approvals**

<https://support.industry.siemens.com/cs/US/en/ps/US2:22HP32FD81/certificate>





D46590003

last modified:

05/08/2019