



**Duplex controller  
with alternator  
NEMA controller size 1  
3-Phase, 3-Pole Maximum voltage rating 600VAC  
Max Hp 60Hz: 1/2@200V; 3/4@230V; 1 1/2@460V; 2@575V  
Solid-state overload relay(s) with 0.75–3.4A range  
Control voltage 110VAC 50Hz / 120VAC 60Hz  
NEMA Type 12 enclosure**

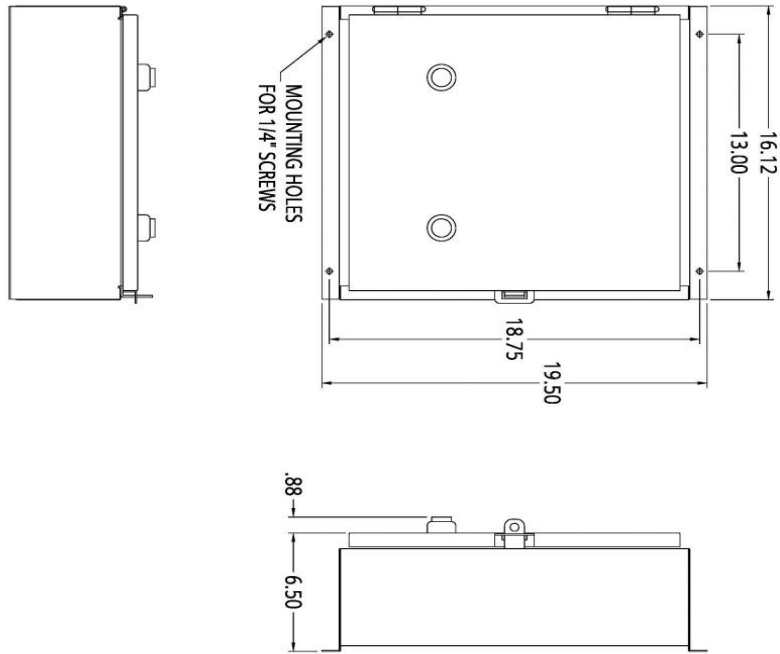


Image is representative and may not depict the actual product.

<b>General technical data:</b>	
Weight	40 lb
Height x Width x Depth	20 x 16 x 6 in.
Finger-safe (main circuit / control circuit)	NA / NA
Maximum altitude	6560 ft
Ambient storage temperature	(-30 to 65)°C / (-22 to 149)°F
Ambient operating temperature	(-20 to 40)°C / (-4 to 104)°F
Humidity (% non-condensing)	(no data)
Rated impulse voltage resistance	(no data)
Rated insulation voltage	(no data)
Country of origin	USA
<b>Contactors (each):</b>	
Number of NO main contacts	3
Amp rating	27A
Mechanical operating cycles	10,000,000
<b>Internal/standard auxiliary contact (per contactor):</b>	
Number of NC / NO auxiliary contacts	0NC / 1NO
Rating	10A@600VAC (A600), 5A@600VDC (P600)
<b>Optional auxiliary contact (per contactor):</b>	
Max number of NC / NO auxiliary contacts	8 total
Rating	10A@600VAC (A600), 5A@600VDC (P600)
<b>Coil (per contactor):</b>	
Voltage	110VAC 50Hz / 120VAC 60Hz Coil
Sealed watts	8.6W
Inrush / sealed power	218 / 25 VA
Normal coil operating limits (% of rated voltage)	85% - 110%
Typical drop-out volts (% of rated voltage)	50%
Pick-up time / Drop-out time	19-29 / 10-24 msec
<b>Overload Relay (each):</b>	
Current range	0.75–3.4A
Trip Class	Class 5 / 10 / 20 (factory set) / 30
Trip detection	Overload, phase failure, phase unbalance, ground fault
Phase failure sensitivity	Trip time after phase-loss: < 3 sec
Repeat accuracy	Within 1%
Reset options	Manual, automatic and remote
External reset	Yes
Test function	Electronics & manual actuation
Conformal coating on printed circuit board	Yes
Number of NC / NO auxiliary contacts	1NC / 1NO
Rating of auxiliary contacts	5A@600VAC (B600), 1A@250VDC (R300)
Single contact isolation	600V

Dual contact isolation	300V differing polarity / 600V common polarity
<b>Enclosure:</b>	
Type	NEMA Type 12 enclosure
Rating	Dust tight and drip proof for indoors
<b>Mounting/wiring:</b>	
Mounting orientation	Vertical
Mounting type	Surface
Line side connection type / torque	Screw / 35 lb-in.
Line side solid & stranded conductors	Screw / 20 lb in. - 24 lb in.
Load side connection type / torque	2 x (14 - 10 AWG) CU 60/75°C
Load side solid & stranded conductors	Screw / 5 lb in. - 12 lb in.
Coil connection type / torque	2 x (16 - 12 AWG) CU 60/75°C
Coil solid & stranded conductors	Screw / 10 - 15 lb-in
Main auxiliary contact connection type / torque	1 x (12 AWG), 2 x (16 - 14 AWG), 2 x (18 - 16 AWG) 75°C CU
Main auxiliary contact solid & stranded conductors	Screw / 7 lb in. - 10 lb in.
OLR auxiliary contact connection type / torque	2 x (20 - 14 AWG) CU 60/75°C
OLR auxiliary contact solid & stranded conductors	
<b>Short circuit current rating:</b>	10kA@600V (Class H or K); 100kA@600V (Class R or J)
Fuses	14kA@240V; 10kA@600V
Thermal Magnetic Circuit Breaker	
<b>Certificates/approvals:</b>	<a href="#">UL (file no. E14900)</a>
	<a href="#">cUL (file no. E14900 for Canada)</a>
	<a href="#">CSA (file no. 006535 C 000)</a>
	<a href="#">ISO 9001 certification</a>
<b>Additional information:</b>	<a href="#">Brochure</a>
	<a href="#">OLR instruction sheet &amp; trip curves</a>

OUTLINE 20X16X6 NEMA 4/4X/12



DIMENSIONS ARE IN INCHES.  
FILE NAME: SFIS-D70690001-0211

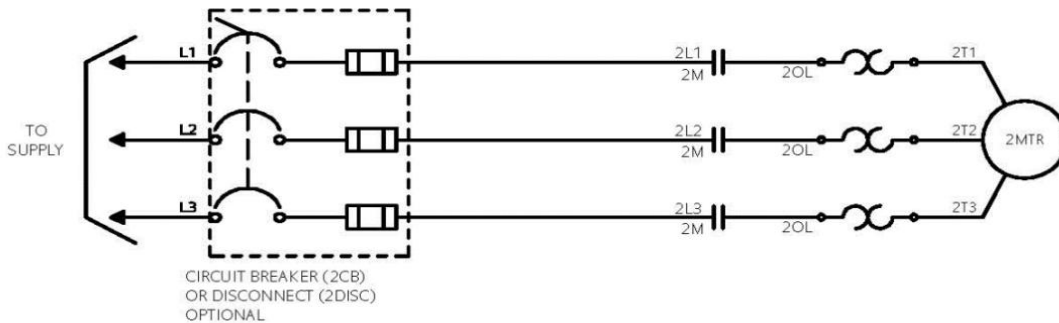
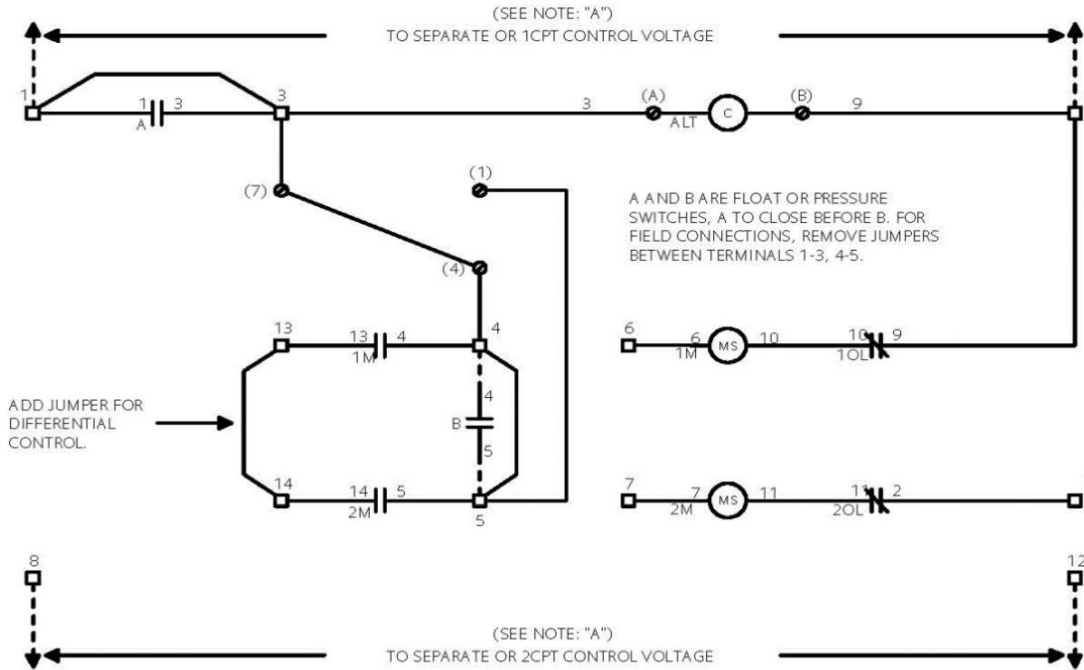
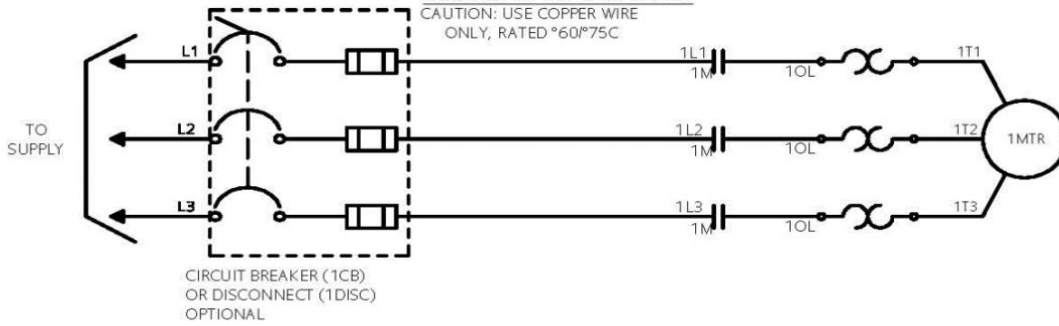
**SCHEMATIC DIAGRAM**

# SCHEMATIC DIAGRAM

## Class 83 & 84 Duplex W/Auto Alternation Size 0-4

### ELEMENTARY DIAGRAM

CAUTION: USE COPPER WIRE  
ONLY, RATED #60#75C



**NOTES:**

- A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE:  
CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT PRIMARIES PER FACTORY OR FIELD MODIFICATIONS.
- B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT 49MAFB4.
- C. TO USE THIS CONTROLLER W/O SELECTOR SWITCHES, JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS 4-6, 5-7, AND 9-2.
- D. FOR TWO POSITION SELECTOR SWITCHES, WIRE AS SHOWN ALSO ADD JUMPER BETWEEN TERMINALS 9-2.
- E. SEPARATE SOURCE CONNECTIONS TO TERMINALS 8 AND 12 ARE REQUIRED ONLY WHEN THREE POSITION SELECTOR SWITCH IS BUILT IN.

REF. D68077001