

Lighting Contactors

CR160MC

Mechanically Held Contactors

CR160MC shallow mount 30A - 225A (2 & 3 pole)

Section 3

Technical Data

Maximum AC Voltage Ratings

Type of Load	Maximum AC Volts		
	Line	Load	Load
Tungsten	480	277	480
Ballast	600	277	600
General Use	600	277	600

Control Line Wiring

Control lines extending several hundred feet from the voltage source and pilot device(s) to the lighting contactor may require special consideration. Select a wire size adequate to provide not less than 85% of rated coil voltage at the coil, for pickup, while passing inrush current through the control circuit. Suggested wire sizes, for use with a "stiff" source of control voltage, are listed below. Interposing control relays are available for greater distances, and for use with pilot devices having ratings lower than those required for direct operation of the contactor coils.

Contactor Size	Wire Size	Approx. Resistance of Single Conductor Copper Wire Ohms/1000 Ft		Max. Control Line Distance ¹	
		115V-60 Hz	230V-60 Hz	115V-60 Hz	230V-60 Hz
30-225A	10	1		500 ft	1500 ft
30-225A	12	1.6		315 ft	950 ft
30-225A	14	2.5		200 ft	600 ft

¹The use of two contactors on one remote control station would reduce the maximum control line distance to 1/2 the specified table value, etc.

Coil Inrush Current and Recommended Control Circuit Fuse Size

Voltage 60 Hertz	Inrush (Amperes)	NEC Fuse Size (Amperes)
	CR160MC	CR160MC
115	26	8
230	13	4
277 ²	10	3
460 ²	7	2

²Breaking all lines

Note: Use of energy management systems, multiple control stations, or signals require prime control logic or use of a 2-wire control relay/module, to assure that on and off signals are never applied simultaneously to a mechanically held contactor.

Control Transformer Data

When the lighting contactor is used on the secondary of a transformer, the transformer must be sized to provide the required inrush current with 90% voltage applied to the transformer primary. As an alternative, utilize an interposing relay with a lower VA CPT. Connect the circuit with the line voltage driving the coil and the control voltage driving the relay coil.

Reference Publications

Instructions	GEH-3202
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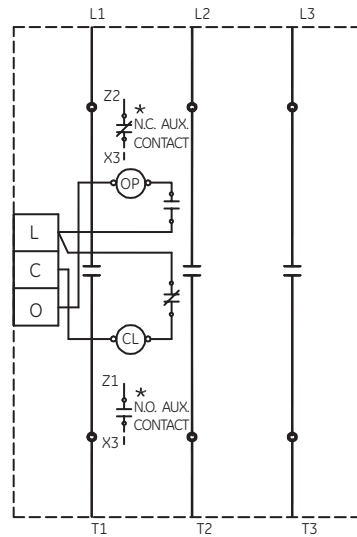
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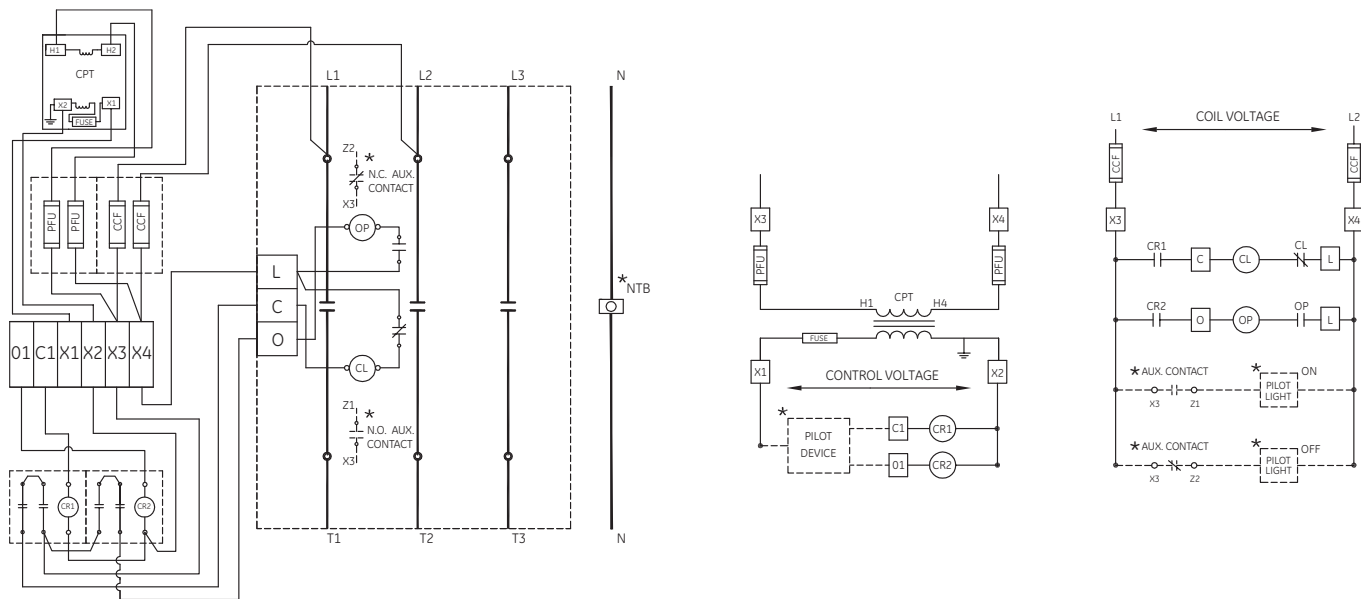
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Outlines, Dimensions and Weights (For Estimating Only)

Section 3



Open Wiring Example



Enclosed Wiring Example

