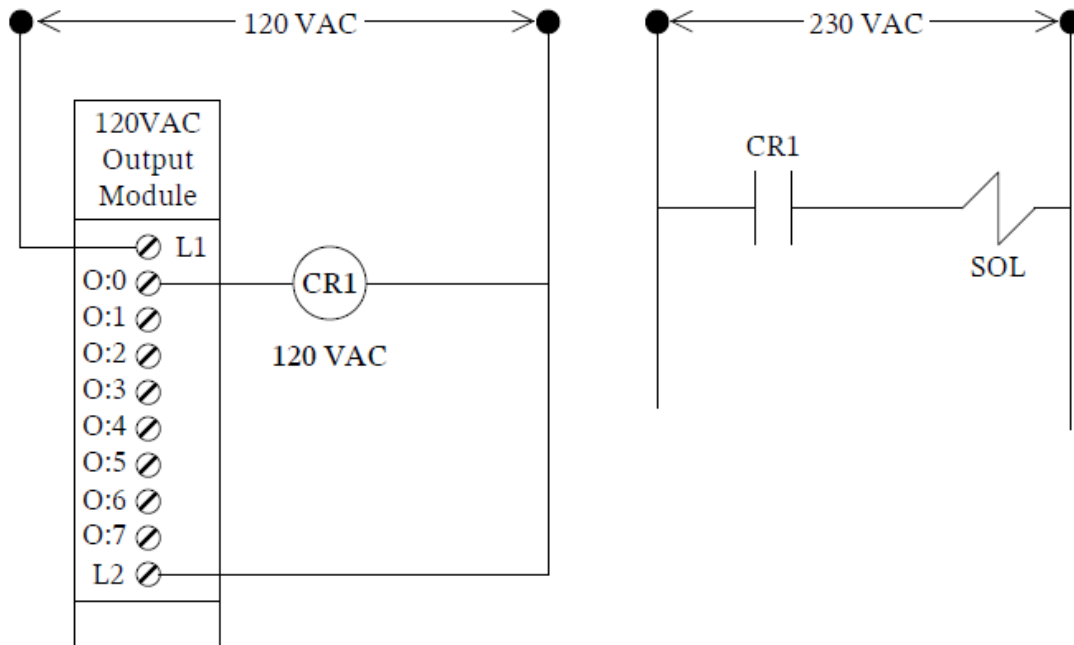


Answers to Chapter 2 Problems

- 1. A discrete 120 VAC output module is to be used to control a 230 VDC solenoid valve. Draw a diagram showing how this could be accomplished using an interposing relay.**



- 2. Assume a thermocouple, which supplies the input to an analog input module, generates a linear voltage of from 20 to 50 mV when the temperature changes from 750 to 1250°F. How much voltage will be generated when the temperature of the thermocouple is at 1000°F?**
35 mV
- 3. With reference to I/O module specifications:**
- If the ON-delay time of a given discrete input module is specified as 12 ms, how much is this expressed in seconds?**
0.012 s
 - If the output leakage current of a discrete output module is specified as 950 μ A, how much is this expressed in amperes?**
0.00095 A
 - If the ambient temperature rating for an I/O module is specified as 60°C, how much is this expressed in degrees Fahrenheit?**
140°F
- 4. Assume the triac of an AC discrete output module fails in the shorted state. How would this affect the device connected to this output?**
The device would remain ON or energized at all times.
- 5. A personal computer is to be used to program several different PLCs from different manufacturers. What would be required?**
Programming software installed in the computer for each model of PLC to be programmed.
- 6. Create RSLogix 5000 base and alias tags for each of the following memory locations:**
- A limit switch connected to terminal 3 of a 16-point input module located in slot 1 of the local chassis.**
Local:1:I.Data.3; Limit_Switch
 - A solenoid connected to terminal 8 of a 16-point output module located in slot 2 of the local chassis.**
Local:2:O.Data.8; Solenoid_x