



SymCom's Model 777-HVR-P2 is a fully programmable electronic overload relay. It is designed to monitor and protect any 3-phase, 340-480VAC motor drawing 2-800 full load amps (external CTs are required above 90 amps). This unit's Form C contacts are pilot duty rated at 470VA @ 600VAC for applications where a control power transformer (CPT) is not used on a 480V system.

The 777-HVR-P2 incorporates a 3-digit LED display that is used for programming, providing real-time operational information and displaying diagnostic codes to aid in troubleshooting a fault condition.

The 777-HVR-P2 Series can be used as stand-alone products or used in a network to communicate with a PC, PLC, SCADA system, or SymCom's Solutions Software with the help of its built-in RS-485 communications port. The 777-HVR-P2, in conjunction with SymCom's CIO modules, supports several communication protocols including Modbus/RTU, Modbus/TCP, DeviceNet and Profibus. The units can also be connected to SymCom's remote monitors for a simple, cost-effective way to meet new requirements for arc-flash safety.

The unit's many features include enhanced trip classes beyond the NEMA standard trip classes. The settable trip class range is 2-60, with or without jam protection, and a secondary linear trip delay can be set with a range of 0-60 seconds. If both the trip class and linear trip delay are set, the 777-HVR-P2 will follow the faster trip time. Another feature is the automatic dry-well recovery timer that allows the unit to automatically select a restart delay based on the last cycle's run time. This allows the 777-HVR-P2 to optimize restart delay times.

The 777-HVR-P2 can be pre-programmed with a 9-volt battery prior to actual installation. This can save a lot of time during initial installations and avoid subsequent service calls when commissioning new projects.

Common applications include conveyor systems, HVAC equipment, saws and grinders, fan motors and almost any pumping application, to save the cost and extra wiring associated with a CPT.

### Features:

- Protects 3-phase motors from:
  - High voltage
  - Low voltage
  - Voltage unbalance
  - Reverse-phase
  - Overcurrent
  - Undercurrent
  - Current unbalance
  - Single-phase
  - Ground fault, Class II
- Network programmable
- Programmable with 9-volt battery prior to installation
- Automatic reset with three separate restart delay timers, or manual reset
- Tamper guard
- RS-485 communications port (communications module sold separately)
- 3-digit LED diagnostic display
- Last fault memory
- UL and ULC listed
- CE compliant
- CSA approved
- Surface or DIN rail mount
- 5-year warranty
- Made in USA

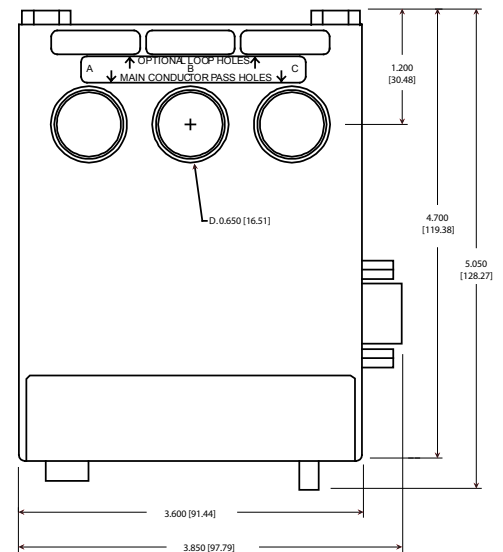
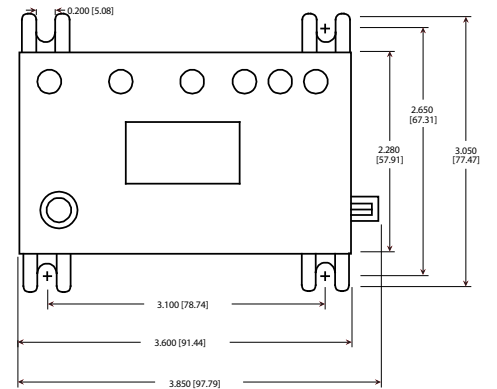
### Auxiliary Products:

- Remote Displays (RM-1000/RM-2000)
- Communication Modules
- Remote Manual Reset Kit
- Solutions Software

# Specifications

Functional Specifications	
Programmable Operating Points LV-Low Voltage Threshold HV-High Voltage Threshold VUB-Voltage Unbalance Threshold MULT-# of Conductors or CT Ratio (xxx:5) OC-Overcurrent Threshold UC-Undercurrent Threshold CUB-Current Unbalance Threshold TC-Overcurrent Trip Class and Linear Overcurrent Trip Delay RD1-Rapid-cycle Timer RD2-Restart Delay after all faults except undercurrent (motor cool-down timer) RD3-Restart Delay after undercurrent (dry-well recovery timer) #RU- Number of restarts after all undercurrent faults ADDR-RS485 Address #RF-Number of restarts after all faults except undercurrent COM-Communications setting UCTD-Undercurrent Trip Delay GF-Ground Fault Current Threshold	340-523V 341-528V 2-25% or 999 (disabled) 1-10, 100, 150, 200, 300, 400, 500, 600, 700, 800 (20-100A) ÷ MULT of 80-140% of CT Primary (0, 10-98A) ÷ MULT or 40-140% of CT Primary 2-50% or 999 (disabled) 02-60, J02-J60; L00-L60 or oFF  0-999 seconds 2-500 minutes  2-500 minutes, A (automatic)  0, 1, 2, 3, 4, A (automatic) A01-A99 0, 1, oc1, 2, oc2, 3, oc3, 4, oc4, A, ocA (automatic)  C00-C07 2-999 seconds (standard) (3-20A) ÷ MULT or 12-40% of CT Primary or oFF
Input Characteristics	
Supply Voltage Frequency Motor Full Load Amp Range	340-480VAC 50/60Hz 2-20A (looped conductors required), 20-90A (direct), 90-800A (external CTs required)
Output Characteristics	
Output Contact Rating - SPDT (Form C) Pilot Duty Expected Life Mechanical Electrical	470VA@600VAC, B600  1 x 10 <sup>6</sup> operations 1 x 10 <sup>5</sup> operations at rated load
General Characteristics	
Operating Temperature Ambient Operating Ambient Storage Accuracy at 25° C (77° F) Voltage Current Timing Ground Fault Repeatability Voltage Current Maximum Input Power Pollution Degree Class of Protection Relative Humidity Terminal Torque Standards Passed Short Circuit Surge IEC ANSI/IEEE Hi-potential Test Vibration Shock Safety Marks UL CE Max Conductor Size through 777-P2 Dimensions Weight Mounting Method	-20° to 70° C (-4° to 158° F) -40° to 80° C (-40° to 176° F)  ± 1% ± 3% (<100A direct) ± 0.5 second ± 15% (<100A)  ± 0.5% of nominal voltage ± 1% (<100A direct) 10 W 3 IP20 10-95%, non-condensing per IEC 68-2-3 7 in.-lbs.  IEC 61000-4-2, Level 3, 6kV contact, 8kV air IEC 61000-4-6, Level 3 10V IEC 61000-4-3, Level 3 10 V/m IEC 61000-4-4, Level 3, 3.5 kV input power 100kA  61000-4-5 Level 3, 2kV line-to-line; Level 4, 4kV line-to-ground C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line Meets UL508 (2 x rated V + 1000V for 1 minute) IEC 68-2-6, 10-55Hz, 1mm peak-to-peak, 2 hours, 3 axis IEC 68-2-27, 30g, 3 axis, 11ms duration, half-sine pulse  UL508, UL1053 IEC 60947-1, IEC 60947-5-1 0.65" with insulation 3.05 H x 3.85 W x 5.05 D in. (77.47 x 97.79 x 128.27 mm) 1.2 lbs. (544.31 g) Surface mount (4 - #8 screws) or DIN Rail Mount

## Enclosure Dimensions



inches (millimeters)

## How to order:

Part Number: 777-HVR-P2

SymCom  
222 Disk Drive  
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