Model 777-P2

SymCom's Model 777-P2 is a fully programmable electronic overload relay. It is designed to monitor and protect any 3-phase, 200-480VAC motor drawing 2-800 full load amps (external CTs are required above 90 amps). It provides unsurpassed protection from faulty voltage, underload and overload conditions.

The 777-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-P2 Series units can be used as a stand-alone product, or it can be 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. Up to 99 model 777-P2 Series units can be networked together. The 777-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-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-P2 to optimize restart delay times.

The 777-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 for the 777-P2 include conveyor systems, HVAC equipment, saws and grinders, fan motors and almost any pumping application.

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

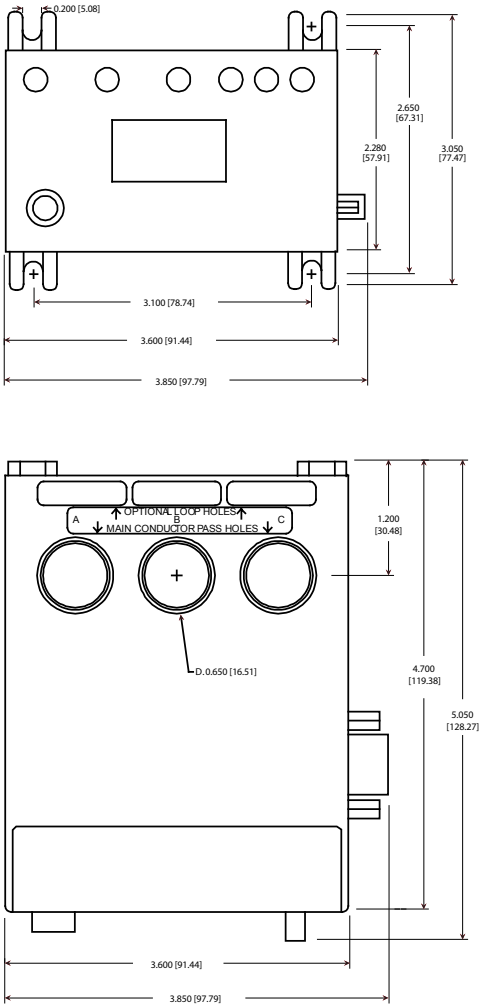
Auxiliary Products:

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

Specifications

Functional Specifications	
Programmable Operating Points	
LV-Low Voltage Threshold	170-524V
HV-High Voltage Threshold	172-528V
VUB-Voltage Unbalance Threshold	2-25% or 999 (disabled)
MULT-# of Conductors or CT Ratio (xxx:5)	1-10, 100, 150, 200, 300, 400, 500, 600, 700, 800
OC-Overcurrent Threshold	(20-100A) ÷ MULT of 80-140% of CT Primary
UC-Undercurrent Threshold	(0, 10-98A) ÷ MULT or 40-140% of CT Primary
CUB-Current Unbalance Threshold	2-50% or 999 (disabled)
TC-Overcurrent Trip Class and Linear Overcurrent Trip Delay	02-60, J02-J60; L00-L60 or oFF
RD1-Rapid-cycle Timer	0-999 seconds
RD2-Restart Delay after all faults except undercurrent (motor cool-down timer)	2-500 minutes
RD3-Restart Delay after undercurrent (dry-well recovery timer)	2-500 minutes, A (automatic)
#RU- Number of restarts after all undercurrent faults	0, 1, 2, 3, 4, A (automatic)
ADDR-RS485 Address	A01-A99
#RF-Number of restarts after all faults except undercurrent	0, 1, oc1, 2, oc2, 3, oc3, 4, oc4, A, ocA (automatic)
UCTD-Undercurrent Trip Delay	2-999 seconds (standard)
GF-Ground Fault Current Threshold	(3-20A) ÷ MULT or 12-40% of CT Primary or oFF
Input Characteristics	
Supply Voltage	200-480VAC
Frequency	50/60Hz
Motor Full Load Amp Range	2-20A, (looped conductors required); 20-90A (direct); 80-800A (external CTs required)
Output Characteristics	
Output Contact Rating - SPDT (Form C)	
Pilot Duty	480VA@240VAC, B300
General Purpose	10A@240VAC
Expected Life	
Mechanical	1 x 10^6 operations
Electrical	1 x 10^5 operations at rated load
General Characteristics	
Operating Temperature	
Ambient Operating	-20° to 70° C (-4° to 158° F)
Ambient Storage	-40° to 80° C (-40° to 176° F)
Accuracy at 25° C (77° F)	
Voltage	± 1%
Current	± 3% (<100A direct)
Timing	± 0.5 second
Ground Fault	± 15% (<100A)
Repeatability	
Voltage	± 0.5% of nominal voltage
Current	± 1% (<100A direct)
Maximum Input Power	10 W
Pollution Degree	3
Class of Protection	IP20
Relative Humidity	10-95%, non-condensing per IEC 68-2-3
Terminal Torque	7 in.-lbs.
Standards Passed	
Electrostatic Discharge (ESD)	IEC 61000-4-2, Level 3, 6kV contact, 8kV air
Radio Frequency Immunity (RFI), Conducted	IEC 61000-4-6, Level 3 10V
Radio Frequency Immunity (RFI), Radiated	IEC 61000-4-3, Level 3 10 V/m
Fast Transient Burst	IEC 61000-4-4, Level 3, 3.5 kV input power
Short Circuit	100kA
Surge	
IEC	61000-4-5 Level 3, 2kV line-to-line; Level 4, 4kV line-to-ground
ANSI/IEEE	C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line
Hi-potential Test	Meets UL508 (2 x rated V + 1000V for 1 minute)
Vibration	IEC 68-2-6, 10-55Hz, 1mm peak-to-peak, 2 hours, 3 axis
Shock	IEC 68-2-27, 30g, 3 axis, 11ms duration, half-sine pulse
Safety Marks	
UL	UL508, UL1053
CE	IEC 60947-1, IEC 60947-5-1
Max Conductor Size through 777-P2	0.65" with insulation
Dimensions	3.05 H x 3.85 W x 5.05 D in. (77.47 x 97.79 x 128.27 mm)
Weight	1.2 lbs. (544.31 g)
Mounting Method	Surface mount (4 - #8 screws) or DIN Rail Mount

Enclosure Dimensions



inches (millimeters)

How to order:

Part Number: 777-P2

SymCom
222 Disk Drive
Rapid City, SD 57702
www.SymCom.com

SSAC
8242 Loop Rd
Baldwinsville, NY 13027
www.SSAC.com

CustomerService@SymCom.com • TechnicalSupport@SymCom.com
800.843.8848 • 605.348.5580 • 605.348.5685 fax