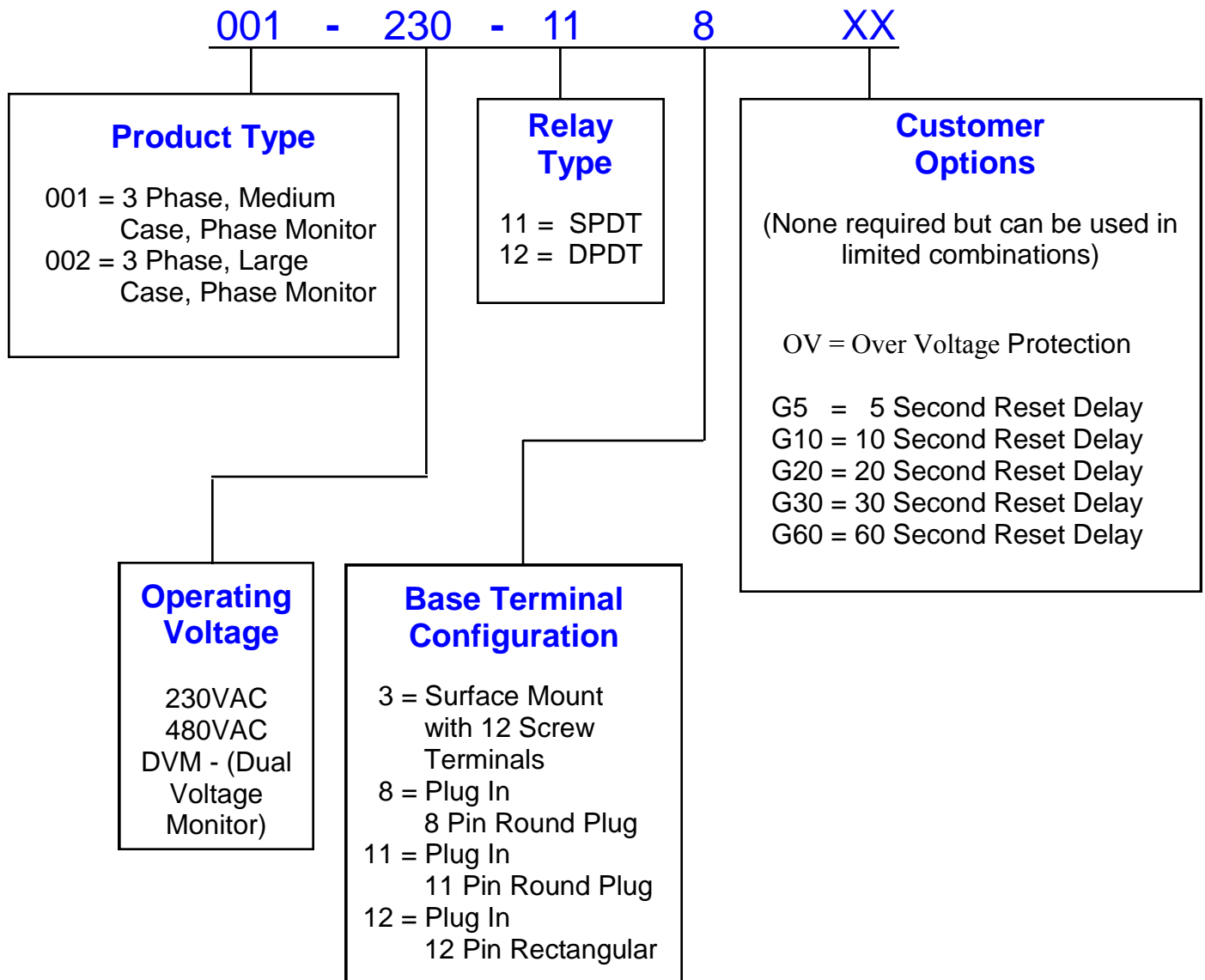


Ordering Information - Phase Monitors

Phase Monitor Designations

Example: M.P.E. Product Number
001 - 230 - 11 8 XX
Product Number Breakdown:





PHASE MONITORS

THREE PHASE MOTOR PROTECTION

MADE IN
THE U.S.A.



UL FILE #E101681



*UL listed models require use of an
RB08 or RB08-PC socket.



PROTECTS AGAINST:

- Under Voltage
- Phase Loss
- Phase Reversal
- Phase Unbalance
- (Optional Over Voltage)

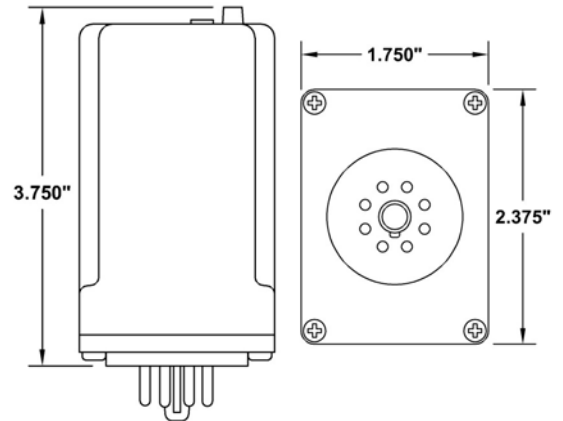
OPERATION

When the proper voltage is connected to the phase monitor the internal relay will be energized and the LED will be on steady. An abnormal condition will cause the LED to blink during the trip delay. When the trip delay has expired the internal relay will be de-energized. The LED will then provide a series of pulses that indicate which fault condition is present. When conditions return to normal, the LED will blink during the reset delay. When the reset delay has expired, the LED will come on steady and the internal relay will be energized. The reset delay is also active immediately after power is turned on to the unit.

These units can be used on Delta or Wye systems, 50/60 Hz.

To add the Over Voltage feature select the OV option.

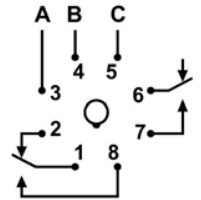
To extend the standard Reset Delay select one of the G options.



SPECIFICATIONS

Under Voltage:	
Trip:	- 15% of Setting for 230V (-10% for 480V)
Reset:	- 12% of Setting for 230V (-8% for 480V)
Over Voltage:	
Trip:	+ 15% of Setting for 230V (+10% for 480V)
Reset:	+ 12% of Setting for 230V (+8% for 480V)
Phase Unbalance:	
Trip:	5% with 5 Second Trip Delay 15% with 1 Second Trip Delay
Reset:	4%
Trip Delay:	5 Seconds (Delay is Reduced to 1 Second
(Delay on Release)	if Phase Unbalance is 15% or Greater)
Reset Delay:	2 Seconds Standard (See Options)
(Delay on Operate)	
Voltage Range:	200V to 240V or 425V to 525V
Output Rating:	10A Resistive @ 240VAC 6A Inductive @ 240VAC
Operating Temp:	-40°C to +50 °C
Storage Temp:	-45°C to +85 °C
Enclosure:	White Lexan
Base:	Phenolic

LED STATUS	CONDITION
ON STEADY	NORMAL
⏏	TRIP or RESET
⏏	UNDERVOLTAGE
⏏	OVERVOLTAGE
⏏	∅ UNBALANCE
⏏	∅ REVERSAL



ORDERING INFORMATION

001 - XXX - 11 8 - XXXXX	
Product Type	Product Type
Operating Voltage (230,480)	Operating Voltage (230,480)
Relay Type (SPDT,SPST)	Relay Type (SPDT,SPST)
Base (8 Pin Octal)	Base (8 Pin Octal)
Options:	Options:
OV - Over Voltage	OV - Over Voltage
G5 - 5 Second Reset Delay	G5 - 5 Second Reset Delay
G10 - 10 Second Reset Delay	G10 - 10 Second Reset Delay
G20 - 20 Second Reset Delay	G20 - 20 Second Reset Delay
G30 - 30 Second Reset Delay	G30 - 30 Second Reset Delay
G60 - 60 Second Reset Delay	G60 - 60 Second Reset Delay



PHASE MONITORS

THREE PHASE MOTOR PROTECTION

MADE IN
THE U.S.A.



UL FILE #E101681



PROTECTS AGAINST:

Under Voltage
Phase Loss
Phase Reversal
Phase Unbalance
(Optional Over Voltage)

*UL listed models require use of an
RB011 or RB011-PC socket.

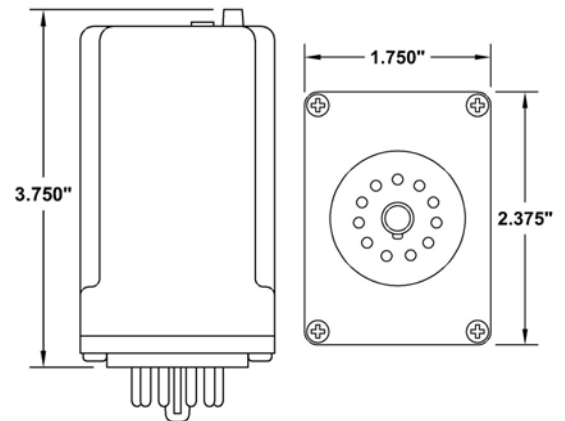
OPERATION

When the proper voltage is connected to the phase monitor the internal relay will be energized and the LED will be on steady. An abnormal condition will cause the LED to blink during the trip delay. When the trip delay has expired the internal relay will be de-energized. The LED will then provide a series of pulses that indicate which fault condition is present. When conditions return to normal, the LED will blink during the reset delay. When the reset delay has expired, the LED will come on steady and the internal relay will be energized. The reset delay is also active immediately after power is turned on to the unit.

These units can be used on Delta or Wye systems, 50/60 Hz.

To add the Over Voltage feature select the OV option.

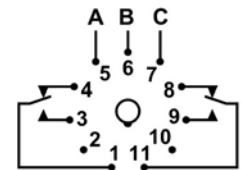
To extend the standard Reset Delay select one of the G options.



SPECIFICATIONS

Under Voltage:	
Trip:	- 15% of Setting
Reset:	- 12% of Setting
Over Voltage:	
Trip:	+ 15% of Setting
Reset:	+ 12% of Setting
Phase Unbalance:	
Trip:	5% with 5 Second Trip Delay 15% with 1 Second Trip Delay
Reset:	4%
Trip Delay:	5 Seconds (Delay is Reduced to 1 Second if Phase Unbalance is 15% or Greater)
Reset Delay:	2 Seconds Standard (See Options)
(Delay on Operate)	
Voltage Range:	200V to 240V
Output Rating:	10A Resistive @ 240VAC 6A Inductive @ 240VAC
Operating Temp:	-40°C to +50 °C
Storage Temp:	-45°C to +85 °C
Enclosure:	White Lexan
Base:	Phenolic

LED STATUS	CONDITION
ON STEADY	NORMAL
⏏	TRIP or RESET
⏏	UNDERVOLTAGE
⏏	OVERVOLTAGE
⏏	UNBALANCE
⏏	REVERSAL



ORDERING INFORMATION

Product Type	001 - 230 - 12 11 - XXXXX
Operating Voltage	
Relay Type (DPDT)	
Base (11 Pin Octal)	
Options:	
OV - Over Voltage	
G5 - 5 Second Reset Delay	
G10 - 10 Second Reset Delay	
G20 - 20 Second Reset Delay	
G30 - 30 Second Reset Delay	
G60 - 60 Second Reset Delay	



PHASE MONITORS

THREE PHASE MOTOR PROTECTION

MADE IN
THE U.S.A.



UL FILE #E101681



*UL listed models require use of an SD12 or SD12-PC socket.



PROTECTS AGAINST:

- Under Voltage
- Phase Loss
- Phase Reversal
- Phase Unbalance
- (Optional Over Voltage)

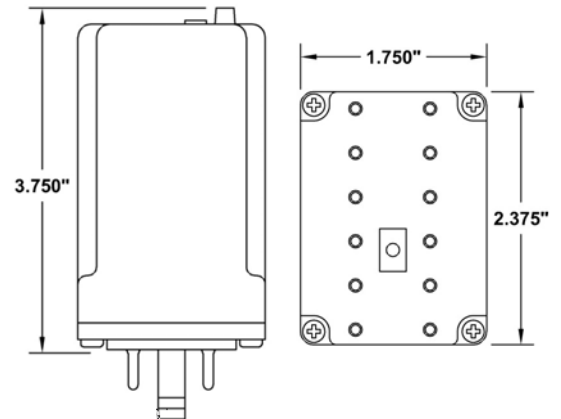
OPERATION

When the proper voltage is connected to the phase monitor the internal relay will be energized and the LED will be on steady. An abnormal condition will cause the LED to blink during the trip delay. When the trip delay has expired the internal relay will be de-energized. The LED will then provide a series of pulses that indicate which fault condition is present. When conditions return to normal, the LED will blink during the reset delay. When the reset delay has expired, the LED will come on steady and the internal relay will be energized. The reset delay is also active immediately after power is turned on to the unit.

These units can be used on Delta or Wye systems, 50/60 Hz.

To add the Over Voltage feature select the OV option.

To extend the standard Reset Delay select one of the G options.



SPECIFICATIONS

Under Voltage:	
Trip:	- 15% of Setting for 230V (-10% for 480V)
Reset:	- 12% of Setting for 230V (-8% for 480V)
Over Voltage:	
Trip:	+ 15% of Setting for 230V (+10% for 480V)
Reset:	+ 12% of Setting for 230V (+8% for 480V)
Phase Unbalance:	
Trip:	5% with 5 Second Trip Delay 15% with 1 Second Trip Delay
Reset:	4%
Trip Delay:	5 Seconds (Delay is Reduced to 1 Second
(Delay on Release)	if Phase Unbalance is 15% or Greater)
Reset Delay:	2 Seconds Standard (See Options)
(Delay on Operate)	
Voltage Range:	200V to 240V or 425V to 525V
Output Rating:	10A Resistive @ 240VAC 6A Inductive @ 240VAC
Operating Temp:	-40°C to +50 °C
Storage Temp:	-45°C to +85 °C
Enclosure:	White Lexan
Base:	Phenolic

LED STATUS	CONDITION	C	B	A
ON STEADY	NORMAL	•	•	•
⏏	TRIP or RESET	6	5	4
⏏	UNDERVOLTAGE	3	2	1
⏏	OVERVOLTAGE	7	8	9
⏏	UNBALANCE	10	11	12
⏏	REVERSAL			

ORDERING INFORMATION

001 - XXX - 12 12 - XXXXX

Product Type	└──┘
Operating Voltage	└──┘
(230,480)	
Relay Type (DPDT)	└──┘
Base (12 Pin)	└──┘
Options:	└──┘
OV - Over Voltage	
G5 - 5 Second Reset Delay	
G10 - 10 Second Reset Delay	
G20 - 20 Second Reset Delay	
G30 - 30 Second Reset Delay	
G60 - 60 Second Reset Delay	



PHASE MONITORS

THREE PHASE MOTOR PROTECTION

MADE IN
THE U.S.A.



UL FILE #E101681



PROTECTS AGAINST:

Under Voltage
Phase Loss
Phase Reversal
Phase Unbalance
(Optional Over Voltage)

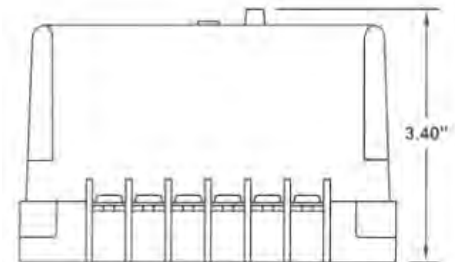
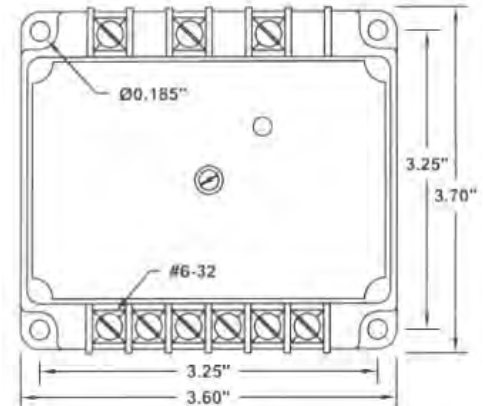
OPERATION

When the proper voltage is connected to the phase monitor the internal relay will be energized and the LED will be on steady. An abnormal condition will cause the LED to blink during the trip delay. When the trip delay has expired the internal relay will be de-energized. The LED will then provide a series of pulses that indicate which fault condition is present. When conditions return to normal, the LED will blink during the reset delay. When the reset delay has expired, the LED will come on steady and the internal relay will be energized. The reset delay is also active immediately after power is turned on to the unit.

These units can be used on Delta or Wye systems, 50/60 Hz.

To add the Over Voltage feature select the OV option.

To extend the standard Reset Delay select one of the G options.



LED STATUS	CONDITION	A	B	C
ON STEADY	NORMAL	1	3	5
⏏	TRIP or RESET			
⏏	UNDERVOLTAGE			
⏏	OVERVOLTAGE			
⏏	Ø UNBALANCE			
⏏	Ø REVERSAL			

SPECIFICATIONS

Under Voltage:	
Trip:	- 15% of Setting for 230V (-10% for 480V)
Reset:	- 12% of Setting for 230V (-8% for 480V)
Over Voltage:	
Trip:	+ 15% of Setting for 230V (+10% for 480V)
Reset:	+ 12% of Setting for 230V (+8% for 480V)
Phase Unbalance:	
Trip:	5% with 5 Second Trip Delay 15% with 1 Second Trip Delay
Reset:	4%
Trip Delay:	5 Seconds (Delay is Reduced to 1 Second if Phase Unbalance is 15% or Greater)
Reset Delay:	2 Seconds Standard (See Options)
Voltage Range:	200V to 240V or 425V to 525V
Output Rating:	10A Resistive @ 240VAC 6A Inductive @ 240VAC
Operating Temp:	-40°C to +50 °C
Storage Temp:	-45°C to +85 °C
Enclosure:	White Lexan
Base:	Blue Lexan

ORDERING INFORMATION

Product Type	002 - XXX - 12 3 - XXXXX
Operating Voltage (230,480)	
Relay Type (DPDT)	
Base (Surface Mount)	
Options:	
OV - Over Voltage	
G5 - 5 Second Reset Delay	
G10 - 10 Second Reset Delay	
G20 - 20 Second Reset Delay	
G30 - 30 Second Reset Delay	
G60 - 60 Second Reset Delay	



DUAL VOLTAGE PHASE MONITORS

THREE PHASE MOTOR PROTECTION

MADE IN THE U.S.A.



UL FILE #E101681



*UL listed models require use of an RB08 or RB08-PC socket.



PROTECTS AGAINST:

- Under Voltage
- Phase Loss
- Phase Reversal
- Phase Unbalance
- (Optional Over Voltage)

OPERATION

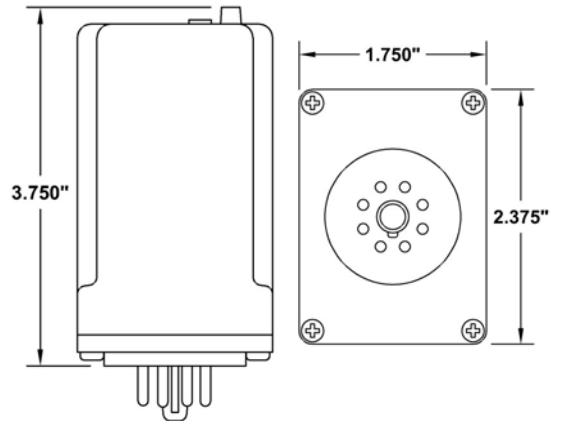
The Dual Voltage Phase Monitor automatically selects which voltage scale to operate from, either the 200-240V or the 425-525V.

When the proper voltage is connected to the phase monitor the internal relay will be energized and the LED will be on steady. An abnormal condition will cause the LED to blink during the trip delay. When the trip delay has expired the internal relay will be de-energized. The LED will then provide a series of pulses that indicate which fault condition is present. When conditions return to normal, the LED will blink during the reset delay. When the reset delay has expired, the LED will come on steady and the internal relay will be energized. The reset delay is also active immediately after power is turned on to the unit.

These units can be used on Delta or Wye systems, 50/60 Hz.

To add the Over Voltage feature select the OV option.

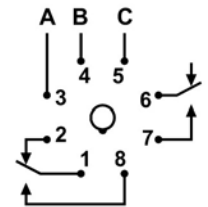
To extend the standard Reset Delay select one of the G options.



SPECIFICATIONS

Under Voltage:	
Trip:	- 15% of 200-240V or -10% of 425-525V
Reset:	- 12% of 200-240V or -8% of 425-525V
Over Voltage:	
Trip:	+ 15% of 200-240V or +10% of 425-525V
Reset:	+ 12% of 200-240V or +8% of 425-525V
Phase Unbalance:	
Trip:	5% with 5 Second Trip Delay 15% with 1 Second Trip Delay
Reset:	4%
Trip Delay:	5 Seconds (Delay is Reduced to 1 Second
(Delay on Release)	if Phase Unbalance is 15% or Greater)
Reset Delay:	2 Seconds Standard (See Options)
(Delay on Operate)	
Voltage Range:	200V to 240V or 425V to 525V
Output Rating:	10A Resistive @ 240VAC
Operating Temp:	-40°C to +40°C
Storage Temp:	-45°C to +85°C
Enclosure:	White Lexan
Base:	Phenolic

LED STATUS	CONDITION
ON STEADY	NORMAL
⏏	TRIP or RESET
⏏	UNDERVOLTAGE
⏏	OVERVOLTAGE
⏏	UNBALANCE
⏏	REVERSAL



ORDERING INFORMATION

001 - DVM - 11 8 - XXXXX

Product Type	└─┬─┘
Operating Voltage (Dual Voltage)	└─┬─┘
Relay Type (SPDT, SPST)	└─┬─┘
Base (8 Pin Octal)	└─┬─┘
Options:	└─┬─┘
OV - Over Voltage	
G5 - 5 Second Reset Delay	
G10 - 10 Second Reset Delay	
G20 - 20 Second Reset Delay	
G30 - 30 Second Reset Delay	
G60 - 60 Second Reset Delay	



DUAL VOLTAGE PHASE MONITORS

THREE PHASE MOTOR PROTECTION

MADE IN THE U.S.A.



UL FILE #E101681



*UL listed models require use of an SD12 or SD12-PC socket.



PROTECTS AGAINST:

- Under Voltage
- Phase Loss
- Phase Reversal
- Phase Unbalance
- (Optional Over Voltage)

OPERATION

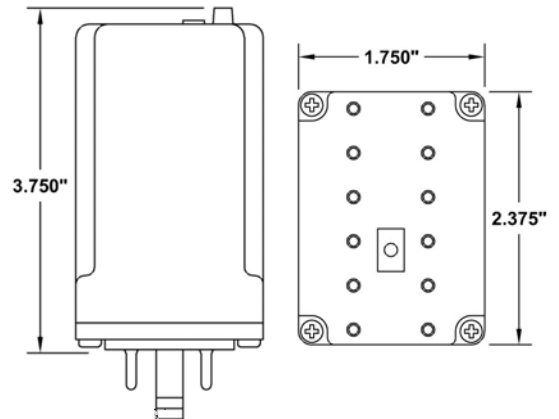
The Dual Voltage Phase Monitor automatically selects which voltage scale to operate from, either the 200-240V or the 425-525V.

When the proper voltage is connected to the phase monitor the internal relay will be energized and the LED will be on steady. An abnormal condition will cause the LED to blink during the trip delay. When the trip delay has expired the internal relay will be de-energized. The LED will then provide a series of pulses that indicate which fault condition is present. When conditions return to normal, the LED will blink during the reset delay. When the reset delay has expired, the LED will come on steady and the internal relay will be energized. The reset delay is also active immediately after power is turned on to the unit.

These units can be used on Delta or Wye systems, 50/60 Hz.

To add the Over Voltage feature select the OV option.

To extend the standard Reset Delay select one of the G options.



SPECIFICATIONS

Under Voltage:	
Trip:	- 15% of 200-240V or -10% of 425-525V
Reset:	- 12% of 200-240V or -8% of 425-525V
Over Voltage:	
Trip:	+ 15% of 200-240V or +10% of 425-525V
Reset:	+ 12% of 200-240V or +8% of 425-525V
Phase Unbalance:	
Trip:	5% with 5 Second Trip Delay 15% with 1 Second Trip Delay
Reset:	4%
Trip Delay:	5 Seconds (Delay is Reduced to 1 Second
(Delay on Release)	if Phase Unbalance is 15% or Greater)
Reset Delay:	2 Seconds Standard (See Options)
(Delay on Operate)	
Voltage Range:	200V to 240V or 425V to 525V
Output Rating:	10A Resistive @ 240VAC
Operating Temp:	-40°C to +40°C
Storage Temp:	-45°C to +85°C
Enclosure:	White Lexan
Base:	Phenolic

LED STATUS	CONDITION	C	B	A
ON STEADY	NORMAL	•	•	•
⏏	TRIP or RESET	•	•	•
⏏	UNDERVOLTAGE	•	•	•
⏏	OVERVOLTAGE	•	•	•
⏏	UNBALANCE	•	•	•
⏏	REVERSAL	•	•	•

ORDERING INFORMATION

001 - DVM - 12 12 - XXXXX

Product Type	└─┬─┘
Operating Voltage (Dual Voltage)	└─┬─┘
Relay Type (DPDT)	└─┬─┘
Base (12 Pin)	└─┬─┘
Options:	└─┬─┘
OV - Over Voltage	
G5 - 5 Second Reset Delay	
G10 - 10 Second Reset Delay	
G20 - 20 Second Reset Delay	
G30 - 30 Second Reset Delay	
G60 - 60 Second Reset Delay	