

The 200 series of timers comprises a whole range of variations from single shot to unequal repeating functions and with optional SPDT or DPDT relays.

The design is based on an oscillator/counter circuit offering better accuracy and repeatability than the usual RC circuits which require large value electrolytic capacitors. Time ranges up to 200 hours are available using this type of design.



All the standard functions such as delay on, interval, and repeating are available as well as extra features like master reset or pulse reset options.



Set point potentiometers are normally on board but can be supplied for remote mounting if required.

Supply voltages from 12VAC to 525VAC and 12VDC to 110VDC are available.

**Model numbers**

SPDT Relay	DPDT Relay	Description
200D	202D	Delay On
200I	202I	Interval
200R0	202R0	Equal repeating "Off" time first
200R1	202R1	Equal repeating "On" time first
201D		One instantaneous + one delay on
201I		One instantaneous + one interval
201R0		One instantaneous + one equal repeating "Off" time first
201R1		One instantaneous + one equal repeating "On" time first
	222	Multi-function/multi-range/multi-voltage
250R0	252R0	Unequal repeating "Off" time first
250R1	252R1	Unequal repeating "On" time first
250P0	252P0	Unequal repeating pulse ("on" time preset 1 sec. pulse) "Off" time first
250P1	252P1	Unequal repeating pulse ("on" time preset 1 sec. pulse) "On" time first
	272	Delay after de-energization

## Supply Voltage Options

Model	12VDC	24VDC	110VDC	12VAC	24VAC	110VAC	230VAC	400VAC	525VAC
200	T	T	T	T	T	T	T	T	T
201	T	T	T	T	T	T	T		
202	T	T	T	T	T	T	T		
222L1 & L2	10 - 30V AC/DC								
222H1 & H2	22 - 265V AC/DC								
250	T	T	T	T	T	T	T	T	T
252	T	T	T	T	T	T	T		
272	T	T	T	T	T	T	T		

Non standard voltages are available to customer requirements - please consult factory.

## Time Range Options

Model	6 secs	20 secs	60 secs	200 secs	6 mins	20 mins	60 mins	200 mins	6 hrs	20 hrs	60 hrs	200 hrs
200	T	T	T	T	T	T	T	T	T	T	T	T
201	T	T	T	T	T	T	T	T	T	T	T	T
202	T	T	T	T	T	T	T	T	T	T	T	T
222L1 & H1	Multi-range 5secs/20secs/150secs/20mins											
222L2 & H2	Multi-range 5mins/20mins/150mins/20hours											
250	T	T	T	T	T	T	T	T	T	T	T	T
252	T	T	T	T	T	T	T	T	T	T	T	T
272	Multi-range 5secs/20secs/150secs/20mins											

The minimum time setting of each range is approximately 1% of the maximum.

Non standard time ranges available to customer requirements - please consult factory.

All timers are available with preset times to customer order.

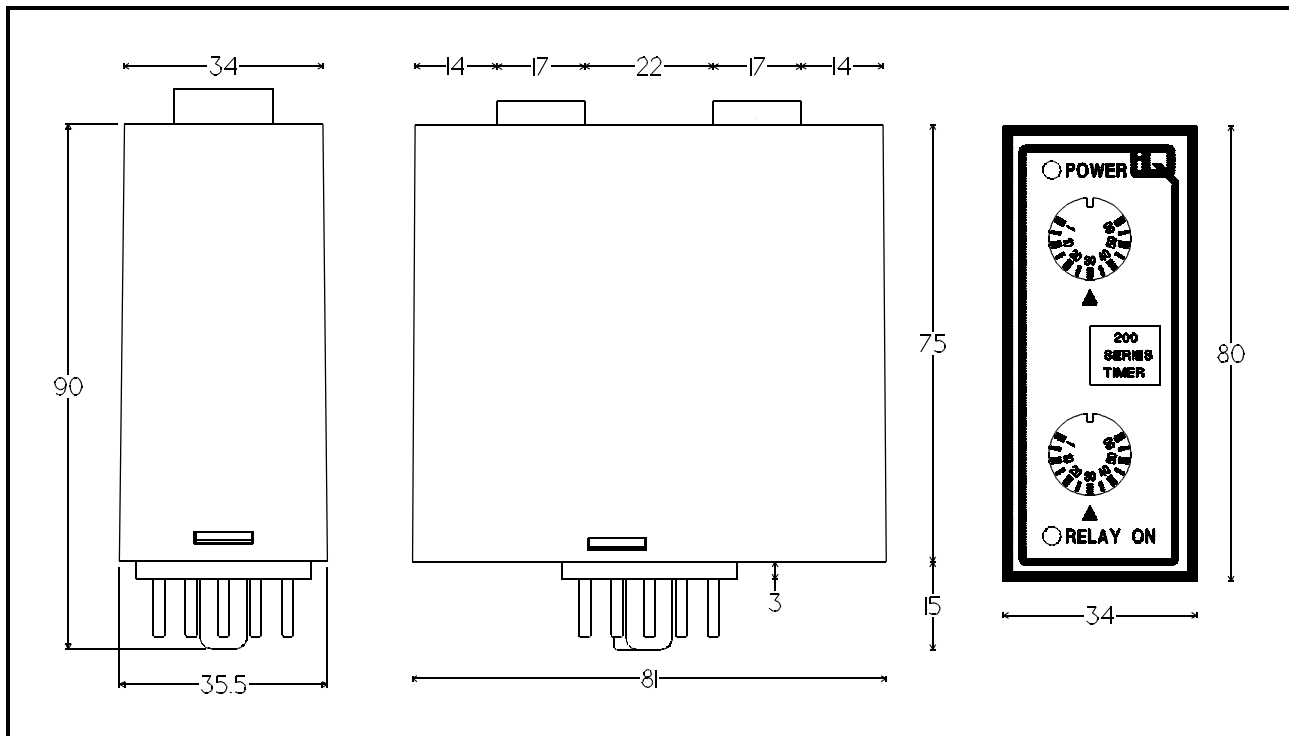
## General Specification

Supply Voltage Tolerance	± 15% of nominal (except 222)
Accuracy of setting (typical)	±5% of span
Repeatability under constant conditions (typical)	±0.1% of span
Temperature limits	-5 to +60°C
Humidity limits	0 - 90% RH non-condensing
Power consumption	DC supplies 1.5W AC supplies (no transformer) 1.5VA AC supplies (transformer) 3VA
Relay Rating SPDT	AC 10A 400V 2500VA DC 10A 30V
Relay Rating DPDT	AC 5A 250V 1250VA DC 5A 30V
Relay Life (Typical)	Mechanical 10 <sup>6</sup> operations Electrical at full load 10 <sup>5</sup> operations

## Explanation of functions.

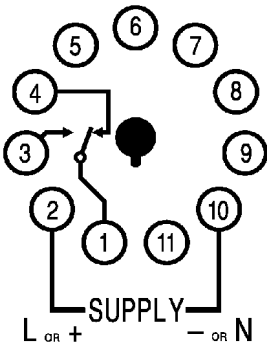
Delay On	When power is applied to the timer the relay remains de-energised. At the end of the delay period the relay energises and remains energised until power is removed.
Interval	When power is applied to the timer the relay energises immediately. At the end of the interval period the relay de-energises and remains de-energised until power is removed and re-applied.
Equal repeating "Off" time first	When power is applied to the timer the relay remains de-energised. At the end of the delay period the relay energises. After a further delay period the relay de-energises. The relay will continue to energise and de-energise with equal "off" and "on" periods until power is removed.
Equal repeating "On" time first	When power is applied to the timer the relay energises. At the end of the delay period the relay de-energises. After a further delay period the relay energises. The relay will continue to energise and de-energise with equal "off" and "on" periods until power is removed.
Unequal repeating "Off" time first	When power is applied to the timer the relay remains de-energised. At the end of the delay period the relay energises. After a further delay period the relay de-energises. The relay will continue to energise and de-energise with times as set by the "off" and "on" knobs until power is removed.
Unequal repeating "On" time first	When power is applied to the timer the relay energises. At the end of the delay period the relay de-energises. After a further delay period the relay energises. The relay will continue to energise and de-energise with times as set by the "off" and "on" knobs until power is removed.
Delay after de-energise	When power is applied to the timer the relay energises and remains energised while power is applied. After removal of power the timer is started. After the set period the relay will de-energise. If power is re-applied before timing is complete, the timer is reset.
Master Reset	This is an option on some models where the reset of the counter is connected to pins 5 & 7 of the timer. When these pins are shorted together at any time the timer is forced to a reset condition (ie. the state in which it would be immediately after power up). This reset remains as long as the short is applied.
Pulse Reset	This is an option on some models where the reset of the counter is connected to pins 5 & 7 of the timer. When these pins are shorted together at any time the timer is forced to a reset condition (ie. the state in which it would be immediately after power up). The reset is only applied for a few milliseconds and the timer will start timing again immediately even if the short remains.

## Dimensions

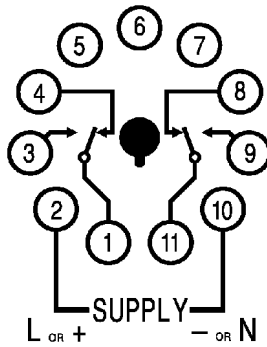


## CONNECTION DIAGRAMS

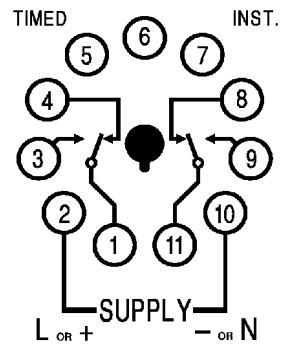
### Standard Units



Models  
200, 250

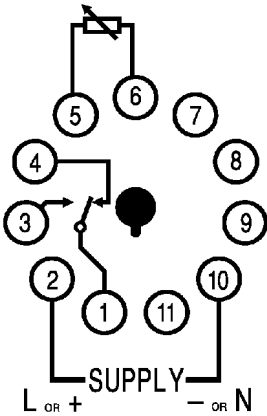


Models  
202, 222, 252, 272

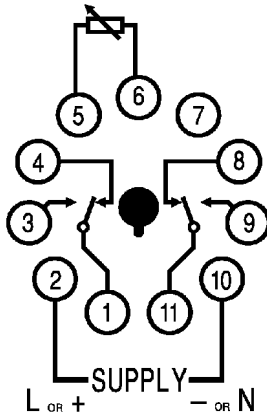


Model  
201

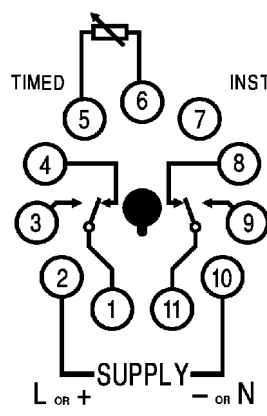
### Remote Potentiometers



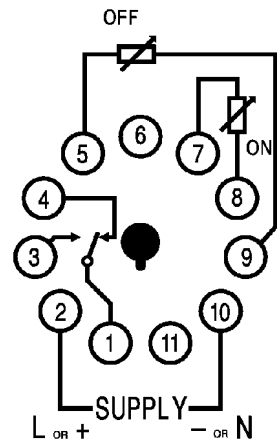
Model  
200



Models  
202, 222, 272

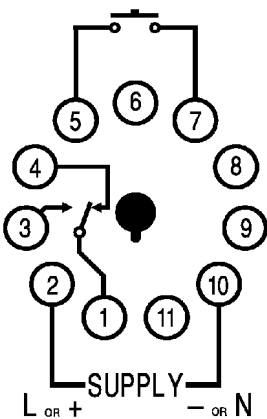


Model  
201

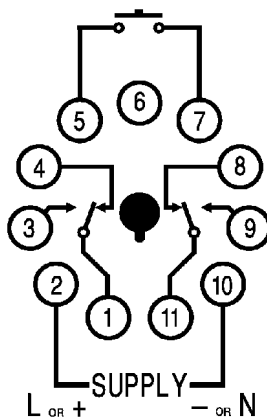


Model  
250

### MR & PR Functions



Models  
200, 250



Models  
202, 252

The model 250 and 252 are available with one local potentiometer and one remote. The model 200 & 202 diagrams apply. The model 252 is not available with both potentiometers remote.

Non standard pin configurations are available to customer requirements - please consult the factory.