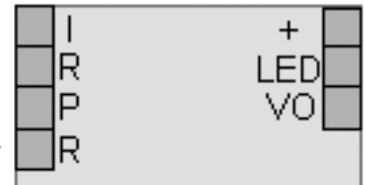


#83831/#83864 IRDOT-P AUTOMATIC TURNOUT CONTROL INSTRUCTIONS

The IRDOT-P uses infrared detection to switch one to four turnouts operated by solenoid switch machines. Use for automatic storage sidings, reverse loops, trailing points and complicated routes.

IRDOT-P TERMINALS

"R" These two terminals are used to connect power to the switch machine. When the IRDOT-P first detects a train, the "R" terminals are connected together. After approx. 1 second, the IRDOT-P removes the connection between the terminals. Whether the train stops over the IRDOT-P or continues to move, the switch machine is only powered for 1 second. Also, there is a dead time of approx. 4 seconds before the "R" terminals will operate again. The 1 second timing and the dead time prevents the switch machine from being damaged by continuous power. The IRDOT-P makes this connection between the "R" terminals with its internal relay contacts. The relay contacts are of 10 amp capacity, allowing at least four switch machines to be switched. Using a relay keeps the IRDOT-P power supply and the switch machine's power electrically separate. The terminals act as an automatically operated passing contact switch. The diagram shows two switch machines controlled by two IRDOT-Ps.



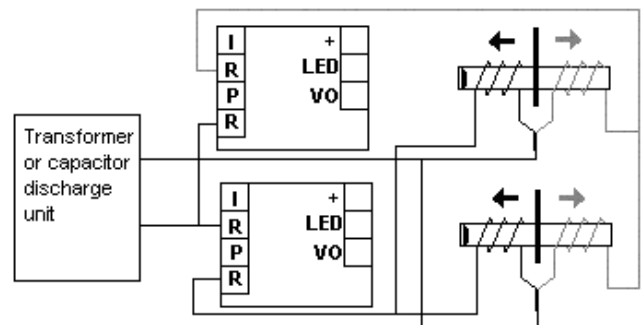
The common (middle) connections of the switch machine are all wired straight back to the switch machine's power. When the top IRDOT-P detects, its "R" terminals will be temporarily connected, giving a burst of power to the left hand connection of both switch machines, switching them left. When the bottom IRDOT-P detects, it will switch both of them right.

"LED": this lights an LED (supplied fitted) when the IRDOT-P detects a train. Long leg of the LED to "LED" short leg to "-". This LED is useful during installation. It can be wired to the control panel if required.

"VO" and "+": these terminals are for connection to a power supply to power the IRDOT-P. It may be powered from 12 to 16 volts AC or DC. This supply is separate from the one used for the switch machines.

"P": on first detecting a train, this terminal switches to 0 Volts for approx. 1 second. Its purpose is to operate other units such as the Dual Timer, latching relays, SA1 shuttle and SA6 when the IRDOT-P detects a train.

"I": Terminal "I" (inhibit) stops the "R" and "P" terminals operating when it is connected to 0 volts. The train detected LED still lights when "I" is used. A switch, SA6, IRDOT, Dual Time Delay board, relay, or Train Direction Detector can be used to operate 'I'. This terminal is used to automatically stop the IRDOT-P from operating the turnout when a train is in a certain place or travelling in a certain direction. "I" is also used for changing from automatic to manual turnout operation.

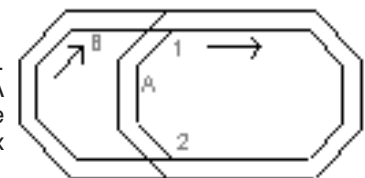


TRAILING POINTS

This is the simplest installation. The IRDOT-P is arranged so that trailing points are always correctly set. If required, they can be set manually for the facing direction.

COMPLICATED ROUTES

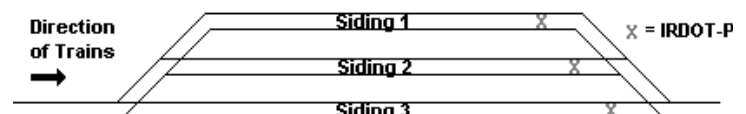
An example of how two IRDOT-Ps can make a train alternate between two different routes is shown. The IRDOT-P at B switches turnout 1 for the outer oval and turnout 2 for the inner. The IRDOT-P at A switches turnout 1 for the inner oval and turnout 2 for the outer. The effect of this is for the train to make alternate laps around the outer and inner lines. This idea can be extended to more complex arrangements.



AUTOMATIC STORAGE SIDINGS

The IRDOT-P gives automatic operation of storage sidings with any number of sidings. For details, refer to the following link on the manufacturer's web site:

http://www.heathcote-electronics.co.uk/P23_AS廖.htm



CHANGE OVER TO MANUAL CONTROL

One switch is used to connect all the "I" terminals to 0 volts (terminal "VO"). When the switch operates, the IRDOT-Ps no longer control the turnouts. A manual turnout switch is wired to the two "R" terminals.

SPECIFICATIONS

Voltage: 12 to 16 volts, AC or DC

Maximum current consumption: 45 m A

Length x Width: 4-5/16" x 1-3/16" (110mm x 31mm)

Height (board to highest component): 13/16" (22mm)

Height of infrared components: 7/8" (22mm)