5000 Mtr Range 240v

WES15104240R

Thompson Safety Pty Ltd



4-Channel151MHzFM Receiver with Main AC supply

FEATURES

- Supply voltage240VAC (also available in110-120VAC supply for international markets)
- High efficiency toroidal transformer
- High capacity output relay
- Pluggable type terminal blocks for easy installation
- Test push buttons for the relay
- Momentary, Latching and Security Latching modes are all user selectable
- Optional WESQM150 bracket available for easy mounting to cases or walls
- Also available in an IP66 rated case for outdoor installations

DESCRIPTION

This receiver can be connected directly to the mains supply, 240VAC. There are four relay outputs that can switch currents up to 16 amps at 240VAC. The relay mode can be set to momentary, latching or security latching.

The user can select 8 different narrow band frequencies and program unlimited number of transmitters to the receiver. With the narrow band FM 151MHz signal from the transmitter a line of sight operating range of 5000 meters is possible. The receiver uses a crystal oscillator circuit that ensures high frequency stability allowing optimal performance in the receiving range.

The toroidal transformer on this receiver is 25-30% more efficient than the conventional types. It has a low operating temperature, low hum and low stray magnetic field.

Connecting wires to the receiver has been made easier by the pluggable type terminal block. An on board LED indicates when power is connected and an extra LED on the board to indicate when the relay is activated. There is a test button for the relay output to test your connections.

The receiver's high capacity output relay is capable of switching up to 16 Amps of resistive load and up to 8 amps of inductive load. A world first for a standalone receiver.

The receiver can be mounted to a Quick Mount or in a weatherproof case with an IP66 rating.

APPLICATIONS

- Floating Pump Control
- Conveyor Systems
- On/Off applications in agricultural equipment
- Mining Equipment

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Technical Data

Supply Voltage	240Volts AC Mains (110-120VAC available on request)
Current Consumption	5.1 mA standby
Receiving Frequency	151.6MHz (8 selectable frequencies. See table above)
Operating Temperature Range	-5 to - 50°C
Sensivity	Better than 0.5uV (For relay to activate)
Type of Demodulation	Narrow-band-width Frequency Modulation (FM)
Connection	Supply, Antenna & Outputs - pluggable type terminal blocks
Output	Change over relay output, rated at 16 amps of resistive load and up to 8 Amps of inductive load.
Antenna	50Ω, 15MHz Antenna, WESANT151M for maximum performance A piece of approximately 1 metre can be used short range applications.
Dimensions	130mm x 70mm x37mm
Mounting Hole Size	3.97mm or 5/32”
Weight	188g
Useable Transmitters	All WES151 series (with correct setting on the two way dip switch) refer to the table above.
Useable Operating Range	Up to 5000 meters, depending on installation and type of antenna used. Recommended Antenna is WESANT151M

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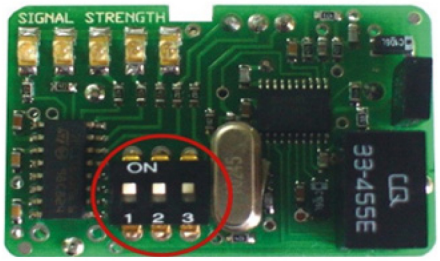
NOISE STRENGTH INDICATOR

If more than 1 led is“ON” without a valid transmission, this indicates that there is noise on the frequency selected. Change the 3-way dip switch on the receiver module to select a different frequency. Following is a table with the Dip switch settings and the corresponding frequencies.



Frequency	1	2	3
151.600 MHz	On	On	On
152.375 MHz	Off	On	On
151.775 MHz	On	Off	On
151.400 MHz	Off	Off	On
151.175 MHz	On	On	Off
151.025 Mhz	Off	On	Off
150.900 MHz	On	Off	Off
150.825 MHz	Off	Off	Off

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OUTPUT MODES

Relay output on the receiver can function in either momentary or latching mode. By default the mode is set to momentary. Modes selectable from the 4-way dip switch. Dip switch 1 corresponds to relay channel 1 and dip switch 2 corresponds to relay channel 2 and so on.

FACTORY DEFAULT = MOMENTARY

Momentary – Output is active for as long as the transmitter button is pressed.
Latching – Output remains active until next press of the transmitter button.
Latching – Output remains active until power to the receiver is removed. Similar to mechanical emergency stops.

CUSTOMIZED SOFTWARE

Custom output modes can be programmed to do special functions. Call Thompson Safety for more details.

FACTORY DEFAULT = MOMENTARY

The 12 way dip switch on the receiver sets the 12 bit unique code for the system. This has to be matched to that on the transmitter. Apart from the 12 way dip switch there is an additional 1 way dip switch:

This 1 way DIP switch on the right side of the 12 way dip switch denotes the channels. See table below. Generally to use a 4 channel Tx to 4 channel Rx match all the 13 dip switch (12 way + 1 way just on the right side of the 12 way).To use an 8 channel Tx to control 2 x four channel Rx match all the 12 dip switch and switch 13 off will 1 Tx and switch 13 on will use the other Tx.

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SW13	SW14	SW15	Output
Off	Off	Off	CH1
Off	Off	On	CH2
Off	On	Off	CH3
Off	On	On	CH4
On	Off	Off	CH5
On	Off	On	CH6
On	On	Off	CH7
On	On	On	CH8

SIGNAL STRENGTH INDICATOR

The 151 MHz receivers have five blue LED's on the board.
The table below indicates the level of the valid transmitted signal.

5 LED's on	-70dBm	Very Strong signal	Very Reliable operating conditions
4 LED's on	-75dBm	Very Strong signal	Very Reliable operating conditions
3 LED's on	-80dBm	Very Strong signal	Very Reliable operating conditions
2 LED's on	-90dBm	Strong signal	Very Reliable operating conditions
1 LED's on	-100dBm	Good signal	Reliable operating conditions

