

FMT-312E, FMT-31202E, FMT-31204E

12V 1Watt 27MHz Transmitter

Features

- 3 versions – 1-channel (FMT-312E), 2-channel (FMT-31202E) and 4-channel (FMT-31204E)
- 1 Watt Transmitter with current consumption of 300mA
- Long range – up to 3km
- Specially programmed micro-controller
- Durable alloy metal case

Application

- Pump Control
- Long distance panic button
- On/Off applications in agricultural devices
- Security alarm
- Basic Telemetry eg. Water level indication



FMT-312E

Description

The FMT-3... series has **3 versions** - 1-channel (FMT-312E), 2-channel (FMT-31202E) and 4-channel (FMT-31204E)

No case versions are also available - 1-channel (FMT-312), 2-channel (FMT-31202) and 4-channel (FMT-31204)

The FMT-3... has a **1-watt transmission** with a **current consumption of 300mA**.

The FMT-3... series is designed to give a controlled range of up to 3km. The controlled operation can be any electronic or electrical operated device when used with the FMR-... series of receivers.

The transmitter uses a specially programmed **micro-controller**, which ensures the highest reliability, low sleep mode current (10uA) consumption and greater flexibility.

The FMT-312 transmitter is the **PCB assembly** only, while the FMT-312E transmitter is enclosed in an alloy metal case.

External supply connection and **SO239 antenna socket** is provided with the transmitter.

The **transmitter modes** are user selectable by simply setting the 2-Way dip-switch on the transmitter board.

Products in the Range



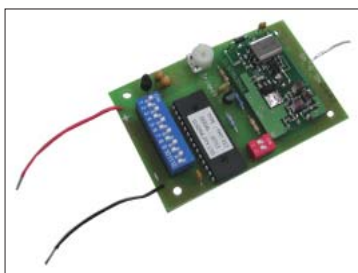
FMT-312E



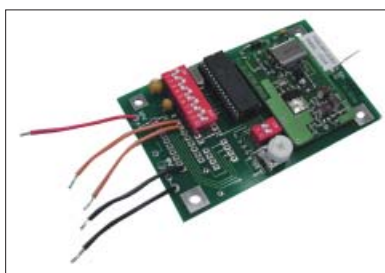
FMT-31202E



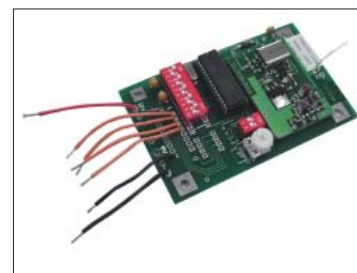
FMT-31204E



FMT-312



FMT-31202



FMT-31204

Warning - Do not transmit without an antenna

Installation Instructions

	<p>Off Delay 2 – 62 seconds Transmitter will transmit a 1.5 second transmission burst and then stop for the "off delay" time selected. The "off delay" time is user selectable between 2 to 62 seconds by adjusting trimpot on the transmitter board. If the code changes during the "off delay" period the new code will be transmitted immediately. When the "off delay" time lapses, transmitter will transmit another burst. The transmitter will cycle (transmission and off delay) indefinitely, if at least one code switch from the 12-Way code switch is ON and supply is connected.</p>
	<p>Off Delay 1 – 10 minutes Same as mode 1 except the "off delay" is user selectable between 1 to 10 minutes.</p>
	<p>Continues Transmission Transmitter will transmit continuously, if at least one code switch from the 12-Way code switch is ON and supply is connected. A transmission limit of five minutes is used to comply with local radio regulations. To activate a receiver longer than 5 minutes, use a delay off feature in the receiver (FMR-212T) and transmitter. The delay off feature in the receiver needs to be set <u>more</u> than the transmitter. This ensures that the transmitter keeps resetting the off delay in the receiver.</p>
	<p>1.5 – 10 seconds one burst transmission Transmitter will transmit one burst and then go to standby or sleep mode. Adjusting the trimpot will vary the burst length. When the code is changed and supply is connected, transmitter will emit one new burst of the new code.</p>
<p>Sleep mode (10 uA) is activated when all 12 code switches are OFF; this applies to all four modes.</p>	

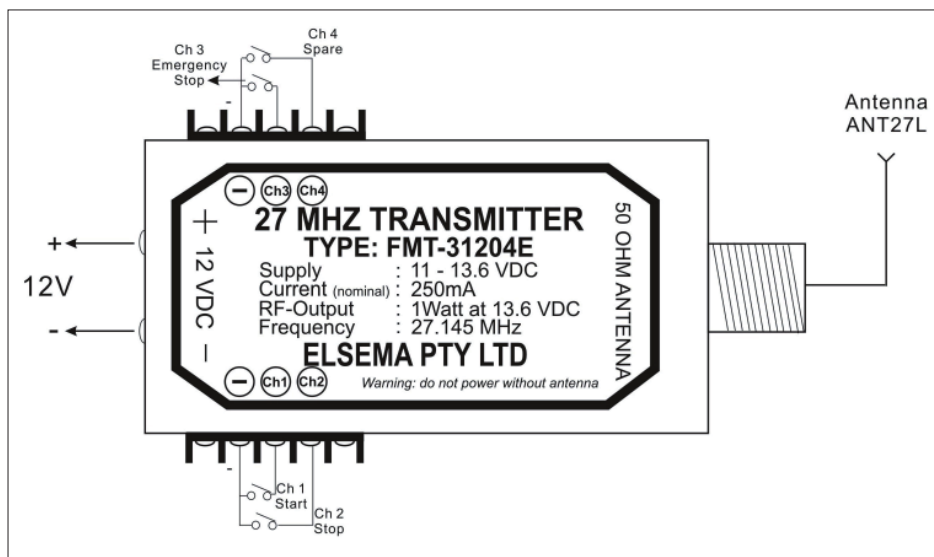
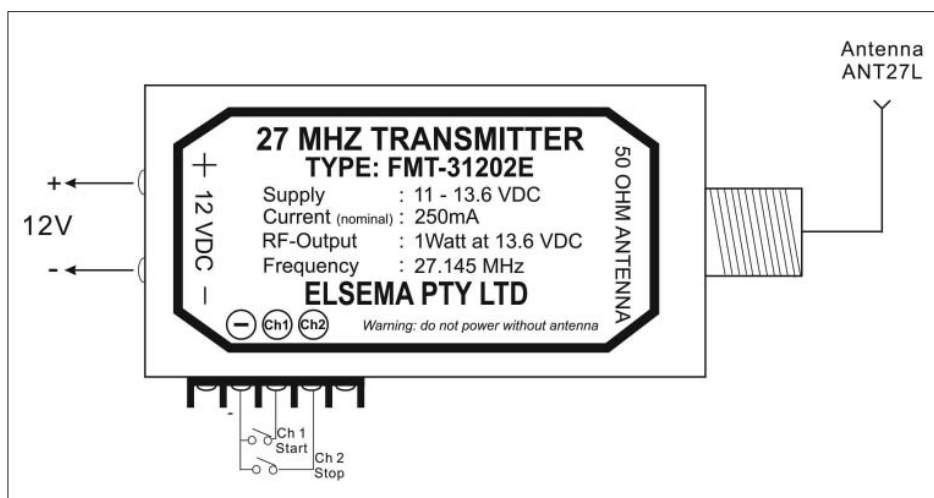
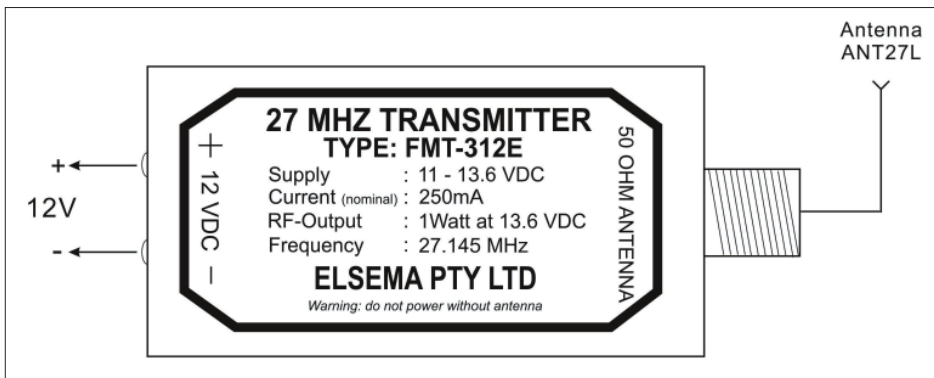
(Grey illustrates the position of the DIP switches)

Technical Data

Power Supply	11 to 13.6 VDC (for constant RF-Output), screw type terminal. Absolute maximum 14VDC.
Current Consumption	Nominal 300mA at 12VDC supply (Transmitting) Nominal 12mA on standby Less than 10uA on sleep mode (only when all code switches are OFF otherwise it is on standby)
Operating Frequency	27.145MHz (Other frequencies available on 27.045, 27.195 and 27.455 MHz. The 27.455 frequency is not available for Australia).
Carrier Frequency Tolerance	Crystal controlled, 30 parts per million (0 to 50°C).
R.F. Output Power	1 Watt, into 50 ohms SO239 socket at 13.6VDC.
Antenna	SO239 socket is provided. Optimum performance use Elsema ANT27L antenna
Type Of Emission	Narrow-band-width Frequency Modulation (5K00F1D)
Frequency Deviation Limiting	1500 Hz non-return to zero
Modulation Frequency	1 kHz (0.96 ms/bit) (15% tolerance)
Spurious Transmission	-13dBm (50uW)
Necessary Band Width	±2.5 kHz
Digital Coding System	On-board 12-way code switch Code switch is inserted into an IC socket. This is for the easy removal of the code switch. Elsema's coding cable can be inserted into the IC socket, which enables the user to have 4096 digital channels.

Connection Diagram

Warning - Do not transmit without an antenna



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