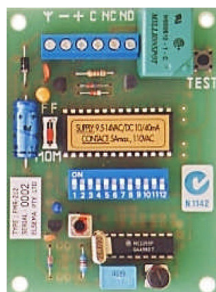


# FMR-212 / 224



The FMR-212/24 is a crystal controlled single channel receiver, comprising of receiving, decoding and relay-output sections. A specially designed LARGE SCALE INTEGRATED CIRCUIT (LSI) is employed in the decoder section, which ensures operation at low supply voltage, highest reliability, associated with very low power drain.

The receiver works on a digitally encoded 27 MHz frequency modulated (FM) signal. It may be used in applications such as the remote control of garage doors, gates, lights, alarms or in any other new or existing installations where the use of conventional wiring is difficult or impossible to accomplish.

If the code of the input signal (from a transmitter) matches the setting of the coding switch on the receiver (up to 4096 combinations), an output is obtained i.e. the relay operates. This relay provides a clean set of contacts for switching DC current up to 5 Amps.

## TECHNICAL READING

Connection to the receiver is via a six-way screw-type terminal block. The receiver can be mounted to a Quick Mount or in a black UBB case.

As an antenna, a piece of any type of wire, approximately one meter long, will be sufficient for a reliable control range of up to 400 metres, with our FMT hand transmitters. A longer wire or a proper 27 MHz CB-Antenna should further improve control range. If a CB-Antenna is used, the shield of the cable must be connected to the "minus terminal".

A push Button (designated as "TEST") is provided for relay output testing.

In the momentary mode (MOM) the relay is only activated while the correct signal is received. When changing the slide switch from "MOM" to "FF" (flip/flop mode) the output relay is toggled with every correct incoming signal. This enables the direct use for switching on/off lights etc. In flip/flop mode, the relay always energises at the initial "power-up".

If a "latching-on" output is required, for example receiver is used together with a "Panic Button", a wire link is to be fitted. In such a case the relay can only be reset again by momentarily interrupting the supply.

Another feature available is a "delayed-off" output. To facilitate it, a small time unit DU-3 is to be fitted into the four unused holes. When ordering receivers with this function, please specify length of which may be between 1 second to 60 minutes. In this mode the relay energises when a correct code is received or the "TEST" is pushed, and de-energises after the time unit.

Care must be taken, not to bring a receiver near strong magnetic fields, such as DC-Motors, speakers, magnets for reed switches, transformers etc. as it would magnetise the coils and may cause severe detuning.

## TECHNICAL DATA

FMT-101	
Power Source	9 Volt Battery Carbon: approximately 1 year shelf life Alkaline: approximately 2 year shelf life
Supply Voltage	7.5 to 9 VDC
Current Consumption	60mA (Typical) at 8VDC supply while transmitting
Operating Frequency	27.145MHz (Other frequencies available on request)
Carrier Frequency Tolerance	Crystal controlled 30 parts per million (0 to 50 °C)
Radiated Field Strength	78.0dBµV/m at 3 metres (±3dB)
Antenna	Built in 50mm long ferrite rod
Type of Emission	Narrow-band-width Frequency Modulation (5K00F1D)
Frequency Deviation Limiting	1000 – 1400Hz non-return to zero
Type of Modulation	Manchester format 1.08 ms per bit (15% tolerance)
Bits per second	926 bps
Spurious Transmission	At least -40dB/carrier
Necessary Band Width	±2.5kHz
Digital Coding System	On board 12-way coding switch (4096 channels)
Dimension	95 x 55 x 24mm
Weight	120g including battery
Useable Operating Range	550 metres. Depends on receiver antenna and location
Compatible Receivers	All Elsema type FMR series