

# FMR-212

1-Channel 27MHz FM Receiver

## Features

- Wide supply connection – 10.0 to 28.0 Volts AC/DC
- Crystal Controlled
- Digitally Encoded
- Relay Output

**(Please take note of the Label in BLUE)**



## Description

The FMR-212 is a crystal controlled single channel receiver, comprising of receiving, decoding and relay-output sections. A specially designed micro-controller is used 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 AC/DC current up to 5 Amps.

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.

A proper 27 MHz CB-Antenna will give a reliable control range of up to 200 metres, when used with Elsema's FMT-301, FMT-302 and FMT-304 transmitters. 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.

If a "latching-on" output is required, for example receiver is used together with a "Panic Button", two wire links are to be fitted and the switch to be ON, as shown below. In such a case the relay can only be reset again by momentarily interrupting the supply.



## Compatibility

- All Elsema type FMT-... series
- FMT-PET
- FMT-101
- FMT-301, FMT-302, FMT304
- FMT-401, FMT-404
- FMT-312

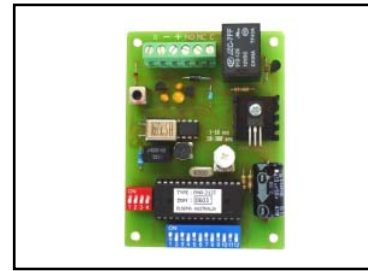
**Products in the Range**



**FMR-212Q**  
(Receiver in Quick mount)



**FMR-212E**  
(Receiver in a Case)

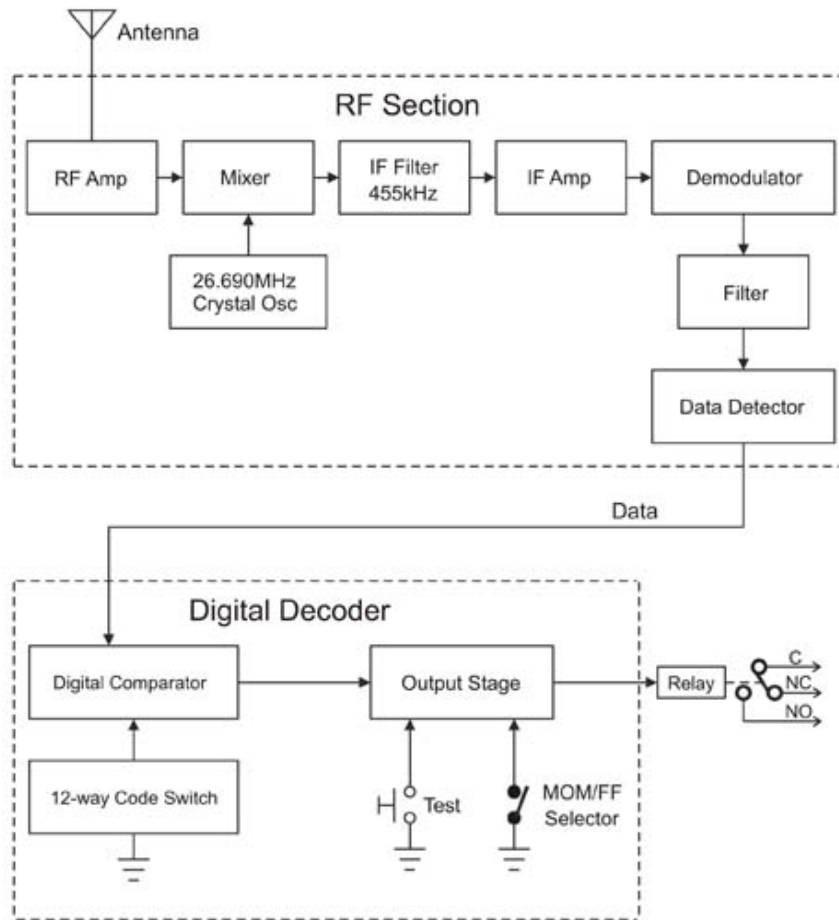


**FMR-212T**  
(Receiver with Delay Timer)

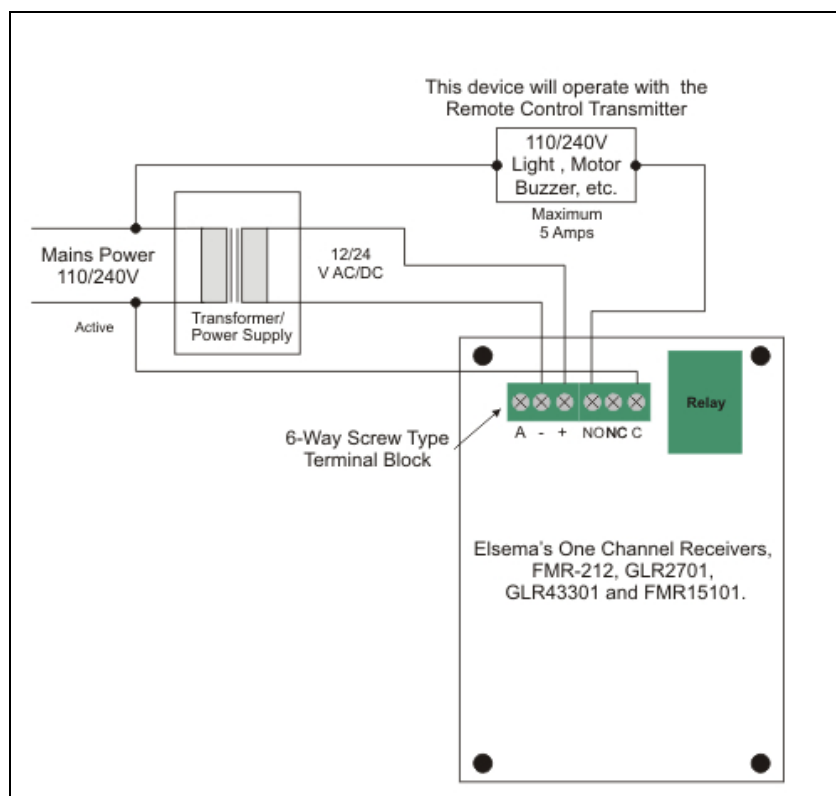
**Technical Data**

Power Supply	10 - 28 VAC Can use Elsema AC power supply PP12 or PP24
Current Consumption	15mA stand by at 12 VDC; 40mA if relay is "ON" at 12VDC
Receiving Frequency	27.145MHz (Other freq. available: 27.045, 27.195 & 27.455MHz. NB. 27.455 freq. is not available for Australia )
Type of Crystal Used	26.690MHz, 3rd overtone, 20pF, 30ppm at 0-50°C
IF Freq	455kHz
Selectivity	At least -40dB at ±10kHz
Sensitivity	Better than 1uV (for transistor to switch on)
Type of demodulation	Narrow-bandwidth Frequency Modulation (FM)
Band Width	±2.5kHz
Decoding System	Onboard 12-way coding switch (4096 digital channels)
Output	Change over relay output, rated at 5A / 240V
Relay Contacts	Common (C) Normally Close (NC) & Normally Open (NO)
Connections	6-way screw type terminal block
Antenna	50Ω, 27MHz Antenna, Elsema ANT27M for maximum performance A piece of approximately 300mm wire can be used for short range applications
Dimensions	96 x 70 x 20mm
Mounting	Clip into a QM100 Quick Mount or UBB plastic case
Weight	58g
Compatible Transmitters	All Elsema type FMT-... series

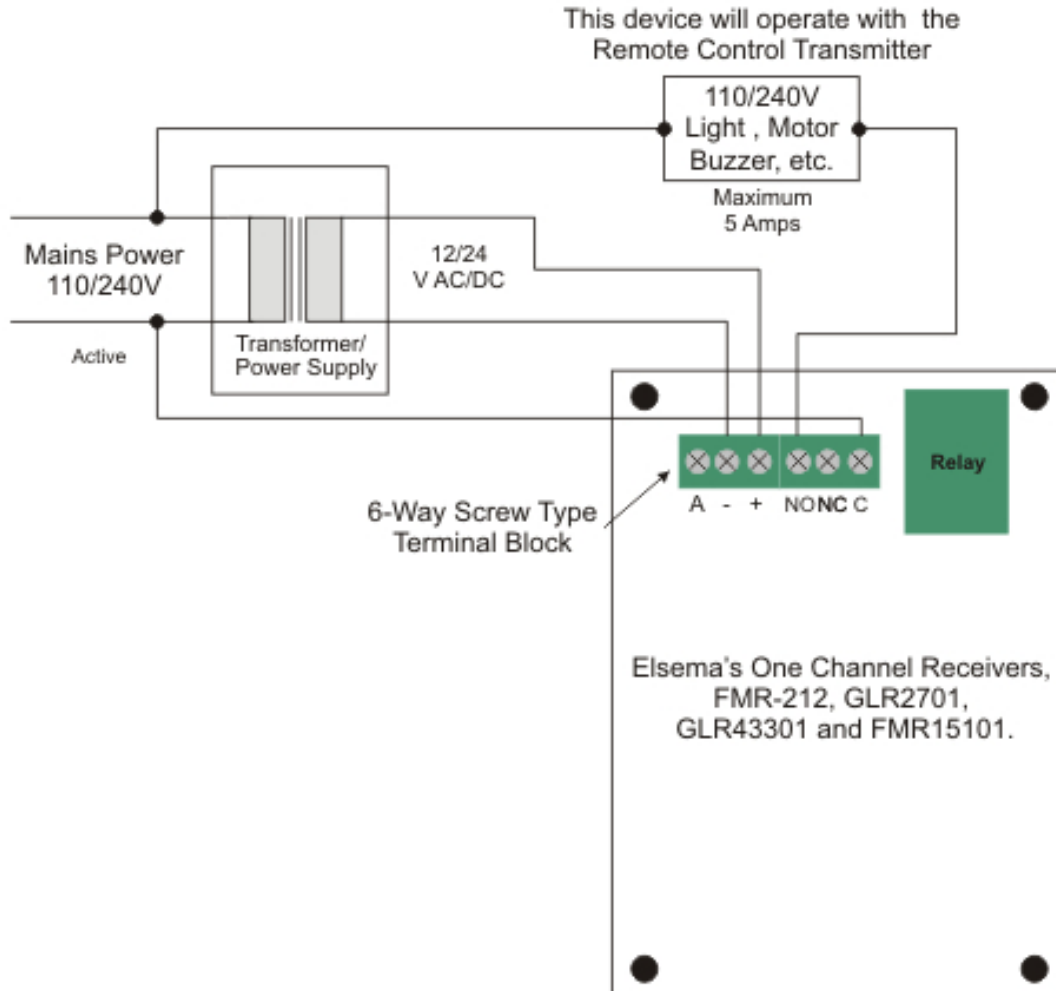
**FMR-212 Block Diagram**



**FMR-212, 240/110 VAC Application**



**FMR-212, 12/24 V Application**



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