

# ELS1135 (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

## 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.

Elsema's ANT27MHz series antennas will give a reliable control range of up to 200 metres, when used with Elsema's FMT-301, FMT-302 and FMT-304 transmitters.

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" (latching mode) the output relay is toggled with every correct incoming signal. This enables the direct use for switching on/off lights etc.

If a "Security latching " 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

- KEY-301, KEY-302, KEY-304
- FMT-301, FMT-302, FMT-304
- FMT-401, FMT-402, FMT-404
- FMT-312E, FMT-31202E, FMT-31204E

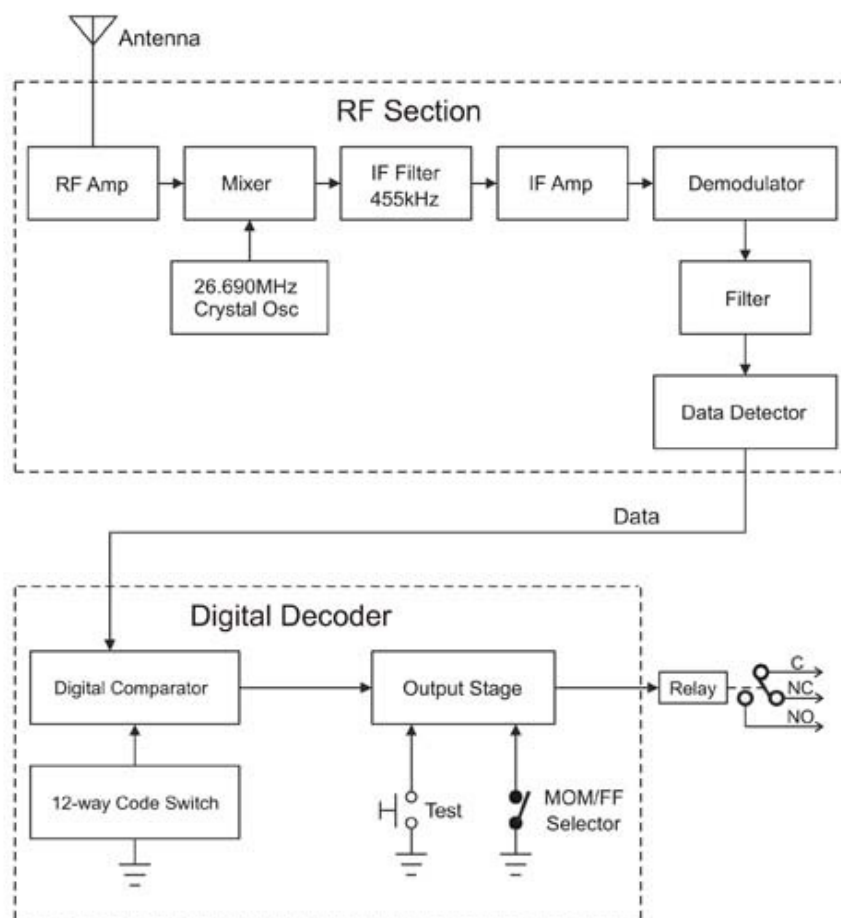
**Products in the Range**

				
<p><b>FMR-201</b> Single Channel Receiver with Open Collector Output</p>	<p><b>FMR-203</b> 2-Channel PCB Strip Receiver</p>	<p><b>FMR-212</b> Single Channel Receiver with Relay Output</p>	<p><b>FMR-212T</b> Single Channel Receiver with Timer Controlled Relay Output</p>	<p><b>FMR-24001</b> Single Channel 240VAC Receiver with Relay Output</p>
				
<p><b>FMR-24002</b> 2-Channel 240VAC Receiver with 2 Relay Outputs</p>	<p><b>FMR-202</b> 2-Channel Receiver with 2 Relay Outputs</p>	<p><b>FMR204-12</b> 4-Channel 12V Receiver with 4 Relay Outputs</p>	<p><b>FMR204-24</b> 4-Channel 24V Receiver with 4 Relay Outputs</p>	<p><b>FMR-204/16</b> 4/16 Channel Receiver with Open Collector Outputs</p>
				
<p><b>FMR-232R</b> Computer Receiver with 2 Relay Outputs &amp; Database Software</p>	<p><b>FMR-100</b> Receiver for Multi-Channel System</p>	<p><b>RXD-101</b> Decoder for Multi-Channel System</p>		

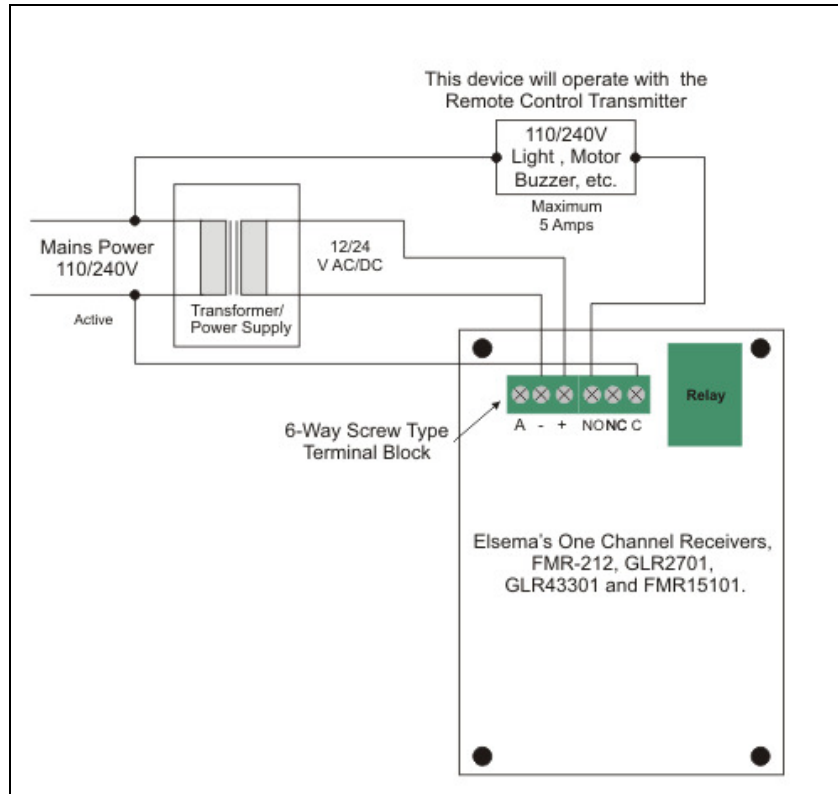
**Technical Data**

Power Supply	10 - 28 Volts AC or DC Can use Elsema AC power supply PP12 or PP24
Current Consumption	15mA stand by at 12 VDC; 40mA if relay is "ON" at 12Volts DC
Receiving Frequency	27.145MHz (Other frequencies available: 27.045, 27.195 & 27.455MHz. NB. 27.455MHz is available for Europe Only)
Sensitivity	Better than 1uV (for the relay to switch on)
Type of demodulation	Narrow-bandwidth Frequency Modulation (FM)
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	Elsema's ANT27MHz series antennas or piece of approximately 300 mm long wire 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-... 27MHz series and KEY-3.. series

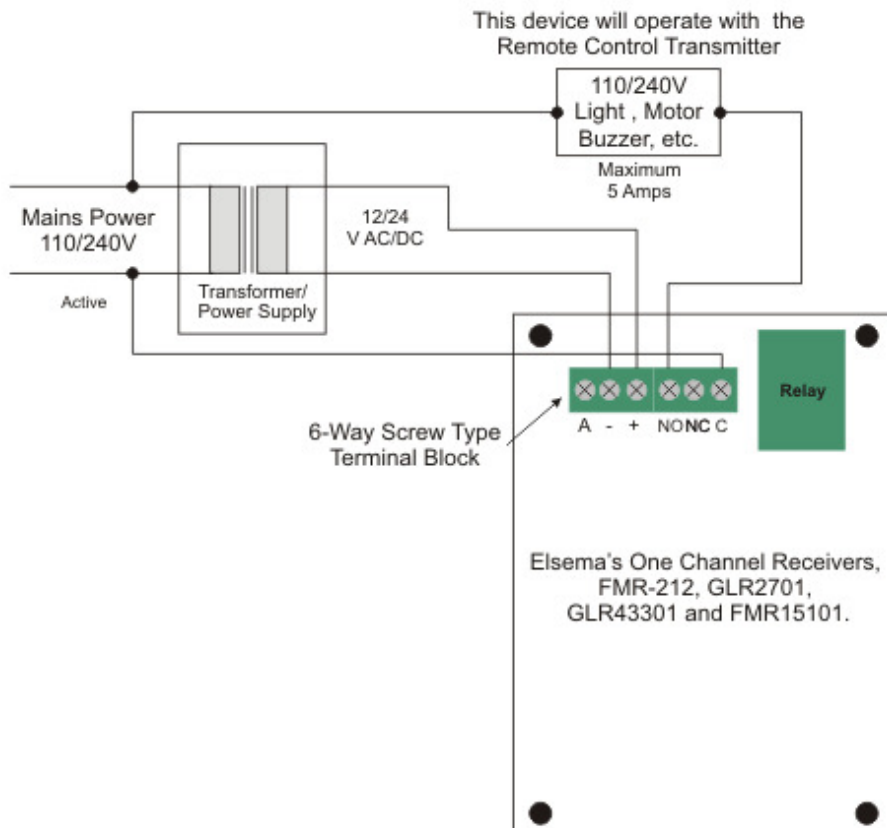
**FMR-212 Block Diagram**



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



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



## REGULATORY COMPLIANCE STATEMENTS

### Australian and New Zealand Users

This device has been tested and found to comply with the limits for a Class [B] digital device, pursuant to the Australian/New Zealand Electromagnetic compatibility (EMC) standard AS/NZS 61000.6.3 set out by the Spectrum Management Agency.



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