

FMR204-12 and FMR204-24

27MHz Receiver with 4 Channels, 12 or 24 Volt Supply

Features

- Crystal Controlled
- 4-Channel
- Digitally Encoded

Applications

- Remote control of garage doors, gates, lights, alarms

Description

The FMR204-12 and FMR204-24 are crystal controlled four-channel receivers, comprising of receiving, decoding and relay-output sections. A specially designed MICRO-PROCESSOR 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 10-way code switch on the receiver (up to 1024 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. Code switches eleven and twelve are addressed by the four channels. The four channels are binary encoded on eleven and twelve.

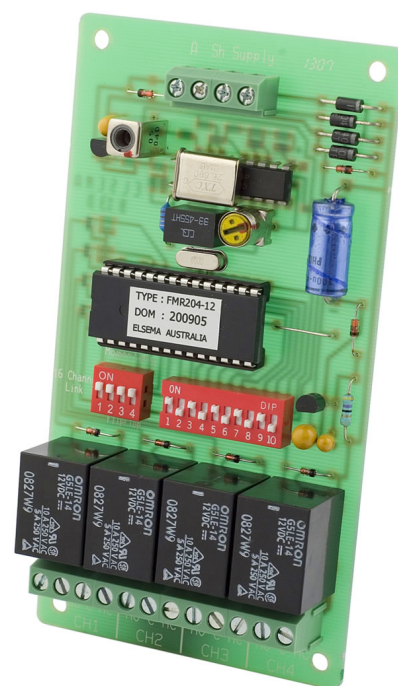
The supply and antenna connections to the receiver are via a four-way screw-type terminal block, with a separate twelve-way terminal block for the relay connections.

The receiver can be clipped to a Quick Mount enabling the receiver to be easily mounted against walls, roof etc.

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.

The four-way code switch allows individual control of each relays output mode. In the momentary mode (MOM) the output relays are only activated while the correct signal is received. In the flip/flop mode ("FF") the output relays are toggled with every correct incoming signal. This enables the direct use for switching on/off lights etc. In flip/flop mode, the relays are off at the initial "power-up".

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 de tuning.



Accessories

FMR204-12Q & FMR204-24Q with Quick Mount QM100
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FMR204-12E & FMR204-24E with Weather Proof Case C160
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Plastic Case C160



Quick Mount QM100

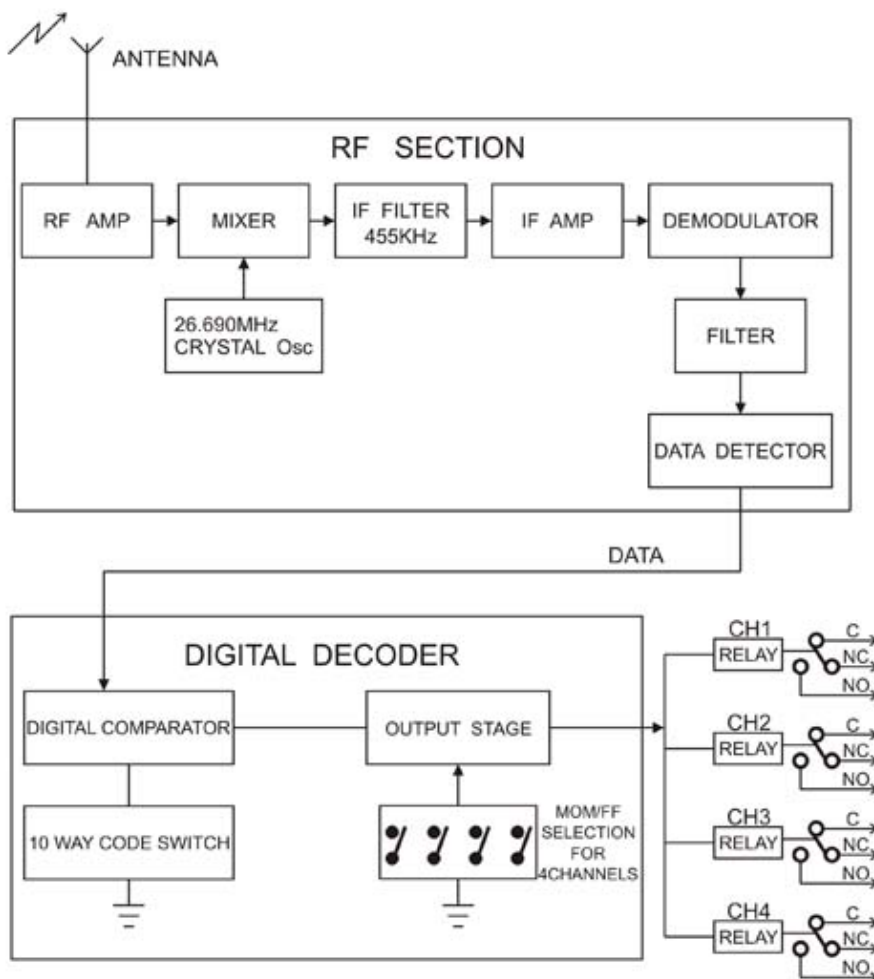
Products in the Range

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

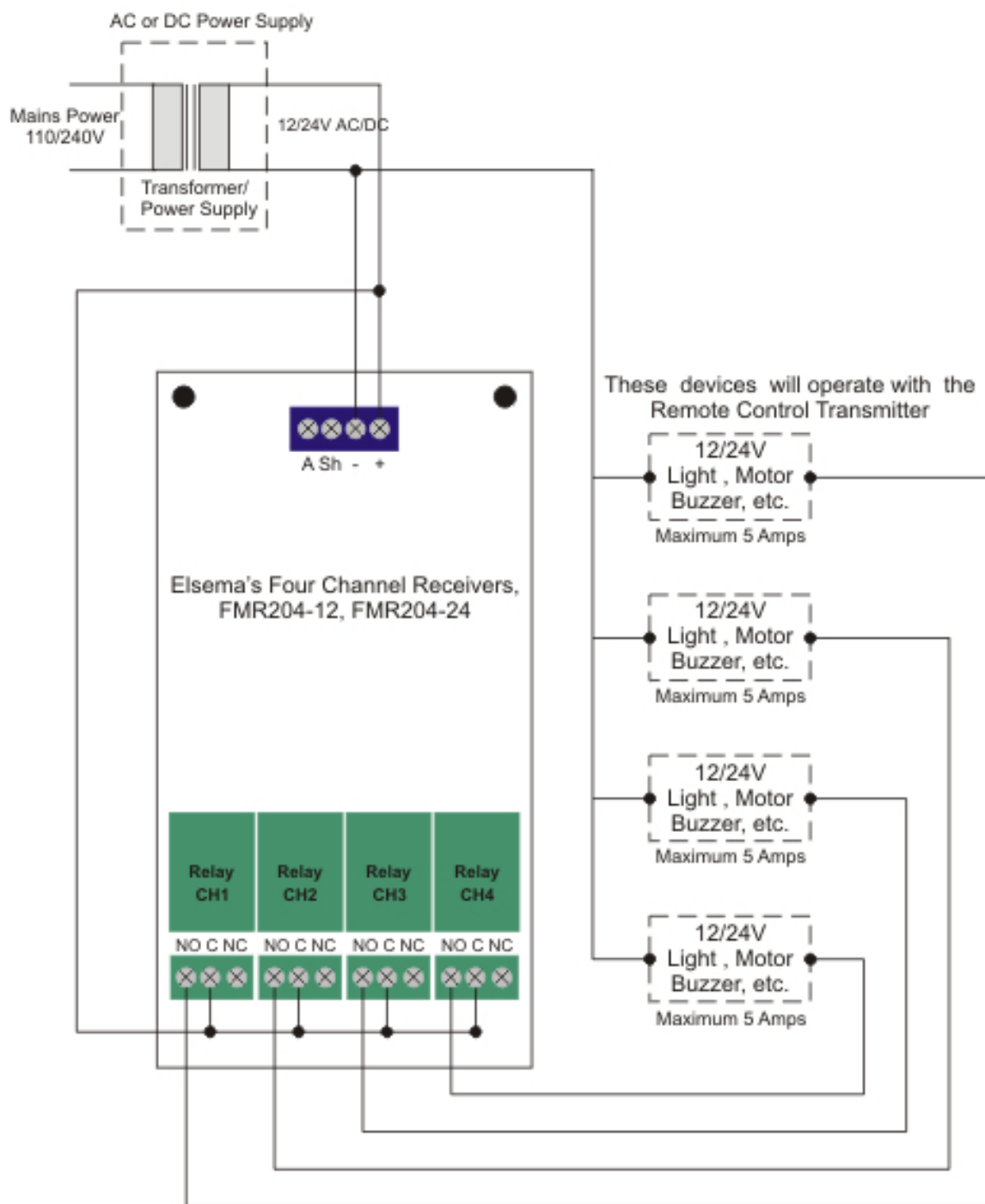
Technical Data

Supply Voltage	FMR204-12: 10 - 14 Volts AC or DC. Can use Elsema 12Volts AC Power Supply (PP12) FMR204-24: 22 - 28 Volts AC or DC. Can use Elsema 24Volts AC Power Supply (PP24)
Current Consumption	FMR204-12: 13.5mA Stand-by; 120mA if 4 relays on FMR204-24: 13.5mA Stand-by; 80mA if 4 relays on
Receiving Frequency	27.145MHz (Other frequencies available: 27.045, 27.195 & 27.455MHz. NB. 27.455MHz is available for Europe Only)
Type of Crystal Used	26.690MHz, 3rd overtone, 20pF, 30ppm at 0-50°C
IF Freq	455kHz
Selectivity	At least -40dB at ± 10 kHz
Sensitivity	Better than 1 μ V (for relay to switch on)
Type of demodulation	Narrow-bandwidth Frequency Modulation (FM)
Band Width	± 2.5 kHz
Decoding System	Onboard 10-way coding switch (1024 digital channels)
Output	4 change over relay output, rated at 5A / 240V
Relay Contacts	4 sets of: Common (C) Normally Close (NC) and Normally Open (NO)
Connections	Supply & Antenna: 4-way screw type terminal block Four Relays: 12-way screw type terminal block
Antenna	Elsema's ANT27MHz series antennas or piece of approximately 300 mm long wire for short range applications.
Dimensions	130 x 70 x 20mm
Mounting	Clip into a QM150 Quick Mount or C160 plastic case
Weight	112g
Compatible Transmitters	All Elsema type FMT-... 27MHz series and KEY-3.. series

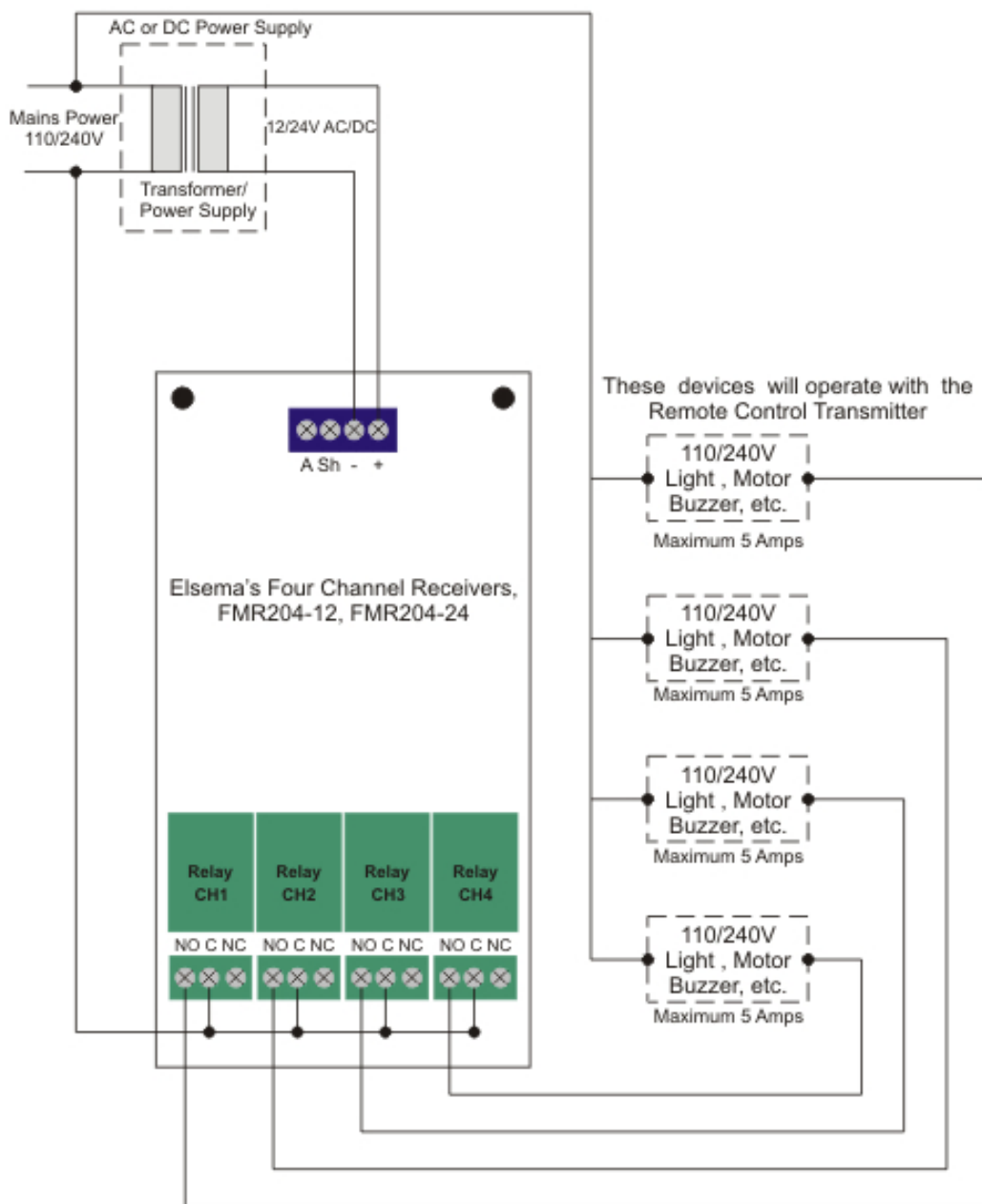
Block Diagram



FMR204-12 & FMR204-24 12/24 VDC Application



FMR204-12 & FMR204-24 240/110 VDC Application



Manufactured by

Elsema Pty Ltd
 3/10 Hume Rd, Smithfield
 NSW 2164
 Ph: 02 9609 4668
 Fax: 02 9725 2663
 Website: <http://www.elsema.com>