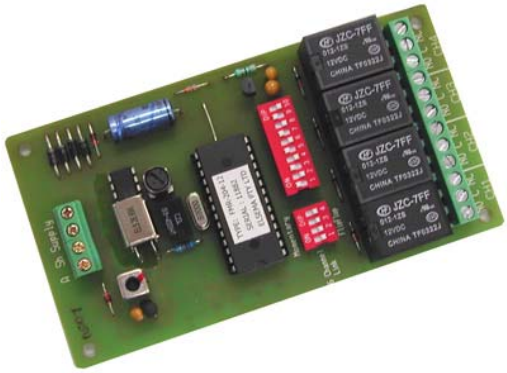
FMR204-12 and FMR204-24

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. 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, FMT-304 transmitters. If a CB-Antenna is used, the shield of the cable must be connected to the "Sh terminal".

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.

Products in the Range

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

Accessories

Plastic Case C160

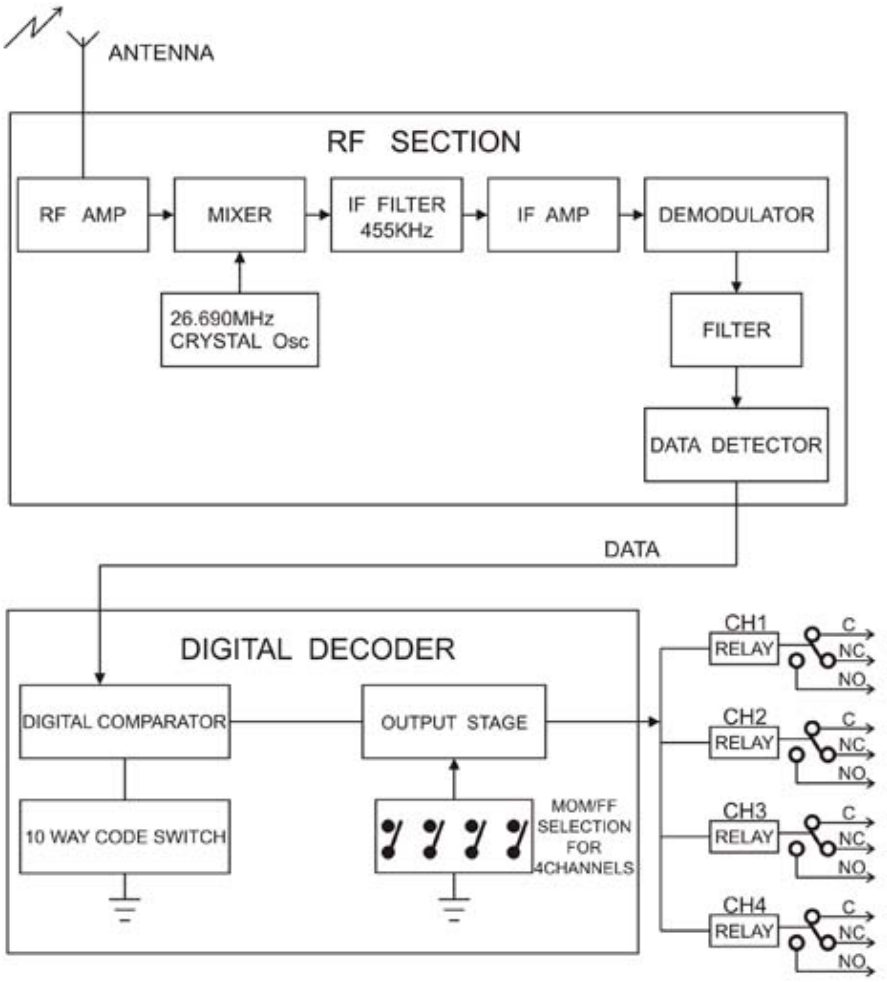
Quick Mount QM100

Technical Data

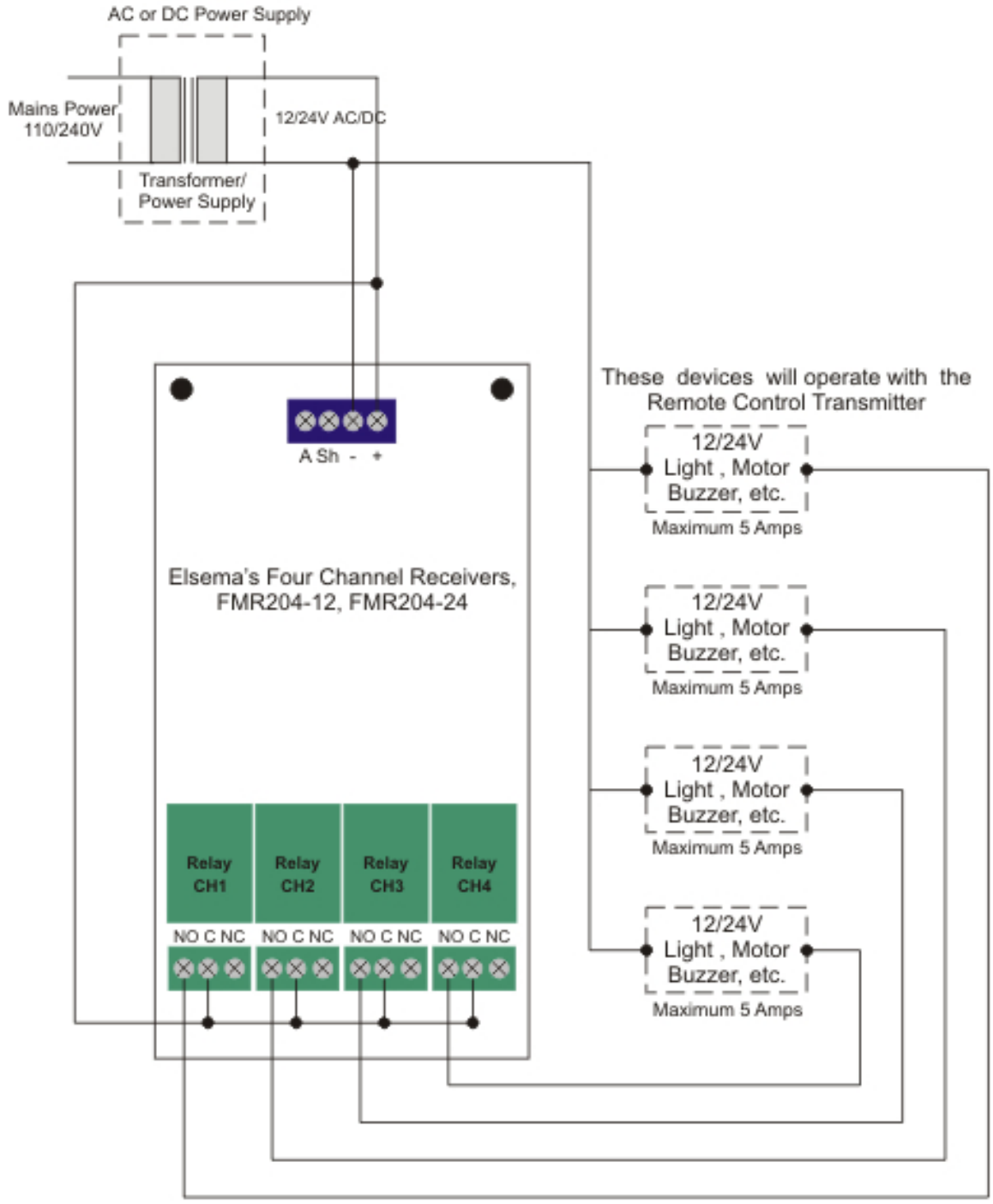
Supply Voltage	FMR204-12: 10 - 14 VAC/DC Can use Elsema 12V AC Power Supply (PP12) FMR204-24: 22 - 28 VAC/DC Can use Elsema 24V Ac Power Supply (PP24)
Current Consumption	FMR204-12: 13.5mA Stand-by; 120mA if 4 relays on FMR204-24: 13.5mA Stand-by; 80mA if 4 relays on
Receiving Frequency	27.145MHz (Other 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 relay to switch on)
Type of demodulation	Narrow-bandwidth Frequency Modulation (FM)
Band Width	±2.5kHz
Decoding System	Onboard 10-way coding switch (1024 digital channels)
Output	4 Open Collector NPN transistors (BC337)
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	50 ohms, 27MHz CB-Antenna or approximately 300mm 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	FMT-... series

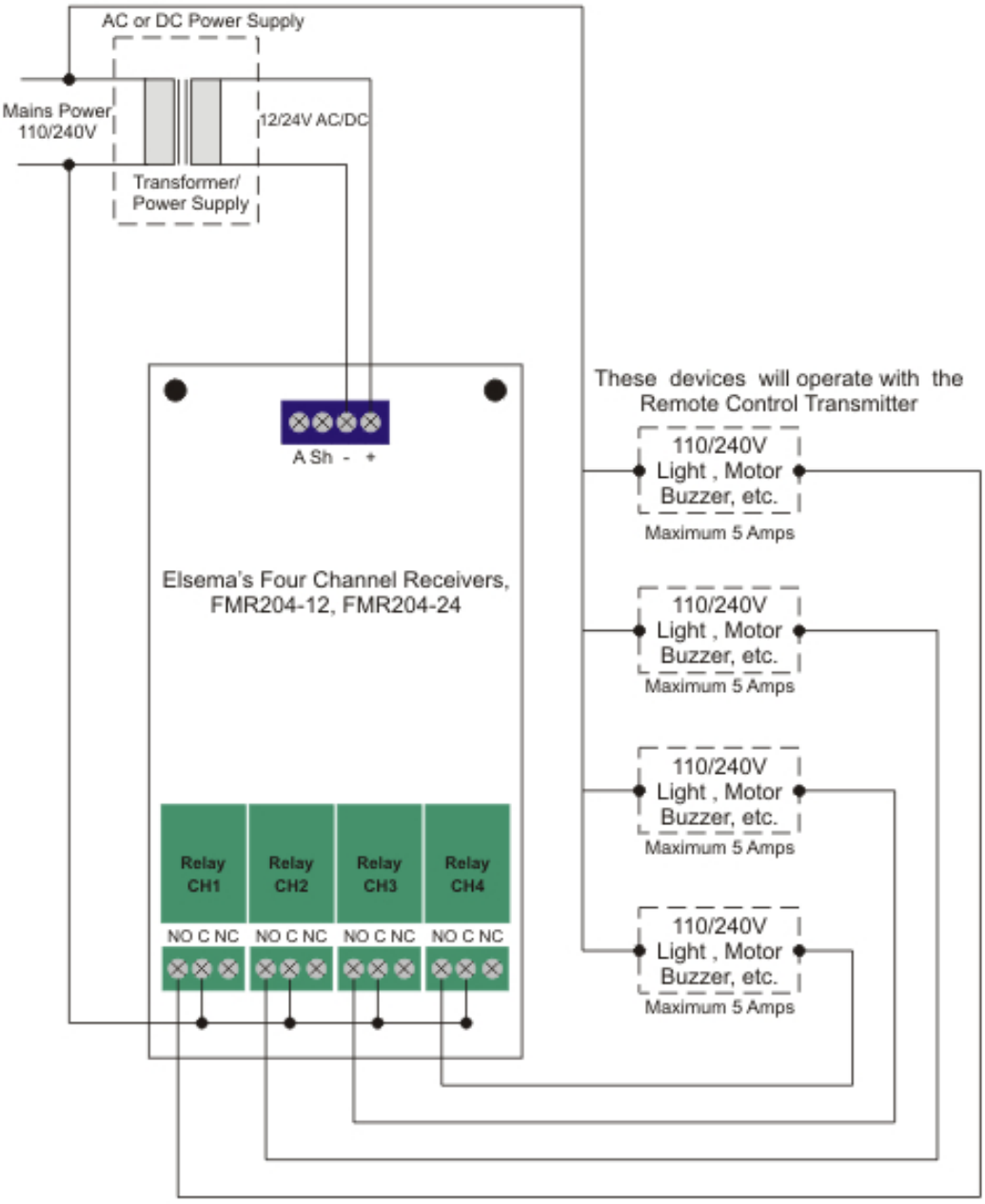
Block Diagram



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



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



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