

GLR43301

Single Channel 433MHz Gigalink™ Receiver with Timer Controlled Relay Output

Features

- Wide supply connection – 10.0 to 28.0 Volts AC/DC
- Highly sensitive receiver input stage. When used with GLT433... transmitters an operating range of 350 metres (980 ft) is possible.
- Eight open collector outputs. All outputs can be operated simultaneously.
- Crystal controlled for high stability and performance.
- Uses micro-controller technology that can be re-programmed to suit unique applications.
- Momentary, flip-flop, timed and latching output modes can be selected by the user. Changing the settings on the four-way dip switch does this
- Power ON LED indicator



Applications

- Automatic gates.
- Security systems.
- Timer controlled outputs.
- Simple on/off functions.

Description

The GIGALINK™, GLR43301 is the **most advanced Remote Control technology** available in the world today. GIGALINK™ is an invention that has revolutionised the entire Remote Control technology including Elsema's earlier version of FMT- ... and FMR- ... series.

The GLR43301 state-of-the-art invention brings a new dimension in the world of Remote Control technology in domestic, **commercial and industrial** applications.

The innovative microcontroller technology replaces the traditional dip switch coding which **eliminates** any possible **code grabbing**. Special features such as over four billion code combinations and ability to program any number of transmitters to a receiver adds up to the most advanced and secure Remote Control available.

The receiver has a relay output that is activated when the GLR43301 receives the correct code from the GIGALINK™ transmitter. The relay out has voltage free contacts. Contacts available are “C” Common, “NC” Normally Closed and “NO” Normally Open.

Code Programming

The microcontroller built-in code programming system automatically selects the programming mode that provides flexibility in programming each receiver channel to different transmitter channels. In programming mode the receiver sends a random code to program the transmitter channel(s). This is known as reverse programming.


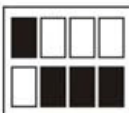
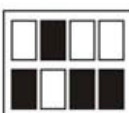
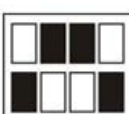





Momentary joining the two CC pins on the receiver board sets all channels to a random code. To program the receiver to the transmitter channel(s) follow the steps outlined in the receiver instructions.

Unique Code System

The microcontroller EEPROM allows large volume users to have a unique code. This enables Elsema to offer OEM manufacturers “their own” radio control.

Changing the Four-Way Dip Switch

The GLR43301 has a 4-way dip switch which allows the user to select between several different output modes. This is shown below:

DIP Switch Mode Settings The output relay will respond in the following manner when receiving the correct signal from a transmitter	
1 2 3 4 	"Momentary": Relay on, only while correct signal is received
	"Flip-Flop": Relay alternates at every correct incoming signal
	"Delayed Off 1": Relay on, but delayed off for 1-10 seconds, adjustable by trimpot
	"Delayed Off 2": Relay on, but delayed off for 10-300 seconds, adjustable by trimpot
	"Pulsing": Relay will pulse at 1Hz for 10-300 seconds, adjustable by trimpot
	"Latching On": Relay will energize until supply to receiver is momentarily interrupted
	"On-Off": This mode requires a 2-channel Tx. Channel 1 will always energize the relay Channel 2 will always de-energize the relay <i>To use this mode you need to do channelised code programming. Do not use single code programming.</i>
	"On-Off": This mode requires a 4-channel Tx. Channel 3 will always energize the relay Channel 4 will always de-energize the relay <i>(Mode added November 2006)</i> <i>To use this mode you need to do channelised code programming. Do not use single code programming.</i>
	"Test": Relay is energized, for test purpose only

AC/DC Supply and Antenna

AC/DC power supply and antenna is connected to the terminal block marked + and -. The shield of the antenna coaxial cable should be connected to the minus (-) terminal block.

Do not connect the AC/DC supply to the 2.5-mm coding socket since connection may damage the microcontroller.


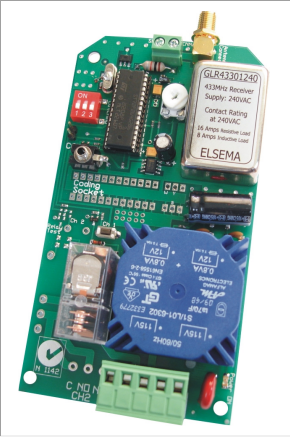

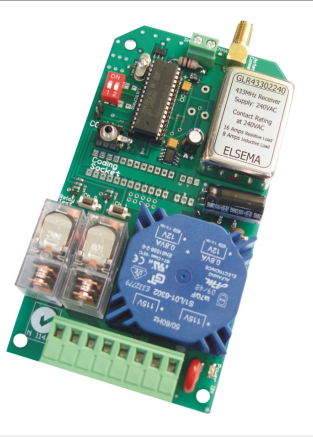
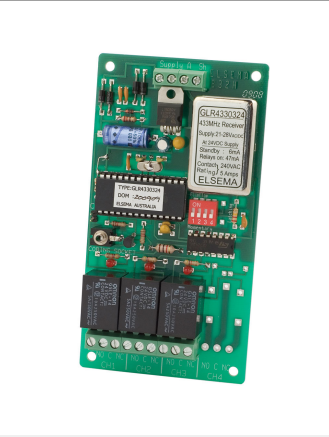





Code Programming

The microcontroller built-in code programming system automatically selects the programming mode that provides flexibility in programming each receiver channel to different transmitter channels. In programming mode the receiver sends a random code to program the transmitter channel(s). This is known as reverse programming. Momentary joining the two CC pins on the receiver board sets all eight channels to a random code. To program the receiver to the transmitter channel(s) follow the steps outlined in the receiver instructions.

Unique Code System

The microcontroller EEPROM allows large volume users to have a unique code. This enables Elsema to offer everyone “your own” radio control.

Products in the Range

				
GLR43301 1-Channel	GLR43301240 1-Channel, 240V	GLR43302 2-Channel	GLR43302240 2-Channel, 240V	GLR4330312 GLR4330324 3-Channel, 12 / 24V
				
GLR4330412 GLR4330424 4-Channel, 12 / 24V	GLR43308 8-Channel	GLR4330812 GLR4330824 8-Channel, 12 / 24V Relay Output	GLR43301SS GLR43302SS 1,2 Channel, receiver with female connector	GLR43301SST GLR43302SST 1,2 Channel with a 5-way terminal block.

Technical Data

Supply Voltage	11.0 to 28.0 VDC or 10.0 to 28.0 VAC Can use Elsema AC power pack (PP12 or PP24). Supply lines should be less than 3 metres long to comply with radio frequency authorities.
Current Consumption	8 mA on standby at 12 VDC supply 45 mA if relay "ON" at 12VDC supply
Receiver Type	Single Conversion Superheterodyne
Receiving Freq	433.920MHz (Other frequencies available on request. Refer to the table below)
Type of Crystal	6.775MHz, Fundamental, 20pF, 30ppm
Operating Temperature Range	-5 to 50°C
IF Freq	320kHz
Selectivity	3dB at ±20kHz
Sensitivity	Better than 1.0uV (For output to switch on)
Type of Demodulation	Amplitude Shift Keying (ASK)
Decoding System	Microcontroller based 96-bit word
Code Combinations	4,294,967,296
Outputs	Change over relay output, rated at 8 Amps/240 Volts
Connections	6-way screw type terminal block
Antenna	Elsema's ANT433MHz series antennas or piece of approximately 690 mm long wire for short range applications.
Dimensions	96 X 70 X 20 mm
Mounting hole size	3.97 mm or 5/32"
Weight	70g
Useable Transmitters	All Elsema Type 433MHz GLT-... series

Available Frequencies

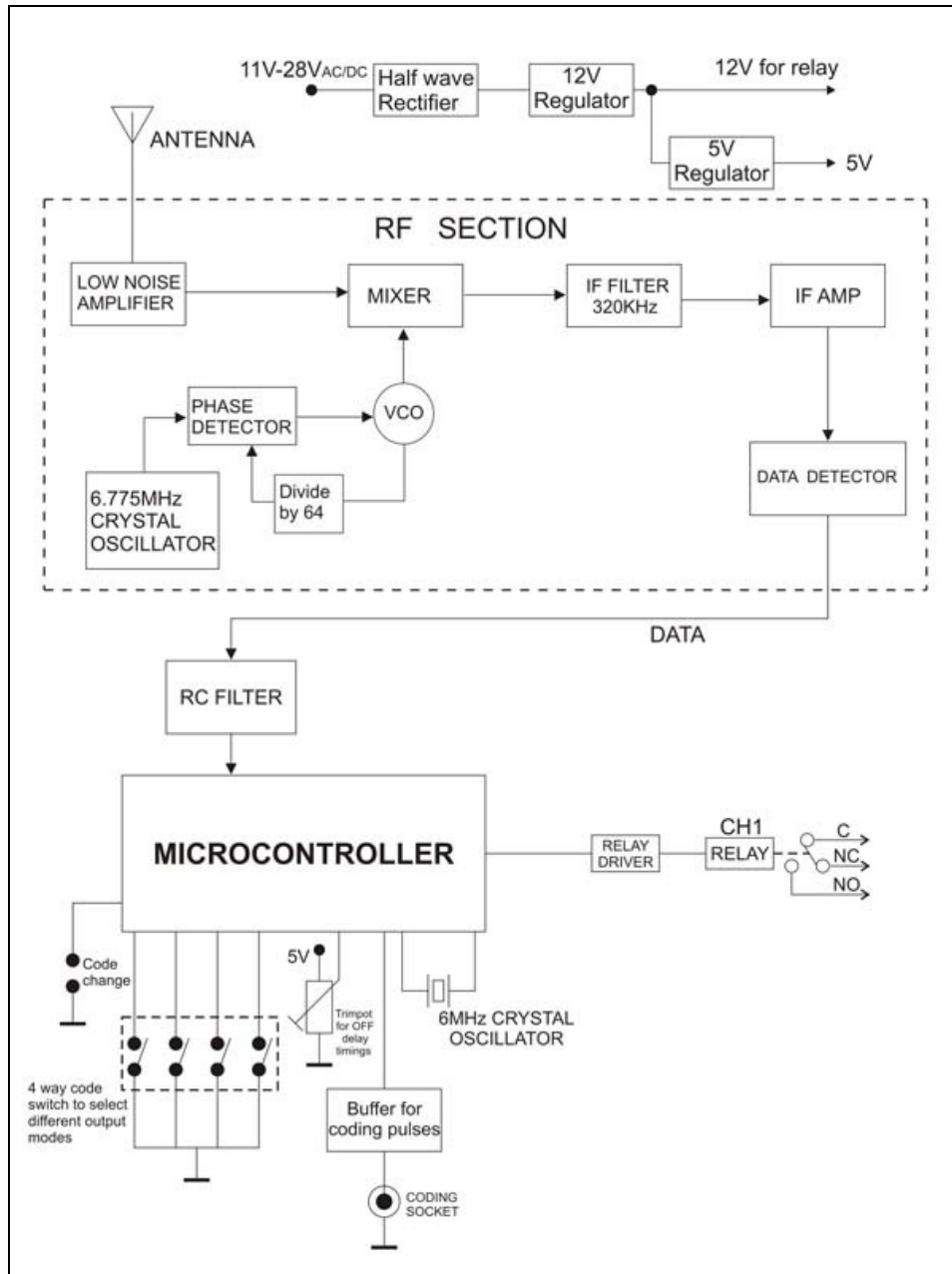
SF2	433.664 MHz
SF3	433.408 MHz
SF4	433.152 MHz
SF5	434.688MHz
SF6	434.432 MHz

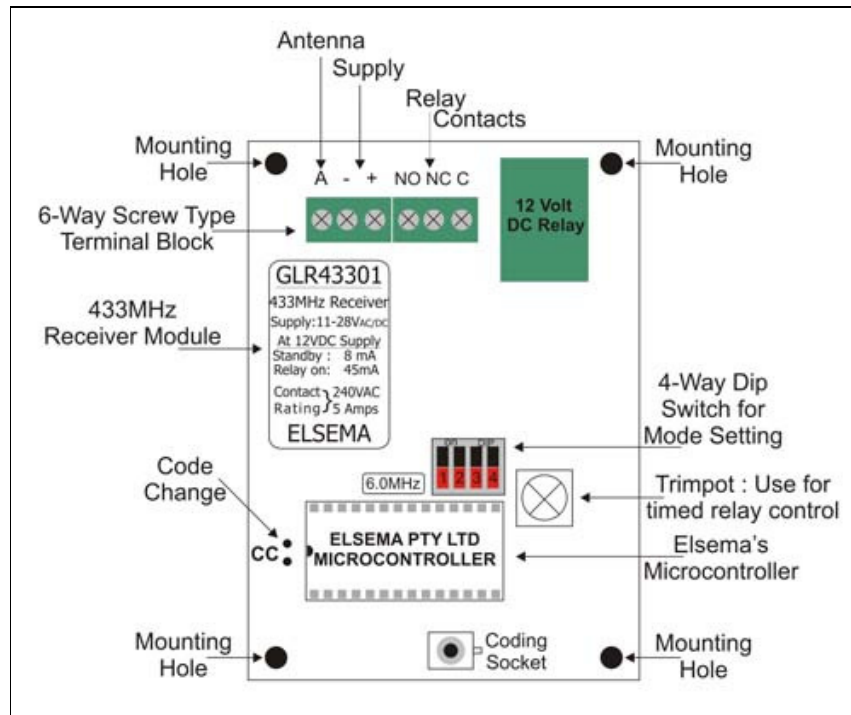
Special Frequency products can be made upon request. There is a minimum quantity order of 10. Please quote Correct SF number when ordering transmitters on special frequencies.

Case

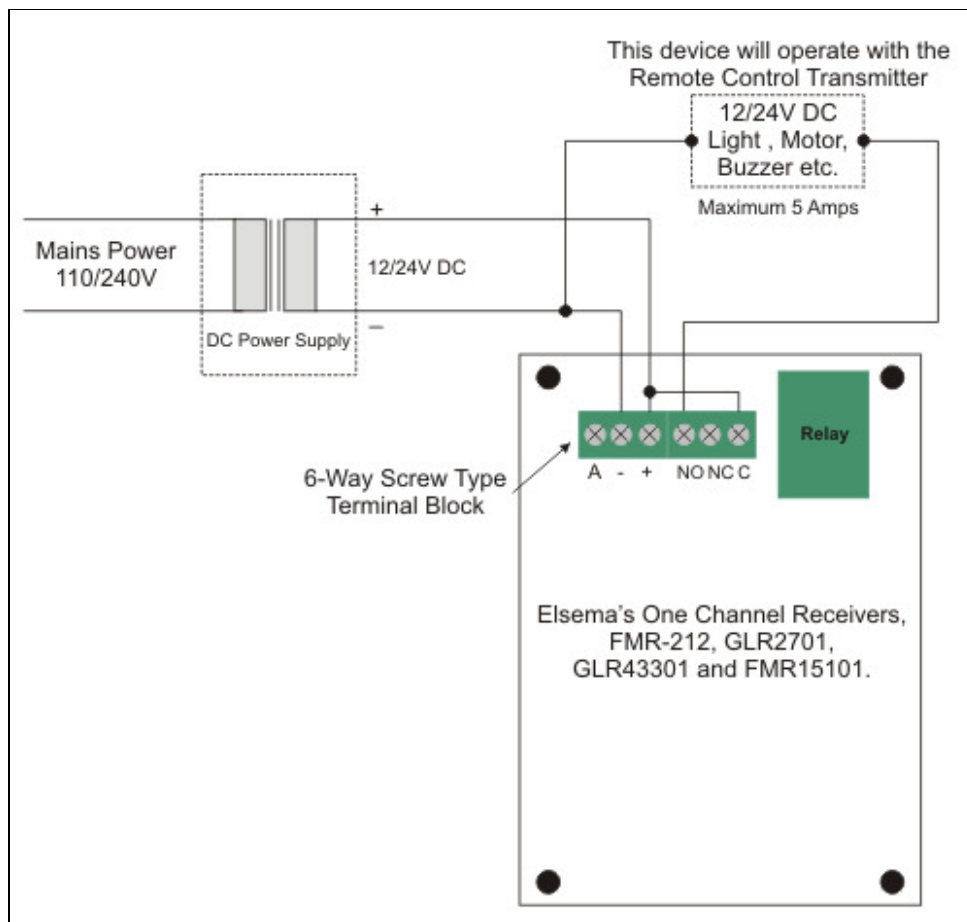
The GLR43301 can be supplied without a case; this allows the receiver to be integrated according to your needs. The C125 case can be used to enclose the GLR43301 receiver. The receiver with a case is known as a GLR43301E.

Block Diagram

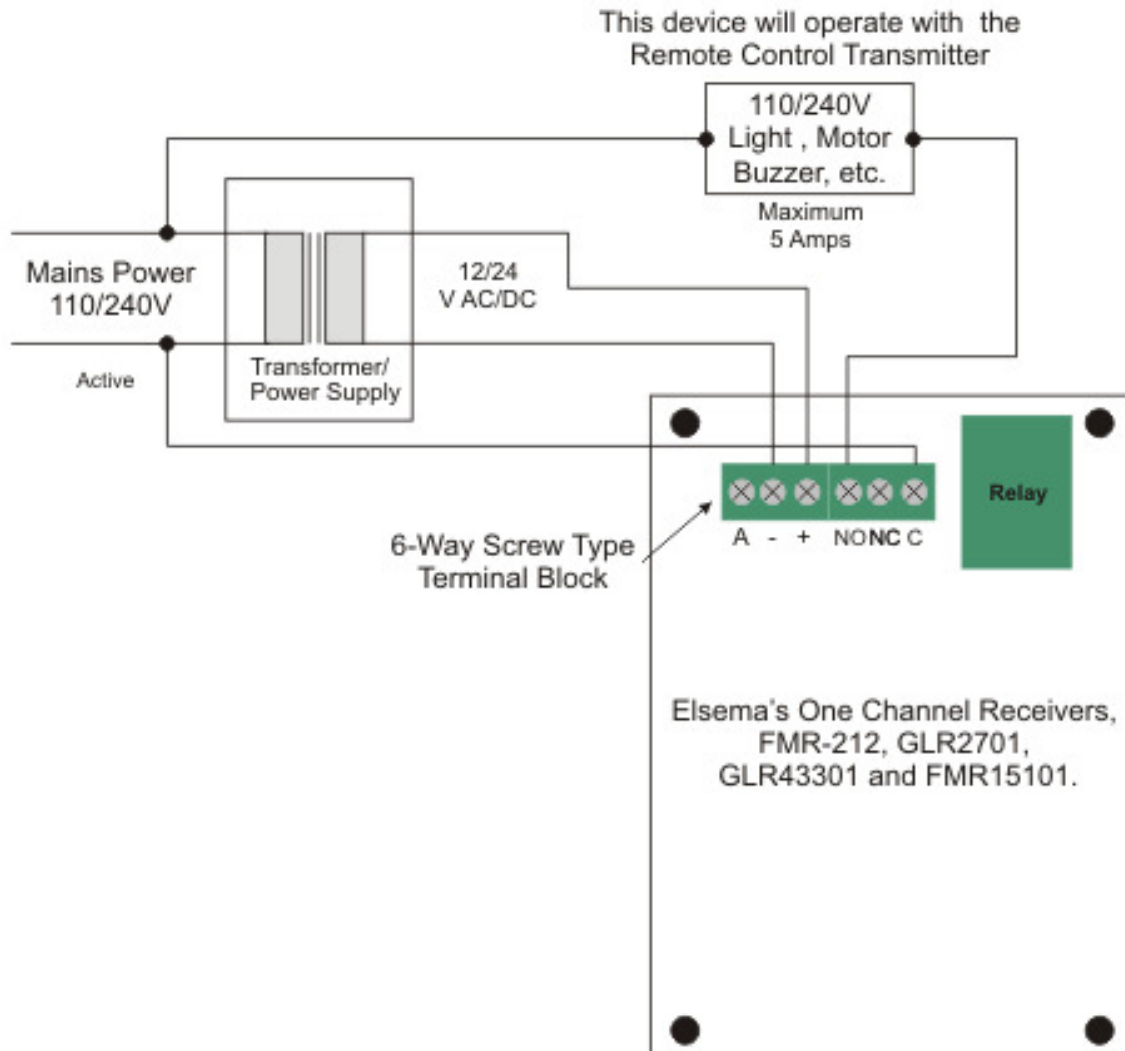




GLR43301 12/24 VAC/DC Application



GLR43301 240/110 VAC Application



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