GLR43301SS, GLR43302SS

1 & 2 Channel 433MHz Gigalink™ Receiver with Open Collector Outputs

Features

• Highly sensitive receiver input stage. When used with GLT433… transmitters an operating range of 350 metres (980 ft) is possible.
• Open collector output(s).
• Both outputs on the GLR43302SS can be operated simultaneously with the same transmitter.
• Crystal controlled for high stability and performance.
• Uses micro-controller technology that can be re-programmed to suit unique applications.
• Momentary, flip-flop and latching output modes is user selectable.

Applications

• Automatic gates.
• Security systems.
• Simple on/off functions.

Description

The GIGALINK™ , GLR43301SS and GLR43302SS are 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 GLR43301SS and GLR43302SS 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.

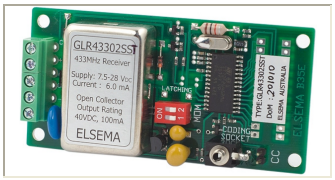
This receiver is available either with one or two channel output. The GLR43301SS has a single channel output and GLR43302SS has two channel outputs. The outputs are open collector(s) and are switched to ground when the receiver receives the correct code from the GIGALINK™ transmitter.

The GLR43301SS and GLR43302SS are available with either a terminal block or a female connector.

The screw type terminal block is used to connect the supply and the antenna. The ordering code for terminal block is GLR43301SST or GLR43302SST.

The six-way female connector is used to integrate a 433MHz receiver onto a printed circuit board. The six-way male connector is soldered onto the printed circuit board, requiring a 433 MHz receiver. The male connector is available from Elsema as a Nylon 6-way male low profile connector, part number 6WLP or high profile connector part number 6WHP. See design dimensions page for more details.

Options Available

			
GLR43301SS 1-Channel receiver with female connector	**GLR43301SST** 1-Channel receiver with a 5-way terminal block.	**GLR43302SS** 2-Channel receiver with female connector	**GLR43302SST** 2-Channel receiver with a 5-way terminal block.

Code Programming - Single

During single code programming, the 2-way dip switch selects the channel to be programmed. The table below shows the setting to select a different channel.

Dip Switch 1	Dip Switch 2	Setting Channel (Output Relay)
OFF	OFF	1
ON	OFF	2

After selecting the correct channel, the receiver channel is ready to be single code programmed.
Follow the steps outlined in the receivers instruction sheet titled single code programming to complete the code programming.

Code Programming - Channelised

If all the receiver channels are to be programmed onto a multi channel transmitter, then follow the steps outlined in the receivers instruction sheet titled channelised code programming. This does not require the user to set the 2-way dip switch since all receiver channels will be programmed sequentially onto the transmitters channels.

The receiver power must be connected when single or channelised code programming.
When programming is completed and the GIGALINK cable is removed from the multi channel receiver-coding socket, the 2-way dip switch is used to select different output modes. This is described below.

Different Modes for the Output

Modes are user selectable from the 2-way dipswitch. Dipswitch 1 corresponds to output channel 1 and dipswitch 2 corresponds to output channel 2.

Momentary Mode	If the dipswitch is “off” the relay will be in momentary mode.
Flipflop Mode	If the dipswitch is “on” the relay will be in flipflop mode.
Latching Mode	If latching is required (Relay stays on until power is removed) the latching link should be inserted and soldered into the two holes to the right of the 2-way dipswitch. This will enable the corresponding outputs to latch.

Code Programming

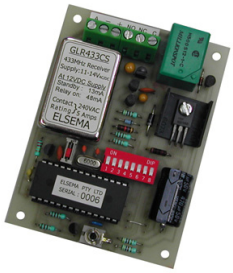
The microcontroller built-in code programming system automatically selects the programming mode that provides flexibility in programming each receiver channel to different transmitter channels. In programming mode the receiver sends a random code to program the transmitter channel(s). This is known as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

Products in the Range

				
GLR43301 1-Channel	**GLR43301240** 1-Channel, 240V	**GLR43302** 2-Channel	**GLR4330312** **GLR4330324** 3-Channel, 12 / 24V	**GLR4330412** **GLR4330424** 4-Channel, 12 / 24V
				
GLR43308 8-Channel	**GLR4330812** **GLR4330824** 8-Channel, 12 / 24V Relay Output	**GLR43301SS** 1-Channel, Solid State Output	**GLR43302SS** 2-Channel, Solid State Output	**GLR433CS** 1-Channel, Code Switch

Technical Data

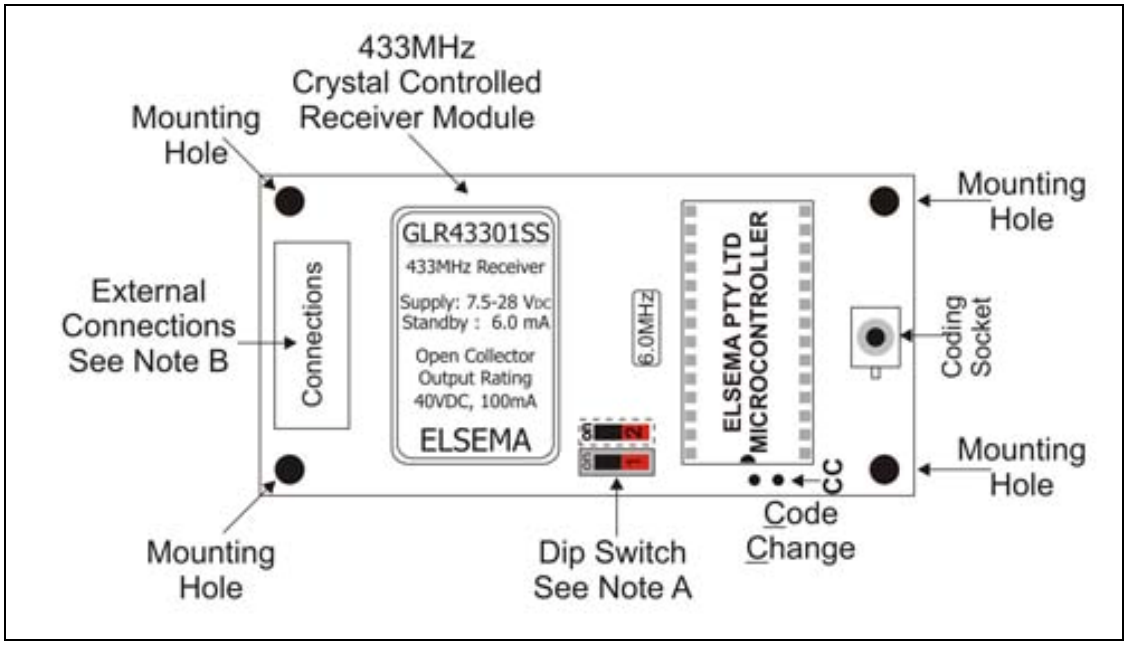
Supply Voltage	7.5 to 28.0 Volts DC. Supply lines should be less than 3 metres long to comply with radio frequency authorities.
Current Consumption	6 mA on standby at 12 VDC supply
Receiver Type	Single Conversion Superheterodyne
Receiving Freq	433.920MHz (Other frequencies available on request. Refer 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 (32-bit word 4.29 x 10^9 codes)
Code Combinations	4,294,967,296
Outputs	GLR43301SS(T): One Open Collector Output GLR43302SS(T): Two Open Collector Output
Connections	GLR43301SS & GLR43302SS: Female connector , the male connector can be soldered to a printed circuit board (Available from Elsema). GLR43301SST & GLR43302SST: Five way screw type terminal block
Antenna	Elsema's ANT433MHz series antennas or piece of approximately 690 mm long wire for short range applications.
Dimensions	88 X 43 X 15 mm
Mounting hole size	3.97 mm or 5/32"
Mounting Hole Spacing	Length 81.28 mm (3.2"), Width 35.56 mm (1.4")
Weight	GLR43301SS: 43 grams GLR43302SS: 45 grams
Useable Transmitters	All Elsema Type 433MHz GLT-... series

Available Frequencies

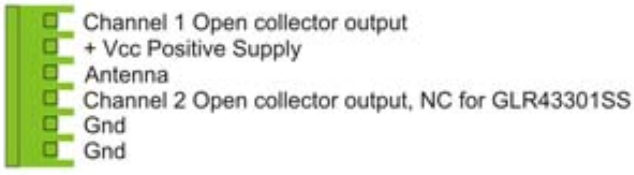
SF2	433.664 MHz
SF3	433.408 MHz
SF4	433.152 MHz
SF5	434.688MHz
SF6	434.432 MHz

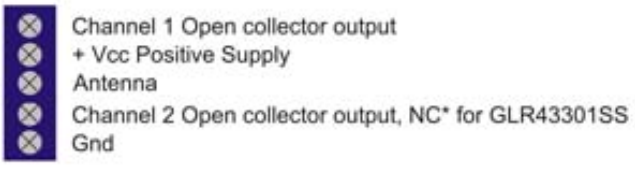
Special Frequency products can be made upon request. There is a minimum quantity order of 10. Please quote Correct SF number when ordering transmitters on special frequencies.

Block Diagram



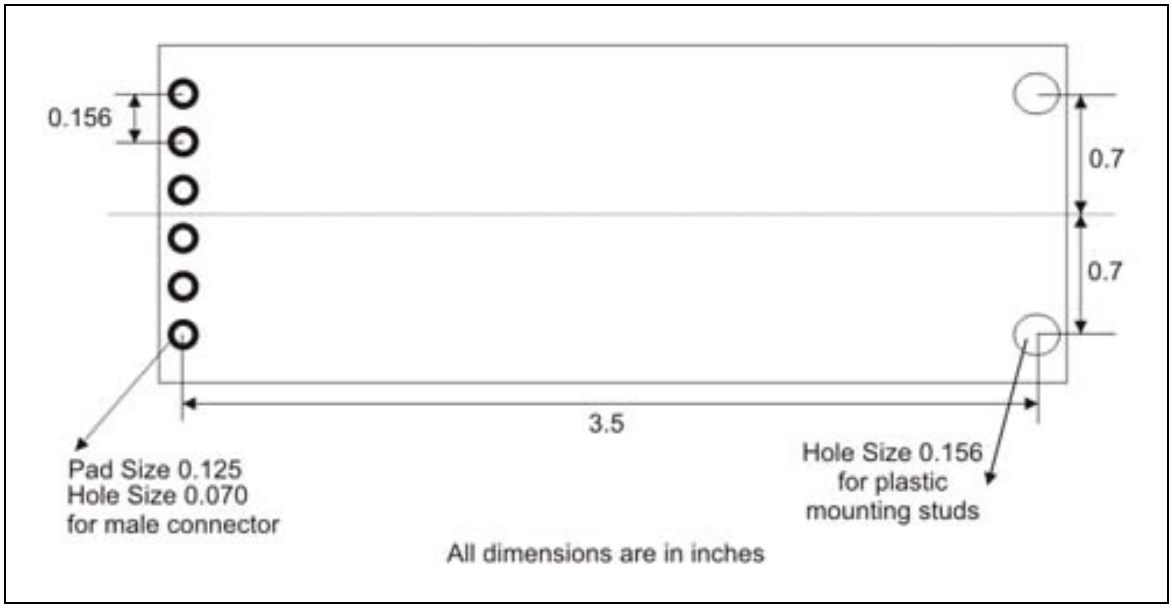
Note A	**GLR43301SS has 1-way DIP switch** **GLR43302SS has 2-way DIP switch**
Note B	**Available with Molex female connector for PCB mounting or 5-way Screw Type terminal block**





Dimensions

The dimensions below show the position the male connector and plastic mounting studs should be when designing the GLR43301SS and GLR43302SS receiver onto a printed circuit board.



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