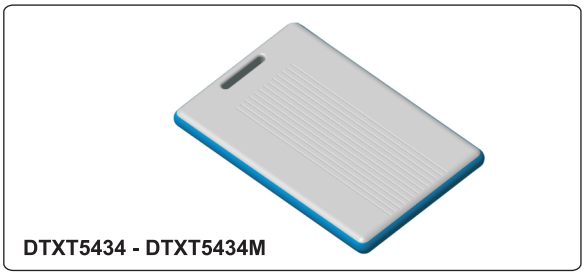
DIGITAG-LR - Stand alone version

Introduction

The DigiTagLR Receiver is designed to be used with the DigiTagLR range of active transmitters from the CDVI Group. Best performance from the transmitter and receiver will be gained when adhering to all the relevant instructions. The DigiTagLR receiver will read and decode the secure coded signals from the transmitter when in the field range of the receiver and validate this against the internal memory store of up to 30 transmitters. A single timed relay output is available on this model to signal electronic door locking or other automation equipment. The DigiTagLR receiver is equipped with a low / high gain selector and a range attenuator for further transmitter detection range reduction. The exact range is dependant on environmental conditions, mounting proximity to metal objects and battery condition of the transmitter. The DigiTagLR receiver contains an internal antenna that must not be modified as it is tuned for best performance in the factory. It must always be mounted vertically and clear of metal obstacles or mountings. Additionally an external antenna (SEA433) can be used if you need to site the receiver elsewhere or inside metallised structures. This is connected to the miniature screw terminals inside the receiver housing.

DTRR1434R



DTXT5434 - DTXT5434M

Digitag-LR Types

Digitag-LR Receiver **DTRR1434R**
Digitag-LR card Transmitter **DTXT5434**
Digitag-LR xard Transmitter w/ motion sensor **DTXT5434M**

Technical Specification

Receiver

Operating frequency .....433,92 MHz
Operating voltage .....12-30 VDC
Operating current
in stand-by .....25 mA
with relay excited .....60 mA
Range15M nominal .....(conditions dependant)
Internal memory.....30 transmitters, non volatile
Output interface .....Relay SPCO, form C
Relay contact power .....24 VA - max 24 Vac : *ONLY for SELV Circuits*
Control 1 .....high / low gain
Control 2 .....10 point attenuator
LED.....1 green and 1 red
Antenna .....Internal helical / external connection 50 Ohm
Sensitivity.....-102dBm
Operating temperature.....-10°C / +70°C

Transmitter

Operating frequency .....433,92 MHz
Modulation .....FSK
E.r.p .....5 µW
Supply.....3V
Battery CR2032

Installation Procedure

The DigiTagLR Receiver is designed to be mounted in proximity to the door or gate opening at a height of 1200 – 1400 mm. It is not recommended that the receiver is mounted over the door, but as a conventional access control reader would be.
Always mount the receiver in the upright position. The DigiTagLR receiver has an internal antenna that detects the DigiTagLR range of active transmitters most efficiently at the front and the rear of the unit. Avoid mounting the reader on or near large metal surfaces as this could cause poor reading performance, erratic transmitter detection or non-linear operation.
The receiver can not read active transmitters through metal objects and will be impeded by large dense obstacles between it and the transmitter so always think line-of-site for optimal reading performance.
Cable connections are by way of screw terminals on the bottom of the circuit board.

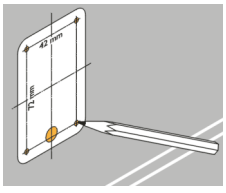


Fig. 2

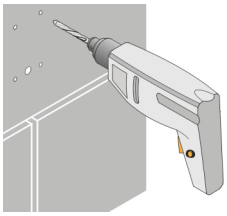


Fig. 3

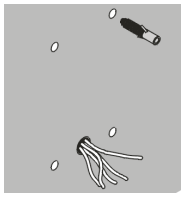


Fig. 4

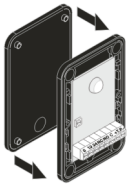


Fig. 5

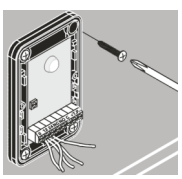


Fig. 6

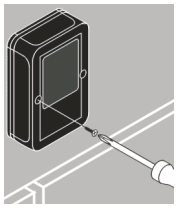


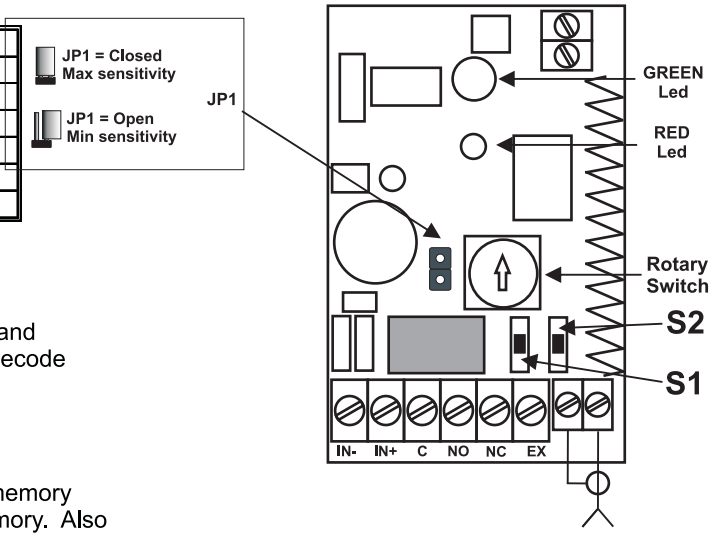
Fig. 7

Fixing the enclosure

1 - Mark the location of the fixing holes using the drilling template supplied with the receiver (Fig. 2);
2 - Drill the fixing holes.(Fig. 3) (Hole diam: 5mm) ;
3 - Locate the plugs (Fig. 4);
4 - Assemble the seal and the receiver (Fig. 5);
5 - Mount the receiver with the screws supplied (Fig. 6);
6 - Make the electrical connections and the adjustments required (see next paragraph);
7 - After the adjustments, fit the cover using the the screws supplied (Fig. 7).

Connection legend

Terminal	Type	description
IN -	Input	0 V
IN +	Input	12 - 30 Vdc
C	Output	Relay common connection
NO	Output	Relay Normally open connection
N/C	Input	Relay Normally closed connection
EX	Input / Output	Exit button input (Normally open , with IN-)



LED Indicators

The DigiTagLR receiver has 2 LED indicators. The red led is always on and indicates that power is applied to the device and it is ready to read and decode transmitter signals. The other is a tri-colour type which displays a colour dependant on its circumstances. In normal operation these colours are:

OFF = No transmitters detected in the field
RED = Transmitter detected in the field but not validated in the internal memory
GREEN = Transmitter detected in the field and stored in the internal memory. Also relay changed state. This also can mean that the exit button input (EX) has been closed for egress purposes.

Range Adjustment

The maximum range of the receiver is dependant on environmental conditions, transmitter orientation and transmitter battery life but should be approximately 15M in high gain mode and the attenuator control set to position '0' and about 7M in normal gain mode with the link removed (recommended). A small 2 pin jumper is present and if disconnected selects normal gain mode. Additional the attenuator control can be rotated to give further range reductions. The lowest range setting would therefore be with the attenuator set to '9' and the normal gain mode selected on the 2 pin jumper.

Programming

The receiver can store up to 30 transmitters in its internal non-volatile memory. The following programming procedures are available from the two small press buttons inside the unit labelled S1 and S2.

F1. Add a new transmitter / user to the internal memory:

1. Bring one new transmitter only in to the field of detection and the red light flashes frequently indicating a correct transmitter type but not yet stored in the internal memory.
2. Press and hold the S1 switch until red led shows then quickly release S1.
3. After a moment the new transmitter will be automatically validated by the receiver and the green led will flash 8 times to confirm. The new validated transmitter will now turn the relay and the green led on.
4. Remove the transmitter from the field of detection.

F2. Change the relay switch time:

1. With no transmitters in the field of detection press and hold the S1 button until the green led shows then quickly release S1.
2. Each green LED flash represents 1 second of relay time up to a maximum of 30 seconds. Press & hold S2 after the desired amount of green led pulses has been shown and 8 green led flashes will be seen. Release S2.

F3. Set or unset the valid transmitter filter:

This function allows a tag to be read once whilst in the field, resets after 30 seconds.
1. With no transmitters in the field of detection press and hold S1 until the amber led shows then quickly release S1 and quickly press S2. The green led flashing indicates the valid transmitter filter is on and the red flashing led indicates off. Repeat this procedure to toggle the filter on and off.

F4. Delete all valid transmitters and factory reset:

1.Press and hold S2 for 6 amber led pulses. After the 6th amber flash the green led will flash 8 times to confirm full reset with no valid transmitters in the internal memory.

NOTE :
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Digi tag LR

A CDVI Group product

CE

Guarantee

The guarantee period of this product is 24 months, beginning from the manufacturing date. During this period, if the product does not work correctly, due to a defective component, it will be repaired or substituted at the discretion of the producer. The guarantee does not cover the plastic container integrity. After-sale service is supplied at the manufacturer factory.

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