

Eltek TU 1037 - User Instructions for GW47 CO₂ RH and temp transmitter

Product Summary

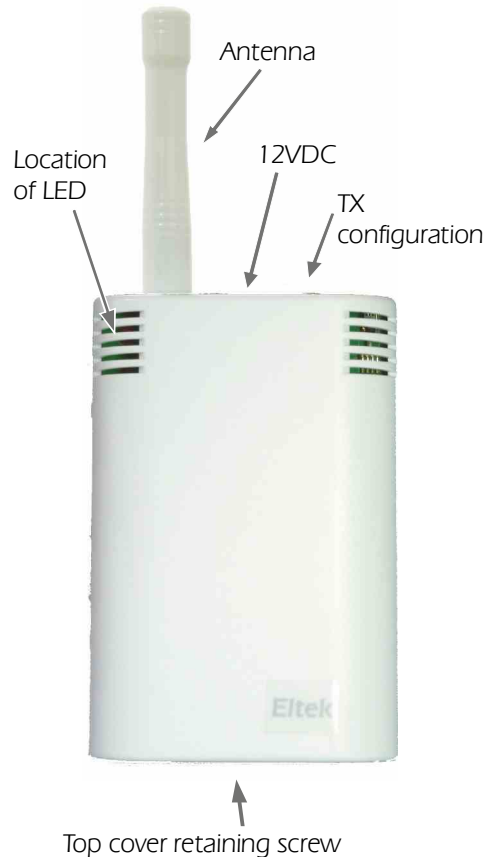
The GW-47 transmitter is a self contained air quality monitoring transmitter with built in sensors for RH, temp and CO₂ (0-5000 ppm) for use with:
GenII – Telemetry monitoring system
WSR – Wireless Sensor Receiver system
Rc250 – Telemetry receiver system

Key Features

The transmitter incorporates a combined RH and Temp sensor and NDIR (infrared) CO₂ sensor. All sensors are interfaced digitally to ensure fast and accurate measurement, requiring no analogue adjustment.

Calibration values are stored in the transmitter, and the CO₂ sensor includes a daily auto calibration feature.

The transmitter is powered from an external 12VDC supply (type MP12U) and is equipped with built-in rechargeable batteries to sustain operation for up to 8 hours in the event of AC mains supply interruption. In addition to this, availability of the external supply is continuously monitored and is presented as a channel to the logger. This means an AC power failure can be investigated or alarmed before the internal batteries become discharged.



Notes

Use only power supply type MP12U (supplied with the GW-47).
(The 2.1mm concentric jack is wired as follows: inner is -12VDC, outer is +12VDC).
An internal fuse protects against reverse polarity connection.

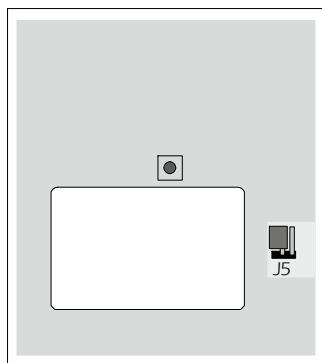
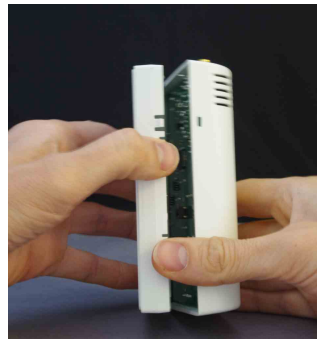
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Removal of rear cover

First remove the screws at the top and bottom of the unit:

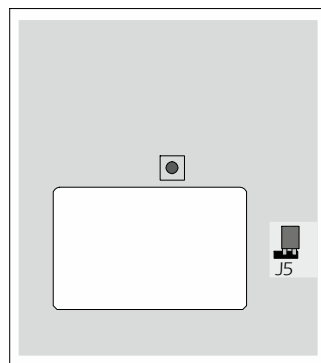


Pinch the unit with your thumbs near the locking tabs to remove the rear cover:



Battery disconnected

From serial number 24021, transmitters will be despatched with the internal battery disconnected as shown on the left. To commission, move the link to connect the two pins of J5 as shown on the right. If the transmitter is not going to be used for an extended period, move the link back to the disconnected position to avoid draining the battery.



Battery connected

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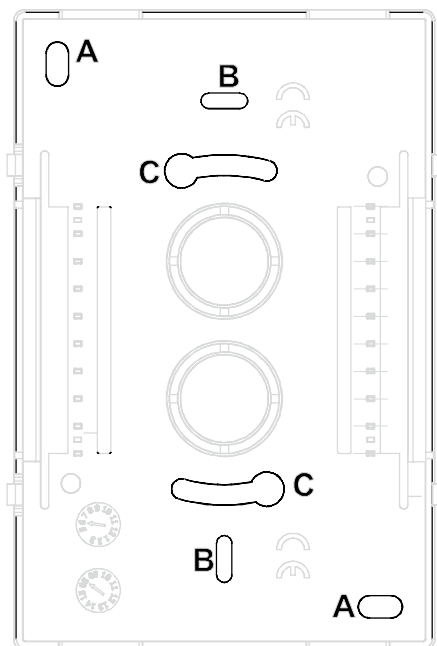
Function of concealed switch

A PCB mounted push switch (Sw1) can be accessed with the rear cover removed. A red LED can be observed through the ventilation grill on the top left hand side of the front of the unit.

Function	Activate switch for	LED cadence
Tx disable	5 seconds	5 x fast flashes
Tx enable	5 seconds	1 continuous 5 sec flash
Test Tx with approx. 5 sec interval for approx. 2 mins	1 second	No indication

Mounting the unit

The unit is intended for wall mounting only. Use holes AA, BB or CC in the rear cover as appropriate to the installation. Holes CC allow precision vertical alignment. Mounting screws are not provided; ensure that the screws used have at least 5mm clearance from the PCB when the cover is replaced. It is essential that the screw head does not touch the PCB or any components mounted on it as this may cause functional damage to the unit.



Rear cover showing screw holes

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Calibration

POA - refer to Eltek.

Input type and specification

GW-47 is compliant to EN300-220-1.

Operating frequency: 434.225MHz (other frequencies available)

Battery type: 2 x 3.6V 150mAh Ni-MH

Environment rating: IP40

Co2

Range	0-5000ppm
Accuracy at +25 °C, 1013mBar:	0-5000ppm < ± (50ppm + 3% of measured value)
Temperature dependence:	typically 2ppm CO ₂ /°C over the range 0 to +50 °C
Pressure dependence:	0.14% of measured value / mBar deviation
Operational temp range:	RH 5 to 95% non condensing : -10 to +50 °C (Functional at -20 °C)

Relative Humidity

Range:	0-100% Resolution 0.1%,
Accuracy RH:	± 2% (10 to 90% RH), ± 4% (0 to 100% RH),

Temperature

Range:	5.0 to 45.0°C
Accuracy:	± 0.4°C (-5°C to 40°C) , ± 1.0°C (-20°C to 65°C) , ± 0.5°C (5°C to 45°C)
Resolution:	0.1°C

Power Supply

Type MP12U AC100/250VAC to 12VDC (2.1mm note outer is +12vDC)

Dimensions / Weight

H115mm x W80mm x D33mm (excludes 75mm antenna)
155g

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