Eltek TU1069 - GenII EP85 customised K type thermocouple and differential pressure

The EP85 is a customised K type thermocouple temperature and built-in differential pressure transmitter.

Sockets are provided on the enclosure for:
1 x K thermocouple plug,
1 x 3.5mm stereo style jack socket for configuration of the transmitter and
1 x SMA (female) for the antenna.
In addition 2 x Colder Products connector and tube terminations are provided for differential pressure measurement. Colder type TMC1703 for 6mm I.D.

The unit environmental rating is IP40.

Specification:

Frequency	434.225Mhz
Compliant to	EN300 220-1
Ambient temperatures	-10 to +55 °C
Humidity	0-90% RH non condensing
Transmitter power	10mW ERP
Transmitter type	EP85
Battery voltage and type	6VDC 4 x LR6 Alkaline only.
Temperature connector type	1 x Thermocouple, K type only mini plug
Differential pressure connector	2 x Colder: one + and one - for 6mm tubing

Measuring Range:

K type thermocouple range	0 to 500°C Accuracy: ±0.5°C for 0 to 500°C
Differential Pressure	-250 to +250 Pascal
Accuracy	±3 Pascal
Display resolution	0.1 Pascal

Transmit interval: As required for the application.

Battery endurance and replacement: Endurance is designed to be greater than 6 months at one minute Tx interval. The battery condition can be viewed on the EP85 LCD, in Darca's Transmitter Setup or on the logger itself using the button panel (go to "Tx battery and reliability" and scroll to the relevant TX serial number). The battery should be considered for imminent replacement when the reading is 4% or one chevron indicated on the LCD. (If the LCD battery gauge flashes the battery may be exhausted). Replace with high quality alkaline batteries only (e.g. GPSuper) to avoid risk of leakage that can cause extreme damage. Note that suspect cells include the Duracell brand.

To replace the battery

Remove the clear front cover by releasing the 4 x captive front cover retaining screws. Set aside the cover. Remove the three black headed screws completely, set aside and carefully lift off the escutcheon and place to one side as it is wired into the main PCB. Note the position of the battery and connector before removing the battery. Replace batteries, observing correct polarity. Reassemble.

Please dispose of the exhausted battery in a responsible manner and to an authorised disposal facility. Exhausted batteries can be returned to Eltek for safe disposal if preferred.

Antenna

Use the compressed spring antenna supplied.
Range can be optimised by using an external antenna.

Enclosure mounting

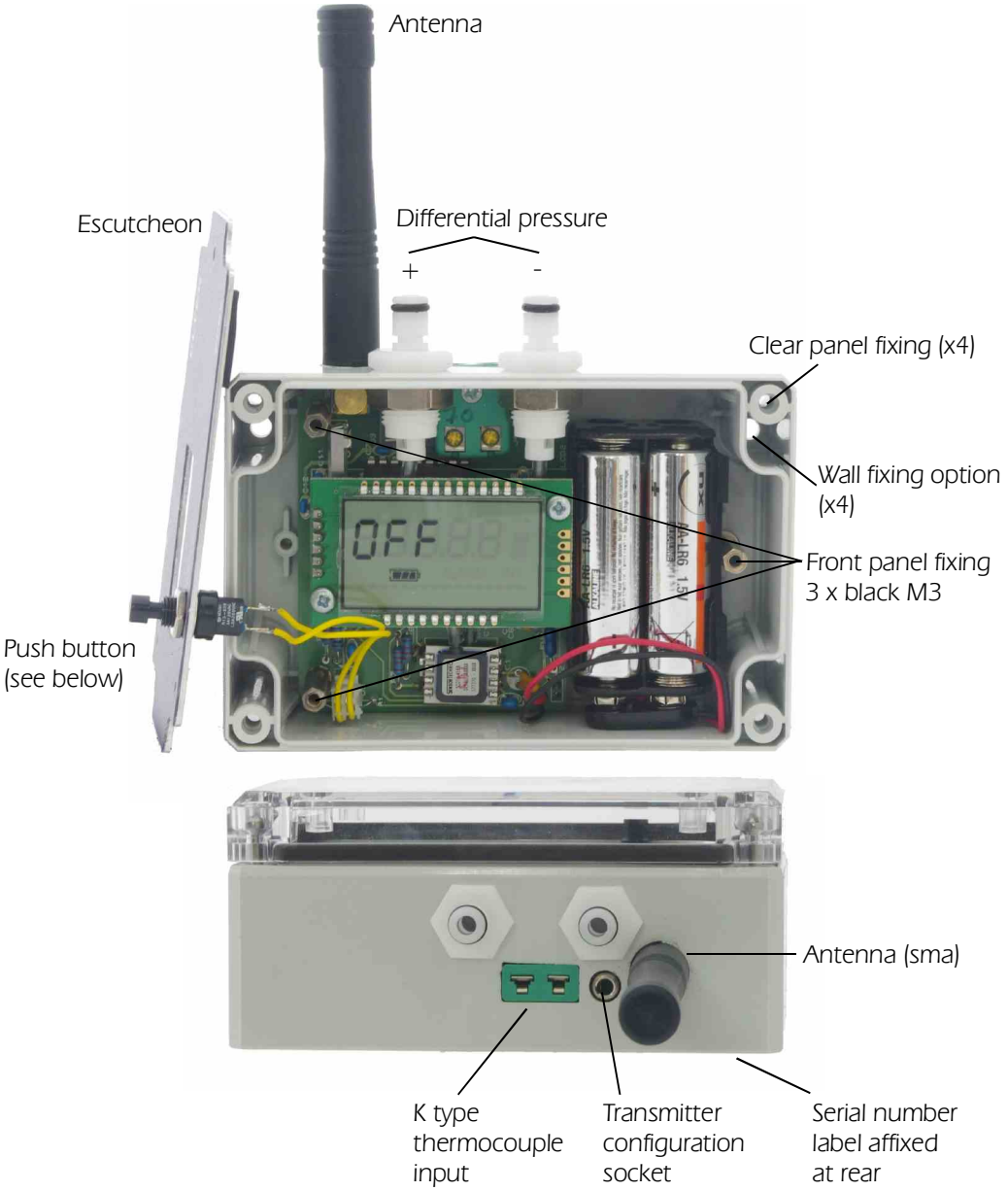
The rugged polycarbonate enclosure can be free standing or wall mounted. Wall fixing hardware is not included. If wall fixing use the 4 holes that can be accessed when the clear front cover is removed.

Enclosure dimensions

H89mm x W122mm x D57mm (less connectors and antenna).
Antenna adds 78mm.

The (grey) enclosure with the clear front cover is intended for indoor use only (IP40). The front cover must be securely fitted using the 4 x semi captive screws to ensure the rubber seal is effective.

Gross weight is 400g.



Push button functions

Press for	Function	LCD
5 secs	Turn on	Scrolls information
5 secs	Turn off	OFF (batt. gauge active)

Asterisk will flash when button has been pressed for sufficient time to make change.
Display will scroll through each enabled channel followed by its sensor value.

Important notice - Differential pressure
The transmitter is fitted with a sensitive digital differential sensor. Do not exceed the range indicated (-250 to +250 pascal) and under no circumstance blow or suck into the ports, this will damage the sensitive sensing element in the sensor.

EP85 configuration
The transmitter should be configured following the instructions detailed in the Operating Instructions (document reference TM1035GB) provided with the receiver/logger (RX250AL).

EP85 channel assignments
A: differential pressure
B: temperature

Note:
For this application the standard logger interval to transmitter interval of 6:1 should be observed.

LCD
The LCD includes a battery condition gauge active at all times: 
Only configured channels are displayed. The LCD scrolls through the configured channel values.

Note: If the EP85 is to be stored, the EP85 should be disabled (put into hibernate mode, i.e. TX disable mode) to prevent unnecessary battery drain and possible loss of settings. Press the front panel push button for 5 seconds. The LCD will now read **OFF.** Full disconnection of the battery is preferred to prevent risk of battery discharge. To do this, remove the batteries or the battery cassette assembly.