ACTIVE

TLU 1.0

Temperature Logging Unit (RAJTEK)

Revision 2009

IEC 62056 Mode C temperature data logger with OBIS coding, 9356-record memory, programmable 1-60 min interval, 2-year battery backup.

Manufactured in-house at our SMT line.
DDM Novastar SPR-45 + LS60 + GF-120HT, AOI on every joint, per-unit calibration to NVRAM.

Energetika-VDS · Strumica, Macedonia · energetika-vds.com

Catalog detail on the following pages.

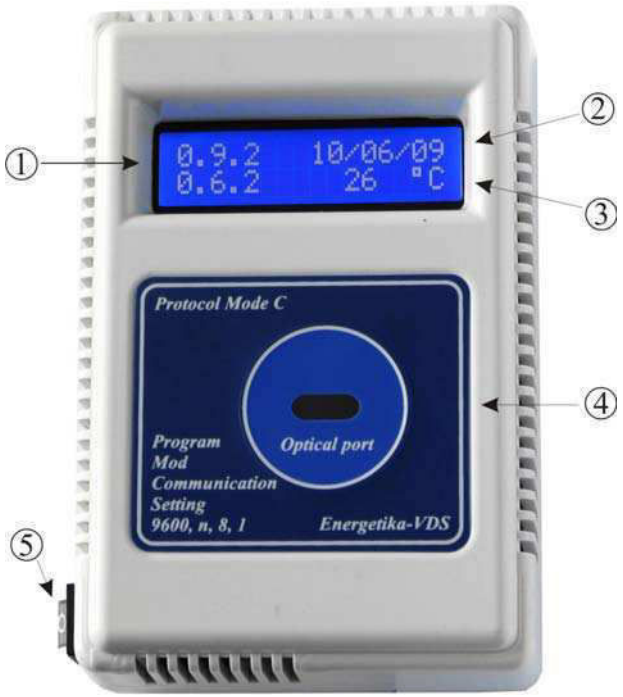
RAJTEK

TLU Data Logger

Nominal voltage 220V AC
Freqency 50Hz
Wide temperature measurement range (-40 C° +125 C°)
Maximum number on data logging 9356
Backup supply 3,4V (two years)

RAJTEK

TLU 1.0 DATA LOGGER



1 - Shows the OBIS code

2 - Shows the current time and date in the following order:
hour : minute, day
date / month / year
Accumulation counter value

3 - Shows the current probe temperature

4 - Optical port

5 - ON/OFF switch

The TLU (Temperature Logging Unit) is used for recording the temperature in a pre-set time interval.
The default probe that comes with the unit can measure temperatures in the range from -40°C to +120°C.
The unit is manufactured in accordance with the IEC standard EN 62056. It functions in Mode C and uses the Object Identification System (OBIS). There is also a built-in IR port.

All of the communication is done through the Optical port and the TLU can communicate with any HHU (Hand Held Unit) or software that is created in accordance the mentioned IEC standard.

The recording time interval can be set in the range from 1 minute to 60 minutes.

The total number of data sets that the TLU can store is 9356. This means that in case the accumulation counter is set to 1 minute then the recording cycle will be about 6.5 days. If the accumulation counter is set to 10 minutes then the recording cycle will be 65 days, etc. The number of days of the TLU's recording cycle depending on the accumulation counter can be calculated according to the formula:

day = (9356 * min.) / 1440

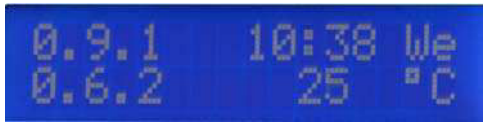
where min. stands for accumulation counter value.

When the last (9356th) memory address has been reached the recording wraps up to the first memory address, hence recording cycle.

The TLU can also be manufactured to measure the temperature every 2 seconds to 1 minute. The addressable memory can also be extended to accomodate 18712 data-sets.

Basic Display View

Switching the unit on shows the following display content:



Current time: hh:mm dd

After 5 seconds the display changes its contents to

Showing the date: date / month / year

After another 5 seconds the display changes again to show the following content:

The value of the accomulation counter.

These screens cyclicly change every 5 seconds, by default. This cyclic interval can be factory set form 5 to 15 seconds.

The second display line always shows the current probe temperature expressed in degrees celsious (°C).

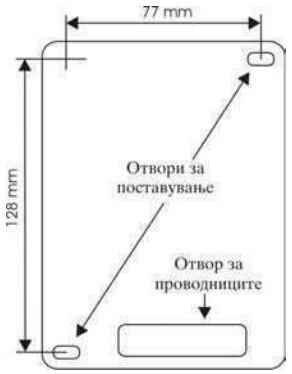
The TLU has a built-in battery to preserve the variable data such as time, date and accumulation counter and can stand for two years without voltage.
It should be noted that the TLU does not record temperature in the absence of network voltage.

At the exact moment of recording the temeprature, in the second row of the display the letter ***W*** appears. After the recording has finished the letter ***W*** disappears.

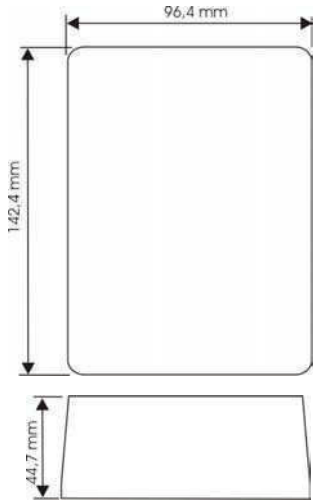
While reading data from the optical port, in the second row of the display the letter ***R*** appears, indicating that the unit is transferring data from its memory to the optical port i.e. to a PC or HHU. If a PC is used with pre-installed RAJTEK original software DATA LOGGER 1.0, the data can be collected and analyzed either graphically or tabular. The downloaded data can also be exported to Microsoft Excel, if one is installed.
After the memory readout (download) has finished the letter ***R*** disappears from the display.

In case the letter ***G*** has been displayed, the TLU needs to be serviced. This can be done only by an authorized service.

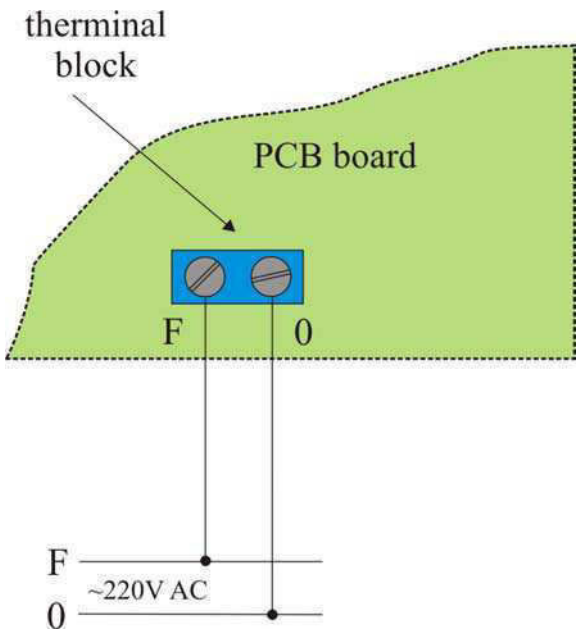
Mounting dimmensions



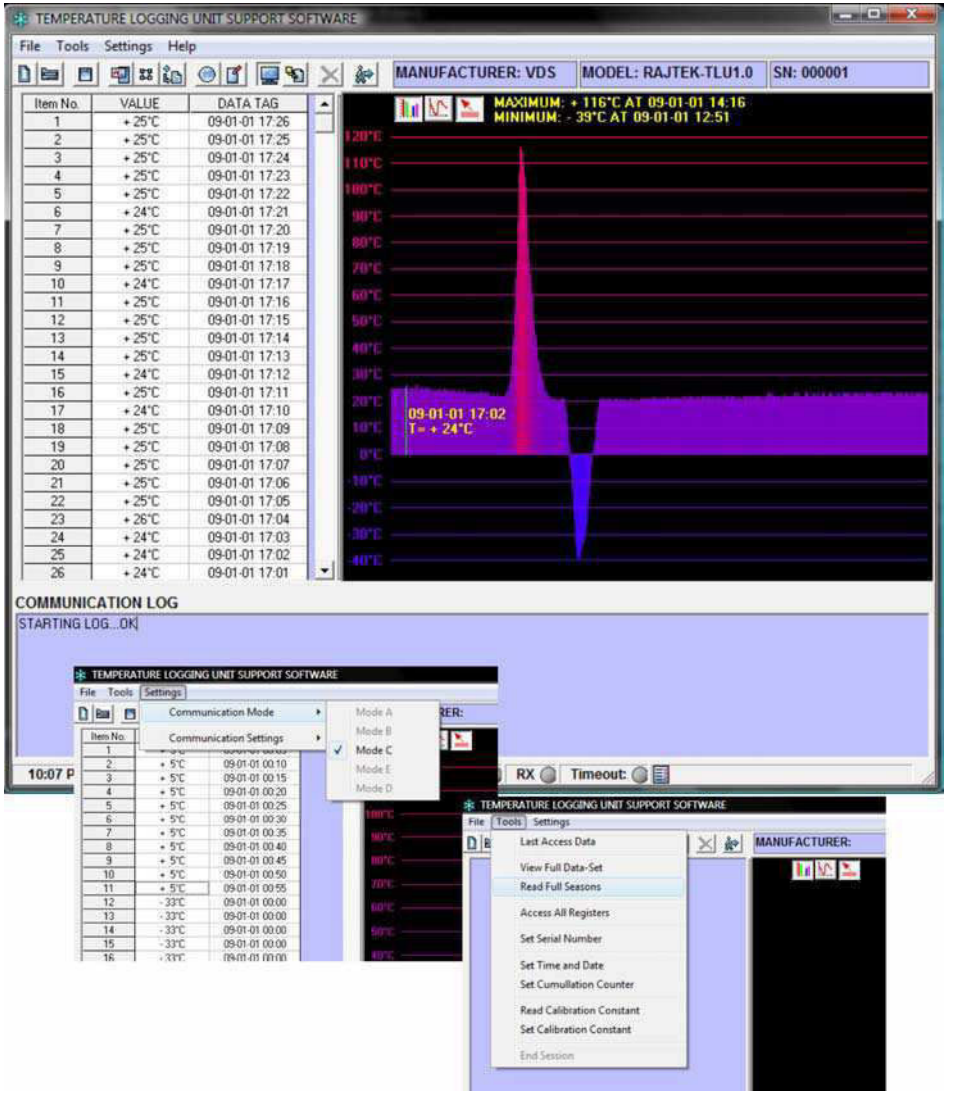
External TLU dimmensions



Connecting scheme of the TLU



Softver for TLU data Logger



Technical data

Product: **TLU Data Logger**

Source Voltage: 220V AC, 50 Hz

Probe temperature range: from -40°C to +125°C

Maximum recording cycle (number of data-sets): 9356

Temperature accuracy ± 0.5°C

Backup supply 3,4V (two years)

IR interface

IEC 62056 Protocol Mode C, Communication Setting 9600,n,8,1

Object Identification System (OBIS)