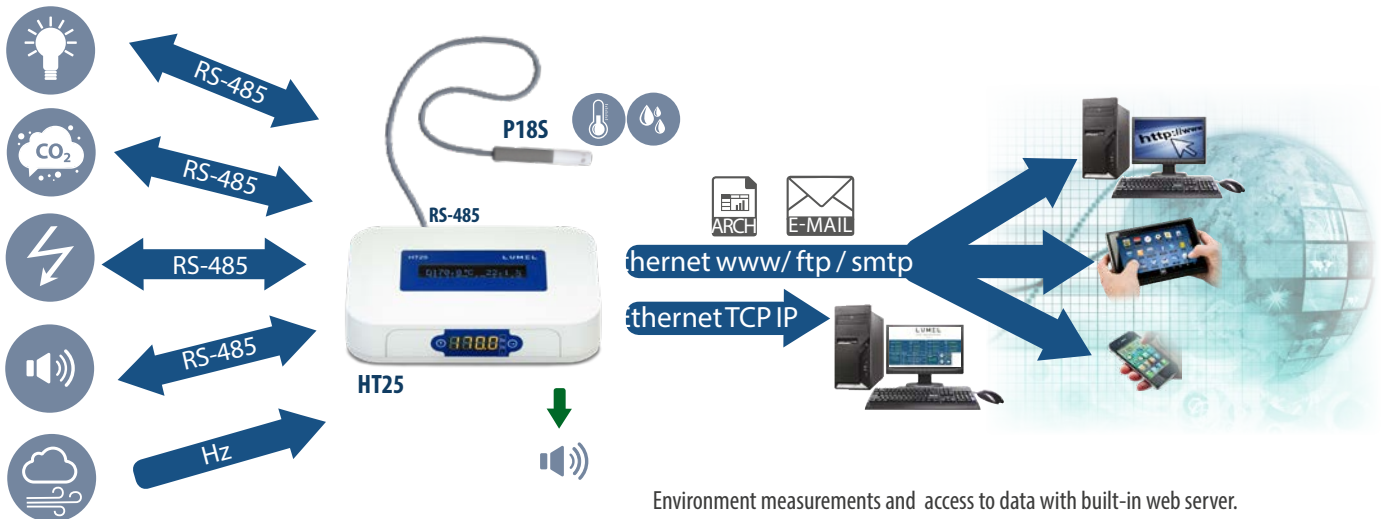


HT25 - DATA LOGGER

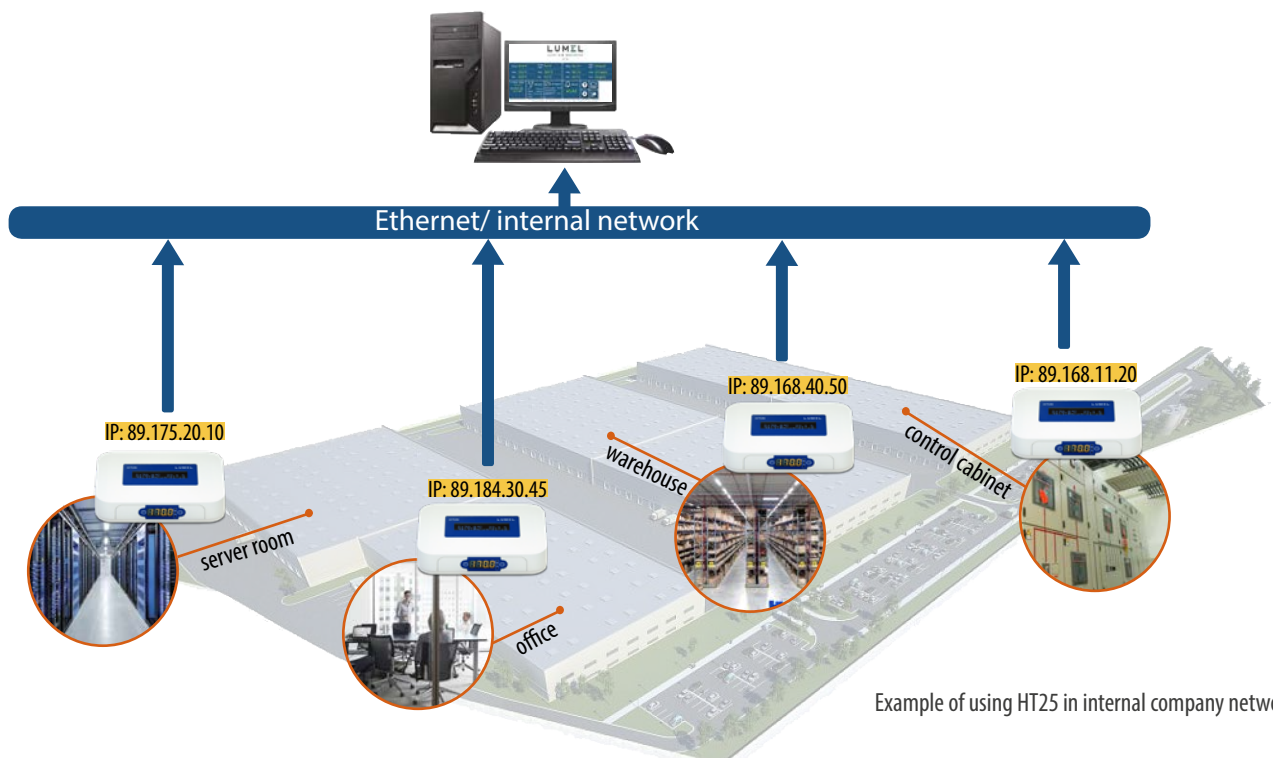
- monitoring up to 100 parameters from external devices through Modbus TCP/IP protocol
- 8GB internal memory for recording of input signals (up to 16 parameters)
- RS-485 interface with MODBUS RTU protocol and MASTER or SLAVE mode
- Power over Ethernet (PoE) or DC socket
- 4 binary inputs
- 2 logical alarms (e-mail, message on www, symbol on the display or sound alarm)
- input for measuring wind speed with anemometer
- sending alarm messages in the form of emails
- user-friendly interface.



EXAMPLE OF APPLICATION

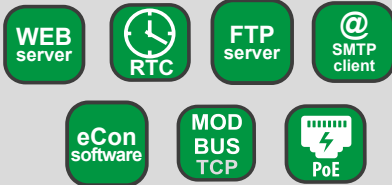


... max. up to 10 devices through RS-485

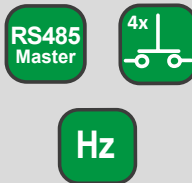


Example of using HT25 in internal company network.

FEATURES



INPUTS



OUTPUT



WHAT PARAMETERS CAN BE MONITOR BY HT25?

The HT25 data logger is a master device in Modbus RTU network, which can read the data from measuring devices with RS-485 interface. For this reason, the scope of monitored values is practically unlimited starting with physical quantities like temperature and humidity, and ending with electrical parameters like current and power. HT25 can simultaneously readout 10 devices (up to 10 registers /10 channels/ from each one). If you need to read more registers, set up separate readable channels for the same device with different base addresses.

HOW DOES HT25 WORK IN CASE THE PRE-SET PARAMETERS ARE EXCEEDED?

The HT25 allows up to two defined warnings. Whenever the pre-set parameters are exceeded, the HT25 will immediately signal this via:

- emails,
- messages on a dedicated website,
- special symbols on the display,
- audible alerts.

Therefore, every time the HT25 is connected to the Internet, you will always have the most up-to-date information on the actual condition of the monitored facility.

ETHERNET INTERFACE AND ITS FUNCTIONALITY

The HT25 is equipped with the Ethernet interface enabling its connection to the local or global network (either LAN or WAN). Thanks to the user-friendly and intuitive 'www' server, you will always have access to the information regarding:

- current measurement values,
- device status.

The 'www' server call also allow you to:

- configure it
- read the serial number, manufacturing code, software version and bootloader version.

The built-in FTP server allows for fast and easy access to archive data files from the level of web browser or from other FTP clients. The DHCP protocol provides automatic configuration of the data logger in the computer network, whereas the SMTP protocol is responsible for sending the warnings via emails. The HT25 data logger can also work in more extensive systems where the communication protocol Modbus Slave TCP/IP provides a smooth and reliable reading of all current measurement data.

MEASUREMENTS ARCHIVE

Thanks to the dedicated website, you can also check the archive data using a smartphone, tablet or a PC. There is no need to be worried about insufficient memory on the device; the HT25 has an 8GB internal file system memory where the data form the internal memory buffer (4GB) is automatically recorded as files. The memory has a form of a circular buffer and after the storage is full, the oldest files are overwritten. The internal archive can be read, copied and/or deleted.

INPUTS

| Input type | Range |
|------------|---|
| Binary | logical 0 0...2.9 V logical 1 3...24 V |
| Frequency | 0.1... 100 Hz |

DIGITAL INTERFACE

| Interface type | Protocol type | Remarks |
|------------------------|--|--|
| Ethernet 10/100 Base-T | Modbus TCP, HTTP, FTP | max number of concurrent connections - 10 |
| RS-485 Master/Slave | Modbus RTU 8N2, 8E1, 801, 8N1 Address 1..247 | Slave mode only to update firmware in HT25 |

RATED OPERATING CONDITIONS

| | |
|-------------------------------------|---|
| Supply voltage | 12 V d.c. or PoE IEEE 802.3af (option) |
| Power consumption | < 5 VA |
| Preheating time | 15 minutes |
| Ambient temperature | - 20...23...60 °C |
| Relative humidity | < 95% |
| Protection grade ensured by housing | IP 20 |
| Fixing way | on a wall or put on a desk |
| Weight | < 0.3 kg |
| Dimensions | 150 x 100 x 28 mm |
| Operating position | any |

SAFETY AND COMPATIBILITY REQUIREMENTS

| | | |
|--|-----------------|----------------------|
| Electromagnetic compatibility | Noise immunity | acc. to EN 61000-6-2 |
| | Noise emissions | acc. to EN 61000-6-4 |
| Pollution grade | 2 | acc. to EN 61010-1 |
| Installation category | III | acc. to EN 61010-1 |
| Maximal phase-to-earth operating voltage | 50 V | acc. to EN 61010-1 |
| Altitude above sea level | < 2000 m | |

PARAMETERS OF DC ADAPTER (OPTION):

| | |
|-----------------------|------------------------|
| Voltage | 12 V d.c. ± 5% |
| Max. power | 12W* |
| Input voltage | 90...253 V a.c. |
| Operating temperature | 0...40 °C* |
| External dimensions | 63.6 x 29.5 x 45.6 mm* |
| Cable length | 1.4 m ± 10%* |
| Plug | φ 5.5 / 2.1 mm |

* adapter parameters can be changed

REMOTE READOUT OF PARAMETERS THROUGH ETHERNET: WEB SERVER, FTP

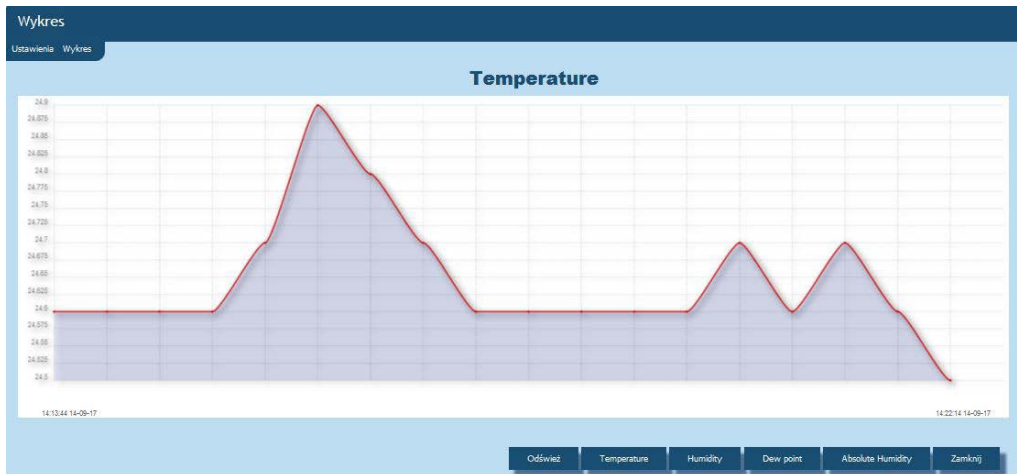
HT 25

main page view

| | | | |
|---|---|--|--|
| Temp: 24.8 °C max: ????? °C min: 21.7 °C | Dew point: 12.6 °C max: ????? °C min: 10.6 °C | Hum.: 46.4 % max: ????? % min: 37.8 % | Abs. hum.: 10.6 g/m3 max: ????? g/m3 min: 9.4 g/m3 |
| User registers <ul style="list-style-type: none"> Temp: 24.84 RH: 46.41 DP: 12.57 AH: 10.59 UserReg 5: 13.31 UserReg 6: 49.20 UserReg 7: 5.46 UserReg 8: 83.32 UserReg 9: -12.77 UserReg10: 20.79 UserReg11: 1.00e+7 UserReg12: 1.00e+7 | | ch. no 1 (ch.1) 1 Value0 2 Value1 3 Value2 4 Value3 5 Value4 6 Value5 | |
| | | ch. no 8 (ch.8) 1 Value0 2 Value1 3 Value2 4 Value3 5 Value4 6 Value5 | |
| Digital input's In1 <input checked="" type="radio"/> Low In2 <input checked="" type="radio"/> Low In3 <input checked="" type="radio"/> Low In4 <input checked="" type="radio"/> Low | Wind speed In4 f 0 Hz 0 m/s | Ethernet Ip: 10.0.1.5 Mask: 255.0.0.0 Gate: 10.10.10.203 DHCP: On | Modbus Id: 1 Baud rate: 9600 Control: 8N2 |
| | | Archive Memory free: 100.0 [*****] Data copying: 0.0% [*****] | Alarms A1 A2 |
| | | | |

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temperature trend view



configuration window of digital inputs

Digital inputs

| | |
|------------------|------|
| In1 active level | High |
| In2 active level | High |
| In3 active level | High |
| In4 active level | High |
| Frequency scale | 60 |

Save Close

REMOTE READOUT OF PARAMETERS THROUG ETHERNET: WEB SERVER, FTP

alarms and archive programming

Archive

Archive values: Temperature, Humidity, Dew point, Absolute Humidity

Conditional archiving - val.: Temperature

Archive type: Always on

Cond. archiving - lower threshold:

Cond. archiving - upper threshold:

Archiving period [s]:

Internal memory threshold which force file writing:

Point separator: .

Field separator: Tab

File format: Numerical (123,45)

Delete archive:

Move archive to file sys. mem.:

Save Browse arch. files Close

Alarms

Choose setting: Alarm 1 configuration settings

Alarm control parameter: Temperature

Alarm working mode: off

Alarm threshold - lower val.:

Alarm threshold - upper val.:

Alarm ON delay [s]:

Alarm Off delay [s]:

Re-switching alarm delay [s]:

Alarm output (use CTRL to check many): Buzzer, E-mail Address 1, E-mail Address 2

Save Close

e.g. of email of cyclic measurements - sent at a specified time period

e.g. of mail alert - temperature exceeding

Skrzynka odbiorcza

| Od | Temat |
|------|--|
| HT25 | HT20 - index: 11 - Period elapsed:15 min |
| HT25 | HT20 - index: 10 - Period elapsed:15 min |
| HT25 | HT20 - index: 9 - Period elapsed:15 min |

HT25 - index: 6 - Period elapsed:15 min

HT25

Wyslano: Brak
Do: user@lumel.com.pl

2017-09-23 09:45:00
T [°C]: 21,3;
RH [%]: 45,7;
DP [°C]: 9,1;
AH[g/m3]: 8,5;

Skrzynka odbiorcza

Data: Dzisiaj

| HT25 | HT25 - Alarm 1 | T [°C] - ACTIVE |
|--------------------------------------|----------------|-----------------|
| HT25- Alarm 1 T [°C] - ACTIVE | | |
| HT25 | | |
| Wyslano: Brak | | |
| Do: user@lumel.com.pl | | |

2017-09-26 08:37:30
T [°C]: 23,9;
RH [%]: 94,2;
DP [°C]: 22,9;
AH[g/m3]: 20,4;

ORDERING

| Data logger HT25 - | X | X | XX | E | X |
|--|---|---|----|---|---|
| Supply*: | | | | | |
| 12 V d.c. | 1 | | | | |
| 12 V d.c. , PoE IEEE 802.3af | 2 | | | | |
| Accessories: | | | | | |
| none | | 0 | | | |
| adapter 12 V d.c. | | 1 | | | |
| Version: | | | | | |
| standard | | | 00 | | |
| custom-made** | | | XX | | |
| Language: | | | | | |
| English | | | | E | |
| Acceptance tests: | | | | | |
| without additional quality requirements | | | | | 0 |
| with an extra quality inspection certificate | | | | | 1 |
| acc.to customer's request | | | | | X |

* - Data loggers in version HT25 1XXXXX require an external power supply 12 V d.c., in version HT25 2XXXXX they can be powered either from Ethernet PoE (Power over Ethernet), as well as from the external power supply 12 V, D.C.

** - after agreeing with the manufacturer

Order example:

Code: **HT25-2-1-00-E-0** means:

- HT25** - HT25 data logger
- 2** - supply: PoE IEEE 802.3af and 12 V d.c.
- 1** - with attached AC 12 V d.c. adapter included
- 00** - standard version
- E** - user's manual in English
- 0** - without additional quality requirements

ACCESSORIES:

| Accessory | View | Ordering code | Technical data |
|---------------------------|------|-----------------|--|
| 12 VDC adapter | | 20-090-00-00023 | Voltage: 12 V d.c. \pm 5% Max. power: 12W* Input voltage: 90...253 V a.c. Operating temperature: 0...40°C* External dimensions: 63.6 x 29.5 x 45.6 mm* Cable length: 1,4 m \pm 10%* Plug: ϕ 5,5 / 2,1 mm * adapter parameters can be changed |
| PoE adapter | | 20-090-00-00022 | Input voltage: 100 – 240 VAC Input frequency: 47 – 63 Hz Power consumption: 0.35 A max. for 240 VAC Output voltage: 48 VDC Output power: 15.4 W Operating temperature: 0 – 40 °C External dimensions: 140 x 65 x 36 mm Weight: 0.2 kg |
| conductor for PoE adapter | | 20-069-00-00146 | Cable length: 1.8 m |

SEE ALSO:



P18S - temperature and humidity transducer



P18D - humidity and temperature transducer with digital and analog output



N43 - rail mounted 3-phase power network meter



S4AI - module of 4 analog inputs meter

DS-HT25_EN_20190430