

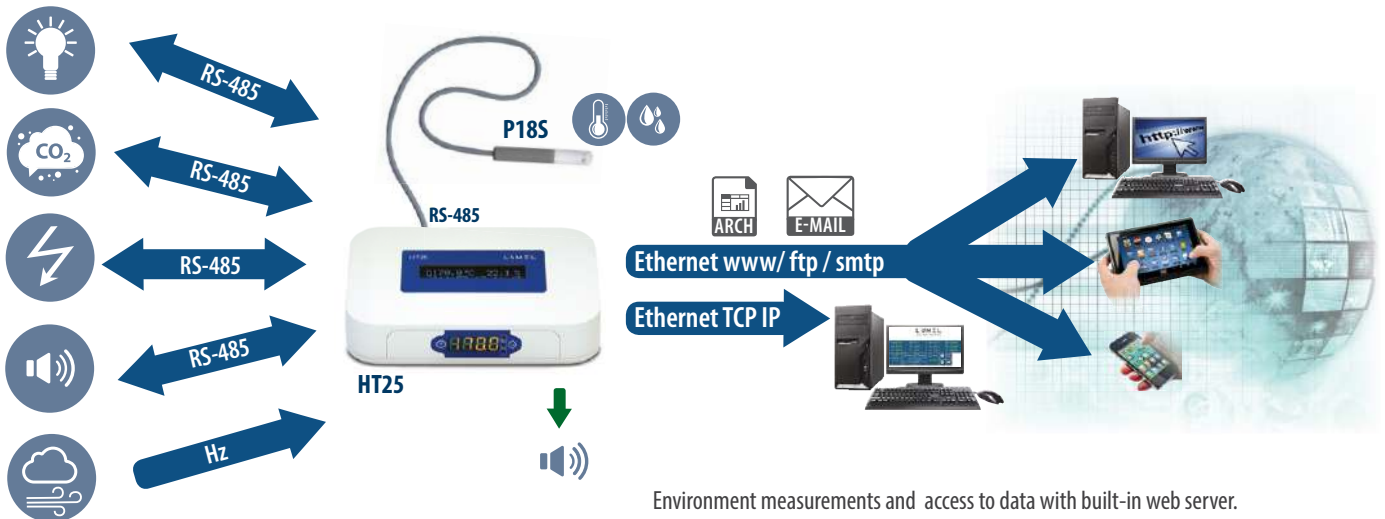


## HT25 - DATA LOGGER

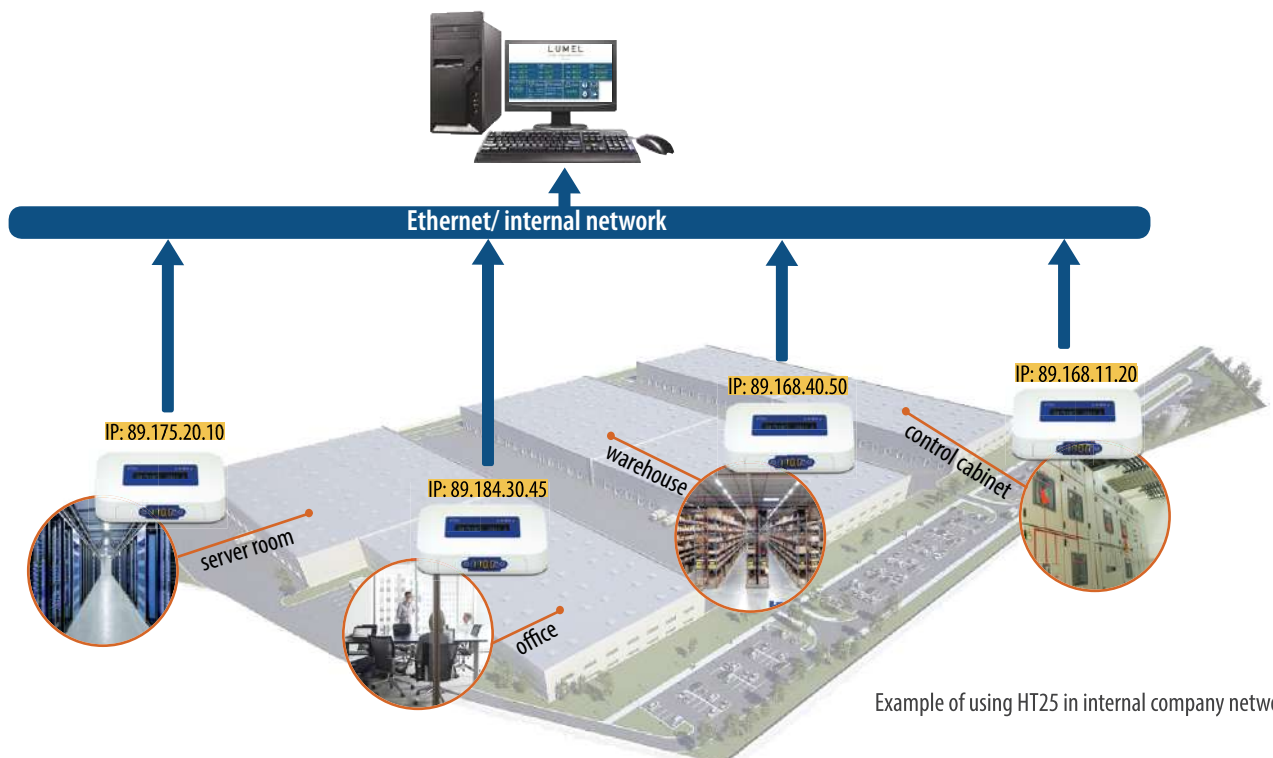
- monitoring up to 100 parameters from external devices through Modbus TCP/IP protocol
- 8GB internal memory for recording of input signals (up to 16 parameters)
- RS-485 interface with MODBUS RTU protocol and MASTER or SLAVE mode
- Power over Ethernet (PoE) or DC socket
- 4 binary inputs
- 2 logical 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.



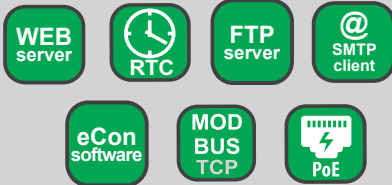
### EXAMPLE OF APPLICATION



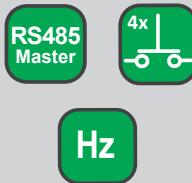
... max. up to 10 devices through RS-485



## 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

HT25

main page view

Temp: 24.8 °C	Dew point: 12.6 °C	Hum.: 46.4 %	Abs. hum.: 10.6 g/m3
max: ????? °C	max: ????? °C	max: ????? %	max: ????? g/m3
min: 21.7 °C	min: 10.6 °C	min: 37.8 %	min: 9.4 g/m3

User registers		
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

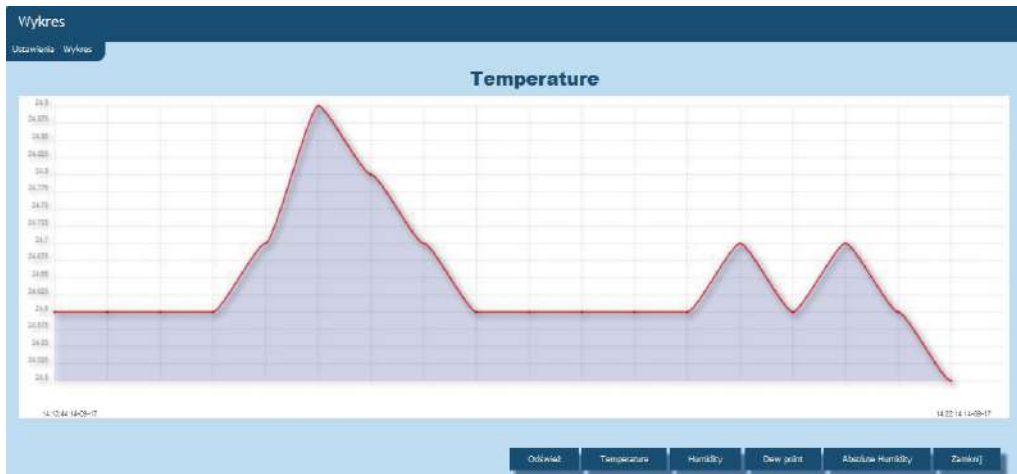
ch. no 8 (ch.8)		
1 Value0	2 Value1	3 Value2
4 Value3	5 Value4	6 Value5

Digital input's	Wind speed	Ethernet	Modbus	Archive	Alarms
In1: Low	In4 F: 0 Hz	Ip: 10.0.1.5	Id: 1	Memory free: 100.0	A1 A2
In2: Low	0 m/s	Mask: 255.0.0.0	Baud rate: 9600	Data copying: 0.0%	
In3: Low		Gate: 10.10.10.203	Control: 8N2		
In4: Low		DHCP: On			

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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: 0

Cond. archiving - upper threshold: 20

Archiving period [s]: 30

Internal memory threshold which force file writing: 50

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.: 23

Alarm threshold - upper val.: 24

Alarm ON delay [s]: 0

Alarm Off delay [s]: 0

Re-switching alarm delay [s]: 0

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

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**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
<b>HT25- Alarm 1 T [°C] - ACTIVE</b>		
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	X	X
<b>Supply*:</b>					
12 V d.c.	1				
12 V d.c. , PoE IEEE 802.3af	2				
<b>Accessories:</b>					
none		0			
adapter 12 V d.c.		1			
<b>Version:</b>					
standard			00		
custom-made**			XX		
<b>Language:</b>					
Polish				P	
English				E	
other**				X	
<b>Acceptance tests:</b>					
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: $\phi$ 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

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