# Room thermometer with PoE Ethernet interface and remote temperature probes   SPAi60

LOREME

ethernetPoE

- *Ambient temperature in wall mounting*
  - *- embedded temperature sensor*
- *Option: input for remote temperature probes*
  - *- Up to 4 inputs for PT100 or PT1000*

- *Communication:*
  - *- Modbus TCP, 6 simultaneous connections*
  - *- Embedded Web Server, SNMP,*
  - *- Send alarms email, SMTP protocol*

- *Recording measurements option (Excel format)*
  - *- Graphics display on Web server*

- *Powered by the Ethernet switch*
  - *- Power over Ethernet (PoE)*

- *LCD display*

- *Applications:*
  - *- sterile room,*
  - *- calibration laboratories,*
  - *- Museums and exhibition halls,*
  - *- Clean room, data center, warehouses,*
  - *- air-conditioned room, ambient probes*
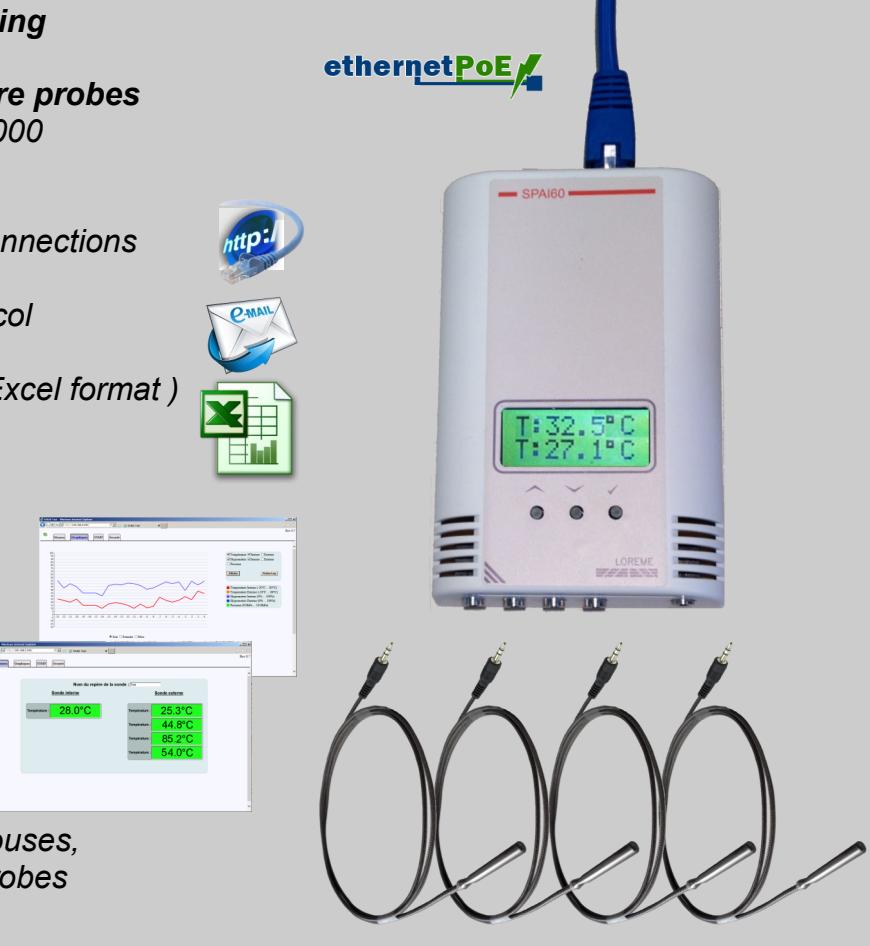
SPAi60 is a multi channels thermometer for monitoring and traceability applications of controlled atmosphere rooms. This probe allows repatriation of measurements by Modbus / TCP or SNMP, to send alarm mail and recording measurement in Excel format.

SPECIFICATIONS

Measures:
Ambient temperature and up to 4 remote probes
automatic detection of sensor type (PT100 / PT1000).

Realization:
- Wall mounting (perforated plastic case).
- Conformal coating.
- protection (housing / terminals): IP20.

Front panel / configuration:
- 2 lines of 8 characters LCD display
display temperature (local and optional remote probe)
-Three keys keyboard allowing:
the communication configuration (IP address and mask).
the measures adjustment (T° offset).

Serial link:
The device is also configurable via the serial link (USB cable - 3.5mm jack supplied separately).
The serial link allows also the firmware updating.

Communication:
Ethernet 10/100 T Base (RJ45).
power over Ethernet (PoE) IEEE802.3af compliant.
Supported protocols: Modbus-TCP, SNMP, Web server.

Qualification test:
- Long term stability better than 0.1°C / year.

Remote probe: (Pt100 or Pt1000)
- remote temperature measurement
cable length: up to 30 meters
jack 3.5mm stereo plug

GND
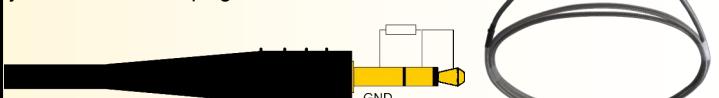
http://www.loreme.fr/fichierscapteurs/SP1000i_eng.pdf

PoE injector:

- For switch not having the PoE functionality, we provide a PoE injector according to IEEE 802.3af

http://www.loreme.fr/fichtech/AL36poe_eng.pdf

Version and order code:

Request a quote

SPAi60 :	Ambiant temperature without remote probe
SPAi60/4 :	Ambiant temperature with 4 probes inputs

Power supply by Ethernet (PoE)
(need a compatible switch or a PoE injector)

Option :	**/Log** : 1 month measures recording (2 minutes rate)
	/SMTP : Send alarm Email

SP1000 :   remote probe (jack 3.5mm stereo plug)

Room thermometer **E 1**

MEASURE

Temperature (embedded sensor)
Measuring range   -25 .....+80 ° C
Accuracy (vertical mounting recommended)
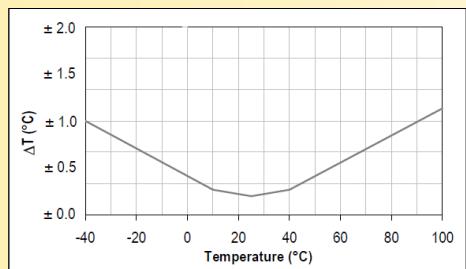
Response time T°   60 seconds typical (63%)
Repeatability   +/- 0.1°C
Linearity   +/- 0.1°C
Long-term stability   +/- 0.04°C / year

Température (remote sensor)
PT100 range   -99°C….250°C (2 wires)
PT1000 range   -99°C….250°C (2 wires)
automatic detection of sensor type
Accuracy   ± 0.1°C (No cable length compensation)
Measure current   < 2 mA
Cable length influence   < 0.1°C / 10 meters
Response time   ~ 200 ms / measure
measure rating   6 per second

POWER SUPPLY

power supply via PoE (power over Ethernet)
36 Vdc to 57 Vdc according to IEEE802.3af

COMMUNICATION

Ethernet 10/100 T Base (RJ45)
Supported protocol: Modbus-TCP, SNMP, Web server.

ENVIRONMENT

Operating temperature:	-25 °C / +80 °C
Storage temperature:	-40 °C / +85 °C
Humidity	85% non condensed
Weight	~ 100 gr.
Protection	IP20
MTBF (MIL HDBK 217F)	> 2 000 000 Hrs @ 25°C
Life time	> 150 000 Hrs @ 30°C

Electromagnetic compatibility 2004/108/CE / Low Voltage Directive 2006/95/EC			
Immunity standard for industrial environments EN 61000-6-2		**Emission standard for industrial environments EN 61000-6-4**	
EN 61000-4-2 *ESD*	EN 61000-4-8 *AC MF*	EN 55011	CE
EN 61000-4-3 *RF*	EN 61000-4-9 *pulse MF*		
EN 61000-4-4 *EFT*	EN 61000-4-11 *AC dips*	*group 1*	
EN 61000-4-5 *CWG*	EN 61000-4-12 *ring wave*	*class A*	
EN 61000-4-6 *RF*	EN 61000-4-29 *DC dips*		

WIRING AND OUTLINE DIMENSIONS:

Rj45 POE

SPAi60

T: 45.3 C
T: 22.6 C

120.7

80.0

Link Ethernet PoE

externals probes connection (SPAI60/4 only)

Serial link, firmware update.

25.4

T1   T2   T3   T4   USB/RS232

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