# Thermo hygrometer probe with PoE Ethernet interface
option: barometer and data recorder *SAi60*

LOREME

ethernetPoE

- **Ambient temperature and humidity probe**
- **Barometer** *(atmospheric pressure)*
- **Recording and export data** *(Excel format)*
    - *Graphics display on Web server*

- **Communication:**
    - *Modbus TCP (Ethernet) 6 concurrent connections*
    - *Embedded Web Server*
    - *SNMP*
    - *Send alarms email, SMTP protocol*

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

- **High visibility LCD display (OLED)**
- **Configurable sound alarm with internal buzzer**

- **Applications:**
    - *Clean room, calibration laboratories,*
    - *museums and exhibition halls,*
    - *data center, warehouses,*
    - *air-conditioned room, ambient probes*

- **Optional remote sensors**
    - *Humidity and temperature sensor with up to 10m cable length*
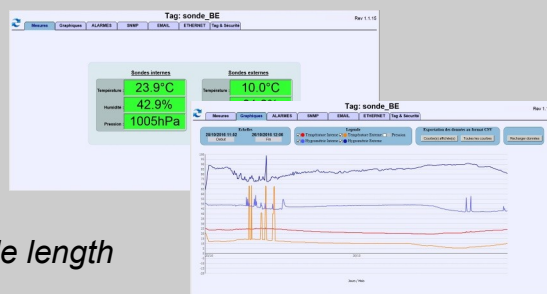
SAi60 is a room sensor for traceability applications of controlled atmosphere rooms. Connected to the local network, this probe provide data measurements via Modbus / TCP or SNMP and can send alarms emails.

SPECIFICATIONS

Measures:
- Room temperature and relative humidity,
 and atmospheric pressure in option.

Feature:
- Wall mounting (perforated plastic case).
- Conformal coating.
- protection (housing / terminals): IP20.
- DIN rail mounting with specific adapter.

Front panel / configuration:
- 2 lines of 8 characters LCD display
display temperature, humidity (local and optional remote probe)
-Three keys keyboard allowing:
        The communication configuration (IP address and mask).
        The measures adjustment (RH, T ° and pressure 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, SMTP, Web server.

Qualification test:
- Excellent lifetime, about 1000 h, under extreme conditions
        (temperature 60 ° C, humidity 93%).
- Return time approximately 10 seconds
        (After 150 hours condensation).
- humidity hysteresis <+ / -1.5%.
- Long term stability better than 0.5% / year.
- Linearity better than 2% over the range of 10% to 90% RH

Remote sensor (optional):
- Allows local and remote measurement of
  temperature and humidity.
- Reference : **SHL10jk**
cable length up to 10 meters (5 meters
in standard) connects to the serial port
(3.5mm jack).
Mounting option: JPC flange
(for attachment to air duct or through panel mounting)
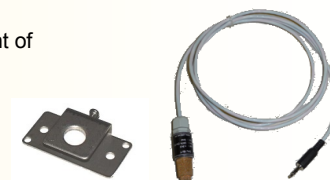
PoE injector:
- For Switch without PoE, we provide a PoE injector
conforms to IEEE 802.3af

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

MEASURE

Relative Humidity (%)
0 ...100% RH not condensate
Accuracy:
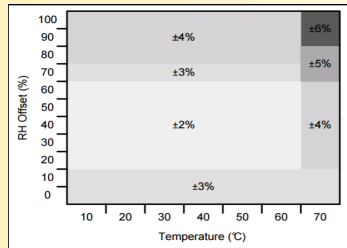
Temperature
20 .....+80 ° C

Accuracy:
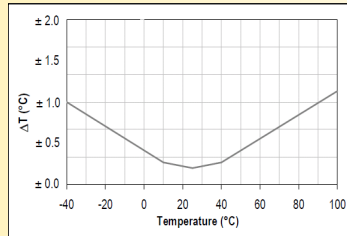
Response time T° and RH	15 seconds typical (63%)
Repeatability	+/- 0.1% ; +/- 0.1 °C
Linearity	<0.2%
Hysteresis	+/- 1% RH
Long-term stability	+/- 0.25% RH/ year; +/- 0.04 °C / year

Atmospheric pressure 50 kPa …... 115 kPa
Accuracy +/- 1 kPa

COMMUNICATION
Ethernet 10/100 base T (connexion RJ45)
protocols : Modbus-TCP, SNMP, Web server.

POWER SUPPLY
power supply via PoE (power over Ethernet)
from 36 Vdc to 57 Vdc according to IEEE802.3af
Optional external power supply : 10 to 35 Vdc (1 watt)

ENVIRONMENT

Operating temperature:	-20 °C / +80 °C
Storage temperature:	-40 °C / +85 °C
drift	~ 0.05 % / ° C (RH measure)
Humidity	85% non condensing
Weight	~ 100 gr.
Protection	IP20
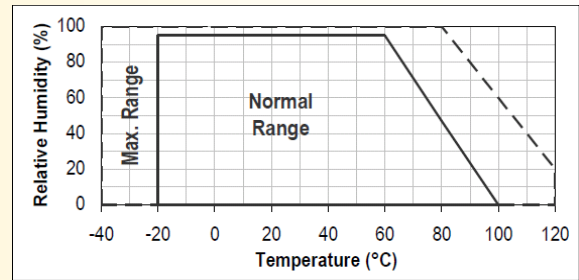
Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE		
Immunity standard for industrial environments **EN 61000-6-2**		**Emission standard for industrial environments** **EN 61000-6-4**
EN 61000-4-2 *ESD*	EN 61000-4-8 *AC MF*	EN 55011
EN 61000-4-3 *RF*	EN 61000-4-9 *pulse MF*	
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*	CE

WIRING AND OUTLINE DIMENSIONS

Serial link
or
remote sensor
link (SHL10jk)

MOUNTING RECOMMENDATIONS
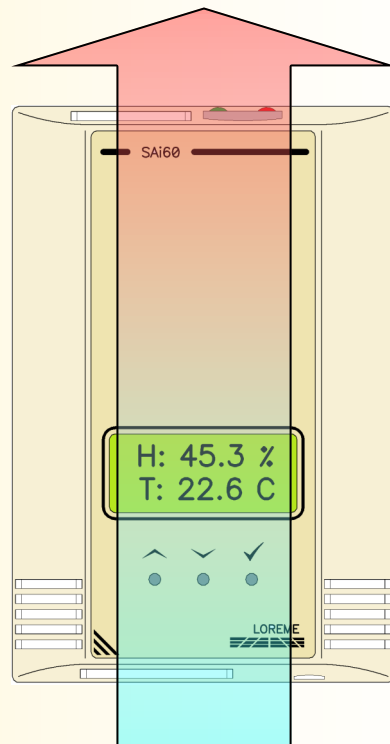
Install the probe vertically. Do not
block any ventilation holes to ensure a
free air flow.

Failure to do this may affect the
measurement accuracy.