ASCON TECNOLOGIC

S E R I E S

BT. 16.01.HL/E

# Humidity and Temperature with Replaceable "Humi-chip" Module HL Line

The HL transmitters determine measurements by means of a capacitive sensor integrated in a silicon microchip.

This technology provides accurate process measurements, reliability and excellent long-term stability.

The sensor is very durable and moisture resistant.

The "Humi-chip" module that incorporates the sensor can be easily interchanged without the need for re-calibration.

The excellent price/performance ratio makes the "HL" transmitter ideal for most applications, particularly in civil and industrial air conditioning, in greenhouses and in the cells of seasoning and storage of food; not in the presence of chemical contaminants or aggressive.

**Humidity and Temperature outputs:**
2 wire 4…20mA, the outpus are not isolated.

**Accuracy:**
RH: 2... 2.5% in teh range 10... 90%
Temperature: 0.4°C max..

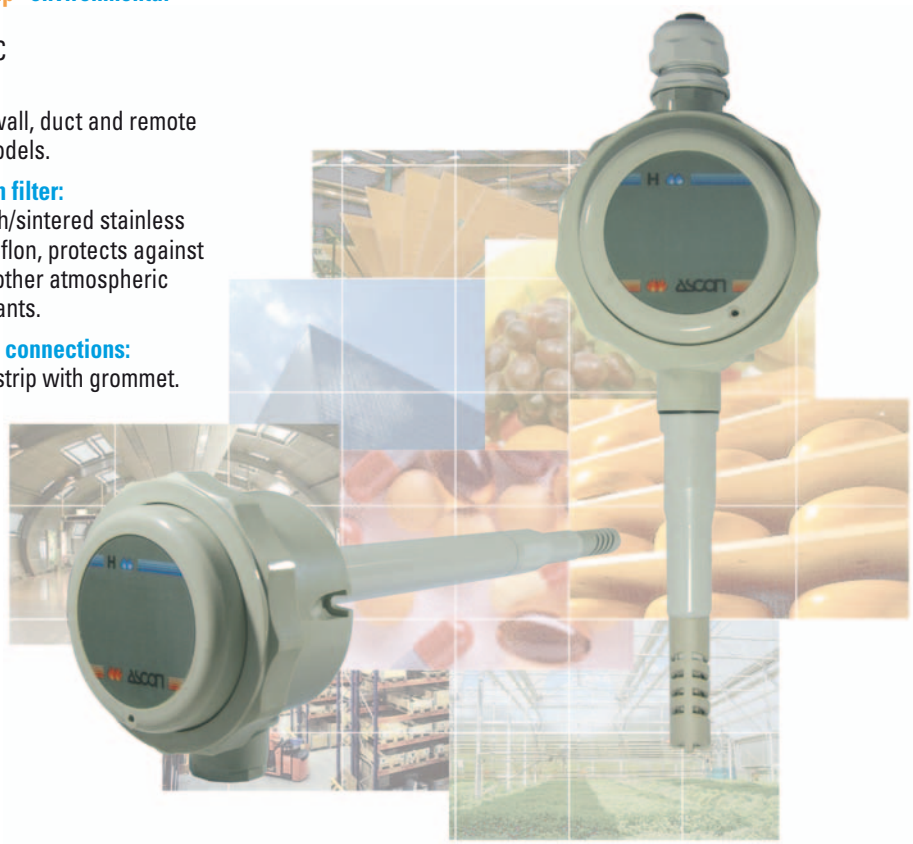
**Stability:**
Long-term drift < 0.5 RH%/year.

**"Humi-chip" environmental limits:**
-30...+90°C

**Housing:**
IP66, for wall, duct and remote sensor models.

**Protection filter:**
Wire mesh/sintered stainless steel or teflon, protects against dust and other atmospheric contaminants.

**Electrical connections:**
Terminal strip with grommet.



E

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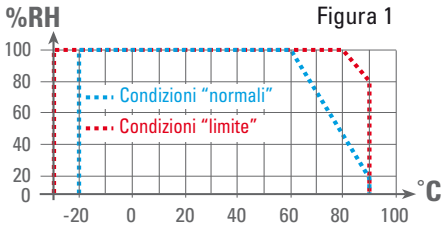
## Characteristics at 25°C ambient temperature

| | | |
|---|---|---|
| Relative Humidity (**RH**) | Range | 0…100% RH |
| | Output signal | 2 wire 4…20 mA; Rmax. (Ω) = (Vdc -12)/20: e.g. 600Ω at 24V |
| | Accuracy (fig. 2) | 2.5% tra 10... 90%RH (comprende non linearità, isteresi e ripetibilità) |
| | Admitted temperature | See Figure 1 |
| | Long time drift | Tipical <1% RH/Year |
| Temperature (**T**) | Available ranges | -30… +70°C; -20… +30°C; 0...50°C; 0... 100°C (other on request) |
| | Output signal | 2 wire 4… 20 mA; isolated between the Humidity output |
| | Accyracy | ±0.3°C |
| Power supply | 12... 30Vdc | Power consumption 2 W max. |
| General characteristics | Housing material | ABS, protection degree IP66 |
| | Electromagnetic compatibility | Compliance to CE standards EN 50081-2, EN 50082-2 |
| | Environmental Temperature | Operating: -30... +90°C - Storage: -50...+90°C |

### Working limits of "Humi-chip" module

Figura 1




### Humidity accuracy

Figura 2

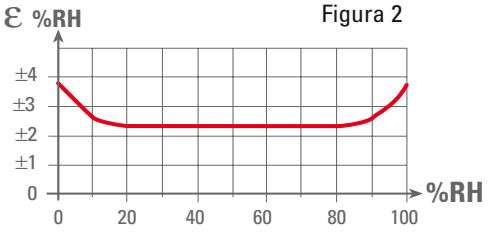
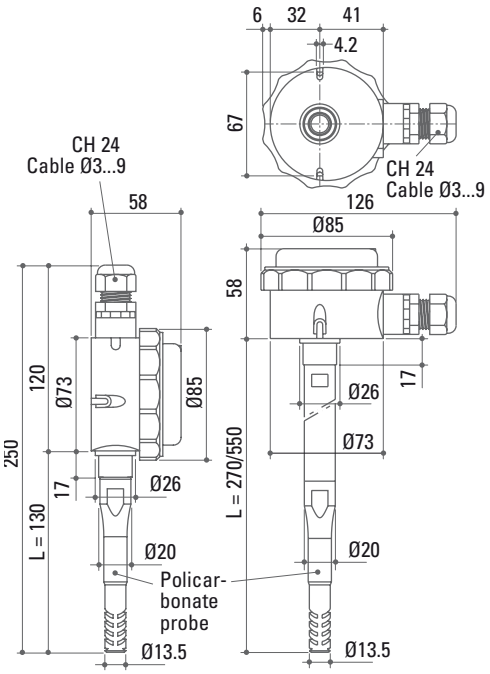


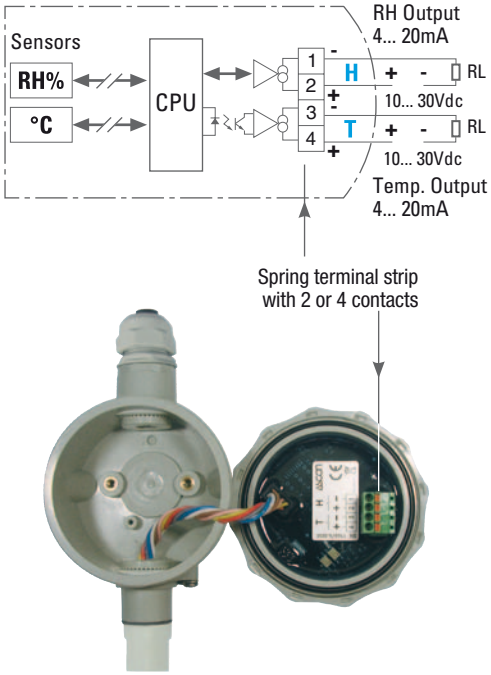

**Figure 1 note:** The measured reading accuracy is guaranteedthrough the "**Normal**" working conditions.A long-time period, at "**Limit**" conditions maygenerate a permanent drift up to +2% RH.

## Dimensions and Mounting

**Wall mounting** **Duct mounting**




## Wiring and Terminals




## Ordering Codes

Line Basic model

Model: **HL** - **A** **B** **C** / **D** - **0** **0**

Mounting - Dimensions

Filter

Temperature Output

| Mounting | Dimensions | A | B |
|---|---|---|---|
| Wall | Ø20 x L130 | P | 0 |
| Duct | Ø20 x L270 | C | 2 |
| | Ø20 x L550 | C | 5 |

| Filter | C |
|---|---|
| Stainless steel wire mesh | R |
| Sintered stainless steel | S |
| Teflon | T |

| 2nd Output (opzione) temperature and range | | D |
|---|---|---|
| Not fitted | | 0 |
| 4... 20mA | -30... +70°C | 1 |
| | -20... +30°C | 2 |
| | 0... 50°C | 3 |
| | 0...100°C | 4 |

Examples:
Model **HL-P0R/0-00** - RH% Only
Model **HL-P0R/1-00** - RH% + °C (Range -30... +70°C)

## Accessories and spares

**"Humi-Chip ®" module**
Easy and fast replacement
(no calibration needed)

Model: **AH-HUMICHIP**

**Wire mesh stainless steel filter**
with threaded filter protection
Porosity: 25 µm
Response time: 5 s (0...63%)
For clean environments (no dust and moderate wind conditions)

Model: **AH-FRI25**

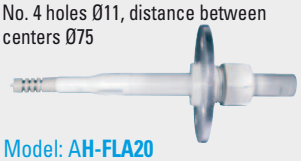
**Stainless steel sintered filter**
with threaded connection
Porosity: 5 µm
Response time: 10 s (0...63%)
Suitable for dusty environments; notmoisture resistant

Model: **AH-FSI05**

**Teflon filter**
with threaded connection
Porosity: 10 µm
Response time: 120 s (0...63%)
Suitable for aggressive chemical environments, not suitable with highgrade humidity

Model: **AH-FT10**

**Adjustable flange Ø100 self-locking**
for Ø20 probe
Material: anodized aluminum
No. 4 holes Ø11, distance between centers Ø75



Model: **AH-FLA20**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