

### Wet bulb natural ventilated temperature sensor



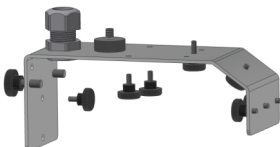

- ▶ Wet bulb temperature measurement with natural ventilation as required for the calculation of the WBGT index (ISO 7243) in portable and/or indoor installations
- ▶ Designed as described in the ISO7726 standard for the “Wet Bulb Temperature”
- ▶ Well protected by the solar radiation
- ▶ In-house ISO17025 calibration laboratory

Thermometric probe with wet bulb and natural ventilation developed according to ISO7726 standard. The Pt100 element is closed inside a wet cotton sock from a water tank. The water tank has a high reflection factor in order to avoid water temperature increase due to radiant sources. This sensor is needed for WBGT (ISO7243) heat stress index measurement.

#### Technical Specifications

| PN                          | ESU121                      |   |
|-----------------------------|-----------------------------|---|
| <b>Wet bulb temperature</b> | Principle                   | Pt100 Class A IEC60751 (DIN Class A)  |
|                             | Measuring range             | -30...70 °C   |
|                             | Accuracy                    | ±0,15 K @ 0 °C  |
|                             | Output                      | Pt100 DIN-IEC 751 table (EN 60751)  |
|                             | Resolution                  | 0.01 °C   |
|                             | Response time (T90 Air)     | 10 min (air flow 0,2 m/s)   |
| <b>General Information</b>  | Standard                    | ISO7726   |
|                             | Protection type             | IP54  |
|                             | Power consumption           | none  |
|                             | Operative temperature       | 0...80 °C   |
|                             | Cable                       | L=1 m   |
|                             | Connector                   | Min-din   |
|                             | Derived quantities obtained | <ul style="list-style-type: none"> <li>• WBGT Index* (ISO7243)</li> <li>* required additional black globe temperature (T<sub>g</sub>) sensor</li> </ul> |
|                             | Mounting                    | On BVA320-315 stands  |

### Accessories

|   |                  |   |
|---|------------------|---|
|   | <b>SVICA0103</b> | Calibration certificate. ISO9001 type (Wet Temperature)           |
|   | <b>SVACA0105</b> | Calibration certificate. ISO17025-ACCREDIA type (Wet temperature) |
|   | <b>MM3101.R</b>  | Spare cotton sock, diameter 3 mm (by meter)                       |
|   | <b>MM3103.R</b>  | Spare cotton sock, diameter 8 mm (by meter)                       |
|  | <b>BVA320</b>    | Arm for fixing sensors on BVA304 tripod or wall                   |
|  | <b>BVA315</b>    | Arm for fixing sensors on BVA304 tripod                           |



▶ LSI LASTEM is an ISO17025 accredited laboratory for air temperature measurements. All sensors manufactured are tested inside our laboratory. LSI LASTEM provides Test report for any sensor supplied and on request, ISO17025 or ISO9001 calibration certificates (see Accessories list).



▶ LSI LASTEM developed a high-end instrument range to assess thermal stress (heat stress and cold stress) and comfort. Wet bulb temperature ( $T_{nw}$ ) is one important measurement (together with Globe temperature and Air temperature) required by the calculation of the WBGT Wet Bulb Globe Temperature heat index under the ISO7243 standard.

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