

## Hot wire anemometer



- ▶ interchangeable head for easy replacement in case of wire breakage
- ▶ High accuracy for air velocity measurement
- ▶ Very low measurement threshold: 0.01 m/s
- ▶ Because of the omni-directional sensitivity, this sensor is very suitable in applications where the air flow is not directional as in Heat stress and Thermal comfort
- ▶ Because of the fast response time, this sensor is very suitable for Turbulence Intensity (TU) measurements. M-Log data logger can calculate directly TU and % of people disatisfy by air draft as described in ISO7730 standard
- ▶ Using air speed values, M-Log data logger can calculate directly air flow (mass and volume) and number of air changes
- ▶ EXP126 model with Radio communication to data logger or Sphensor Gateway
- ▶ Internal ISO17025 accredited calibration laboratory

Hot wire anemometer for measuring mean air speed (va). ESV108-108.1 measure the air speed only, using one sample every 100 ms and update output every one sec. The ESV308 model is similar to the ESV108 model, but its output is serial to be connected directly to the RS232-2 port of the E/M-Log data loggers and calculates turbulence intensity (TU) in compliance with ISO7726. EXP126 measures air speed every 1 sec and send, by radio, the average value of the last min to the radio receiver. These sensors can be used in indoor environments, ducts, ventilation outlets. They can be hand-held or it can be mounted on a tripod during longer measurements. When the support for the directional measurement is removed, this sensor has a good response to plane omnidirectional air flow which arrive on the hot wire from any directions within 300°.



### Technical Specifications


PN	ESV308	ESV108	ESV108.1	EXP126
<b>Measurement</b>	Air speed (m/s) + Turbulence (%TU)	Air speed (m/s)		
<b>Output</b>	RS232	60 ....300 mV		Radio 869 MHz
<b>Connector</b>	DB-9	Mini-DIN	Free wires	-
<b>E/M-Log input type</b>	RS232	N.1 analog	N.1 analog	Radio
<b>Power supply</b>	9...30 V DC		10...30 V DC	10...30 V DC
<b>Power consumption (vel. 20 m/s)</b>	1.2 W @ 9 V DC	0.9 W @ 9 V DC	0.9 W @ 10...30 V DC	1 W @ 12 V DC
<b>Derived quantities susing E/M-Log</b>	<ul style="list-style-type: none"> <li>• Air flow, N°air changes</li> <li>• Turbulence index (TU)</li> <li>• Draft rate index (ISO7730)</li> </ul>	Air flow N°air changes		
<b>Output (va and TU)</b>	Every second: mobile average over the last 5 s	-	-	<ul style="list-style-type: none"> <li>• Sampling rate: 1 s</li> <li>• Every minute: mobile average over the last 60 s</li> </ul>
<b>Data Logger compatibilty</b>	M-Log E-Log	M-Log	E-Log	<ul style="list-style-type: none"> <li>• E-Log using EXP301 receiver</li> <li>• Sphensor Gateway</li> </ul>

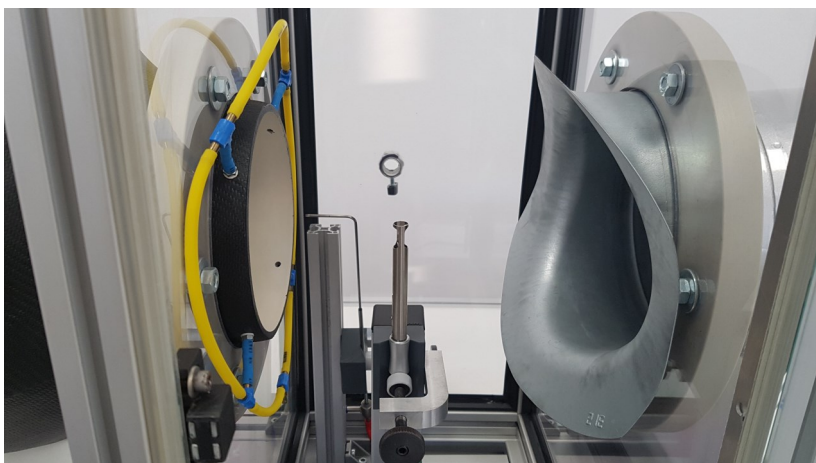
## Common Technical Specifications

<b>Anemometer</b>	Principle	Hot wire
	Measuring range	0.01...20 m/s
	Accuracy (10...30°C; 1013 hPa; 0...300° arc directions)	<ul style="list-style-type: none"> <li>• NA (0...0.1)</li> <li>• ±0.06 m/s (0.1...0.4 m/s)</li> <li>• ±0.08 m/s (0.4...3.0 m/s)</li> <li>• ±0.035 of reading (3.0...20 m/s)</li> </ul>
	Threshold	0.01 m/s
	Resolution	0.01 m/s
	Response time	0.1 s
	Sampling rate	10 Hz
	<b>General Information</b>	Standard
Protection grade		IP54
Power consumption		70 mA (EXP126 only: 50 mA)
Operative temperature		-40...85 °C
Cable		L= 1 m (ESV308, ESV108). L=10 m (ESV108.1). L=5m+DEA261.2 (EXP126)
Mounting		On BVA320 stand
<b>Radio (EXP126 only)</b>	Frequency	869.450 MHz
	Radio Transmission Power	25 ± 3 mW
	Transmission rate	1 min (average value of the last 60 sec)
	Radio Transmission distance	600 m (line-of-sight)

## Accessories

	<b>SVSKA2002</b>	USB communication interface for head replacement. Connectors: <ul style="list-style-type: none"> <li>• USB-A = connected to PC</li> <li>• DB-9 pin 9 = connected to ESV308</li> <li>• Pressfit pin 4 = connected to ESV108-108.1</li> </ul>
	<b>SPMCA1004</b>	Replaceable hot wire head for substitution
	<b>SVICA2003</b>	Calibration certificate ISO9001 type (Air speed)
	<b>SVACA2015</b>	Calibration certificate ACCREDIA type (Air speed)
	<b>BVA320</b>	Arm for fixing sensors on BVA304 tripod
	<b>DEA261.2</b>	Power pack for EXP126 sensor. 10W - 90..264 V AC/13,6V DC @ 750 mA interchangeable universal plug, connector M8-3

	<p><b>SPMCA1005</b></p>	<p>Replaceable hot wire head spare part compatible with extension cable CCCFA4900</p>
	<p><b>CCCFA4900</b></p>	<p>Extension cable for hot wire anemometer to execute measurements in ducts or small holes. L=1,8 m</p>



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