



**LSI LASTEM
EXP815.1
Relative
Humidity and
Air
Temperature**



LSI LASTEM EXP815.1 Relative Humidity and Air Temperature Owner's Manual

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LSI LASTEM EXP815.1 Relative Humidity and Air Temperature



Frequently Asked Questions

Q: How often should I calibrate the Thermohygrometer?

A: It is recommended to calibrate the Thermohygrometer annually for accurate measurements.

Q: Can the sensor be used outdoors?

A: The sensor is designed for indoor use; outdoor usage may affect its performance.

Installation

1. Choose a suitable location for the sensor ensuring it is exposed to the air to be measured.
2. Install the sensor in small spaces, pipes, or ducts as required.
3. For dirty air applications, consider using the DYA225 shelter to protect the sensor from dirt accumulation.

Usage

1. Connect the appropriate output (analog, digital, or radio) based on your monitoring system requirements.
2. Ensure the cable length does not exceed 100 meters for optimal performance.
3. Monitor and record the air temperature and relative humidity readings as needed.

Maintenance

1. Regularly check and clean the sensor to ensure accurate readings.
2. Replace the battery (AA 3.6 V) as needed to maintain power supply.

Thermohygrometer (analogue, digital and radio outputs)

- 4...20 mA, RS485-Modbus RTU and Radio outputs version
- Easy installation of the sensitive part, even in small spaces or pipes
- Cable length from 5 to 100 m
- Dew Point calculation and output (replace RH% output)
- Simple replacement of the sensitive element

- Outstanding accuracy (1.5%) for RH%

Sensor for measuring the air temperature and relative humidity in indoor environments or inside pipes or ducts. In applications with dirty air, it is possible to mount the sensor inside the DYA225 shelter in order to prevent dirt from accumulating directly on the sensitive element.

Technical Specifications

PN	EXP815.1	DMA975.1	DMA875.1
Measurements	°C/RH%	°C/RH%	°C/RH%
Output	Radio	RS485	2×0/4...20 mA
Frequency	868 MHz	–	–
Radio transmission power	25 ± 3 mW	–	–
Radio transmission distance (line-of-sight)	600 m	–	–
Transmission rate	10'	–	–
Battery life	>2 years	–	–
Protocol	–	Modbus RTU®, TTY-ASCII	–
Configuration	–	Hyperterminal	–
RS485 protection	–	Galvanic insulation (3 kV, UL1577)	–
RS485 speed	–	1200...115 kbps	–

PN	EXP815.1	DMA975.1	DMA875.1
Power supply	Battery (AA 3.6 V)	10...30 V AC/DC	10...30 V AC/DC
Power consumption	<10 µW stand-by 120 mW in trasmissione	1 W	1 W
Electric protections	NO (electrically insulated system)	Tranzorb and Emifilter	Tranzorb and Emifilter

Common Technical Specifications

Temperature	Principle	RTD Pt100 1/3 DIN B (Class AA EN60751)
	Measuring range	Programmable: -40...60 °C, -50...60 °C, -50...70 °C, -30...100 °C
	Accuracy	0.1 °C (@ 0 °C)
	Resolution	0.01 °C
	Response time (T90)	Typical 4 s (1 m/sec air flow)
	Long term stability	<0.1 °C / year
Relative Humidity	Principle	Capacitive
	Measuring range	0...100%
	Accuracy	±1% (@5...95%)
	Output	Programmable: RH% or Dew Point
	Long term stability	<±1% / year
	Response time (T90)	Typical 10 s (1m/s air flow)
	Hysteresis	<1%
	Resolution	0.1%
General Information	Protection rate	IP65
	Operative temperature	-50...100 °C

Accessories


	SVICA0003	ISO9001 type calibration certificate (Temperature)
	SVACA0006	ISO17025-ACCREDIA type calibration certificate (Temperature)
	SVICA1003	ISO9001 type calibration certificate (Relative Humidity)
	SVACA1005.1	ISO17025-ACCREDIA type calibration certificate (Relative Humidity)
	DWA505A	Cable L= 5 m
	DWA510A	Cable L= 10 m
	DWA525A	Cable L= 25 m
	DWA526A	Cable L= 50 m
	DWA527A	Cable L= 100 m
	MG2251.R	7 pin free female connector
	ML3015	Sensitive element (spare part) for DMA815.1-875.1. EXP815.1
	EXP301	Radio signal receiver from EXP815.1 radio sensor. Output compatible with data loggers (M/E-Log) Maximum number of receivable sensors: 200 Battery: NiCd 9 V Power supply: 12 V DC Connection cable to data logger: DWA601
	DYA225	Open well for T+RH% sensors when mounted in ducts in presence of dirty air flow. Material: Iron Dimensions: L= 200 mm Ø 92 mm Support plate: 120x120 mm

LSI LASTEM Srl Via Ex SP. 161 Dosso, 9 20049 Settala (MI) Italy

Tel. +39 02 954141

Fax +39 02 95770594

Documents / Resources



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EXP815.1, EXP815.1 Relative Humidity and Air Temperature, Relative Humidity and Air Temperature, Humidity and Air Temperature, Air Temperature, Temperature

References

- lastem.com
- [User Manual](#)

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