



LSI MW9009 LASTEM sensors for Temperature and Relative Humidity User Guide

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LSI MW9009 LASTEM sensors for Temperature and Relative Humidity



RELATIVE HUMIDITY AND AIR TEMPERATURE

- 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. 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 Vac/dc	10...30 Vac/dc
Power consumption	<10 µW stand-by 120 mW in trasmissione	1 W	1 W
Electric protections	NO (electrically insulated system)	Tran orb and Hemofilter	Tran orb and Hemofilter

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 Vdc 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: 120×120 mm

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Documents / Resources



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References

-  [The domain name lastem.com is for sale](#)
-  [Environmental Monitoring Solutions - LSI LASTEM](#)