S904
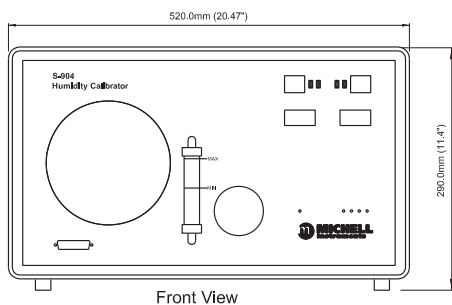## Relative Humidity and Temperature Generator for Calibrations

The S904 humidity and temperature generator is designed to calibrate and verify the operation of relative humidity sensors and transmitters. With a chamber temperature range of +10 to +50°C (+50 to +122°F), a uniformity of ±0.1°C (±0.02°F) and the ability to generate 10–90% RH, accurate and repeatable calibrations are made easy.

Highlights

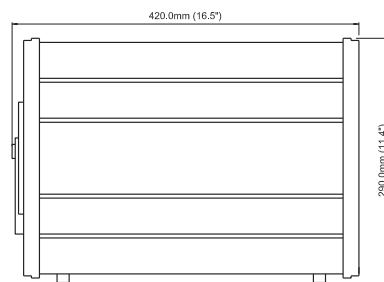- Relative humidity and temperature controlled chamber

- Excellent stability within chamber: ±0.2% RH, Temp. ±0.1°C (±0.02°F)

- Optional in-built data-logging for reference probe and probes under calibration

- Probes with body diameters between 5 to 25mm (0.2 to 0.98") can be accepted

Technical Specifications

Humidity	
Generator range	10-90% RH
Accuracy **Control element**	≤±1% RH (10–70% RH) ≤±1.5% RH (70–90% RH)
Stability	±0.2% RH (20–80% RH)

Temperature	
Generator range	+10 to +50°C (+50 to +122°F) (lowest T set point = 10ºC (18°F) below ambient)
Accuracy	±0.1°C (±0.2°F)
Stability	±0.1°C (±0.2°F)

Chamber	
Ramp rate from **+20 to+ 40°C (+68 to +104°F)** **+40 to +20°C (+104 to +68°F)**	1.5°C / minute (2.7°F / minute) 0.7°C / minute (1.2°F / minute)
Control element	Removable relative humidity sensor

General	
Probe ports	up to 5 – sensor body diameters 5 to 25mm (0.2 to 0.98") accommodated by port adapters
Chamber volume	2000cm^3 (122.1in^3)
Chamber dimensions	105 x 105 x 160mm (4.13 x 4.13 x 6.3") (wxhxd)
Instrument dimensions	520 x 290 x 420mm (20.5 x 11.4 x 16.5") (wxhxd)
Set point resolution	0.1 for humidity and temperature
Displays	3 digit LED, 10mm (0.39") characters
Supply	85–264 V AC, 47–63 Hz, 150 VA
Weight	20kg (44lb)

Dimensions

Front View

Side View

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S904

Accessories and Spare Parts

0.25kg (0.55lbs) desiccant (orange)	A000171
ø18.5mm (0.73") Blind stop	A000200
Drying module	A000240
Water bottle	A000242
Door kit with 5 ports. 5 adapters to be specified	A000263
Door kit with 5 ports and 25 adapters (5 x ø19mm (0.75"), 4 x ø12mm (0.47"), ø13.5mm (0.53"), ø15mm (0.59"), ø18.5mm (0.73"), ø24mm (0.94") - and blind stops. Adapter tool included)	A000264
Tool for changing the port adapters	A000265
Door with clear window - no ports	A000266
Door without ports	A000268
Door kit for use with MI Optidew. (Optidew dew-point sensor port adapter, PRT port adapter and 4 x ø19mm (0.75") adapters. Adapter tool included)	A000269
Polymer port adpt ø18.5mm (0.73") to ø3mm (0.19") (for Optidew probe)	A000273
Blind stop for Optidew adapter	A000277
Blind stop for PRT adapter	A000278
M30x1 Molded polymer port adpt & blind stop (to be modified by customer)	A000290
Polymer port adpt ø client specific & blind stop	A000290X
Polymer port adpt for ø12mm (0.47") probe, blind stop (M30x1)	A000291
Polymer port adpt for ø13.5mm (0.53") probe, blind stop (M30x1)	A000292
Polymer port adpt for ø14mm (0.55") probe, blind stop (M30x1)	A000293
Polymer port adpt for ø15mm (0.59") probe, blind stop (M30x1)	A000294
Polymer port adpt for ø18.5mm (0.73") probe, blind stop (M30x1)	A000295
Polymer port adpt for ø19mm (0.75") probe, blind stop (M30x1)	A000296
Polymer port adpt for ø24mm (0.95") probe, blind stop (M30x1)	A000297
Polymer port adpt for ø25mm (0.98") probe, blind stop (M30x1)	A000298
Transport Case for OptiCal and S904	OCAL-TC
Control sensor	HT961T00

1. S904 set point temperature (0-10 V = 0 to 100°C (32 to 212°F)
2. S904 set point RH (0-10 V = 0 to 100% RH)
3. Free to use (0-10 V)
4. Free to use (0-10 V)
5. Free to use (0-10 V)
6. Free to use (0-10 V)
7. Free to use (0-10 V)
8. Free to use (0-10 V)

The acquisition system only measures 0-10 V on every channel so the 4-20 mA signals from the Optidew are converted to a 0-10 V signal. Channels 1 and 2 are not available for logging signals. A 500 Ω resistor must be used.
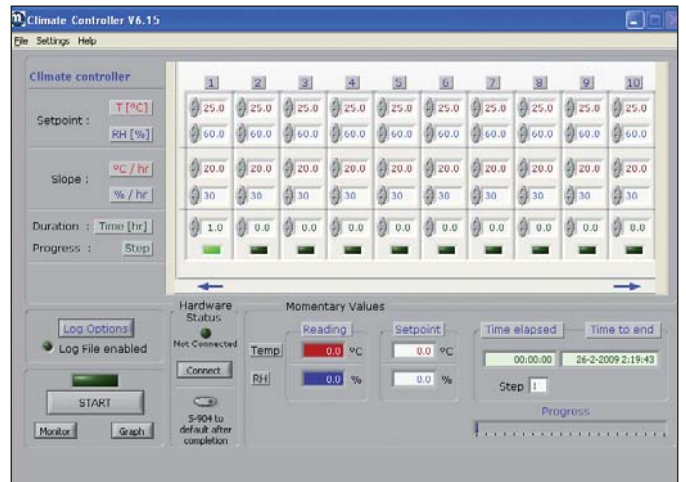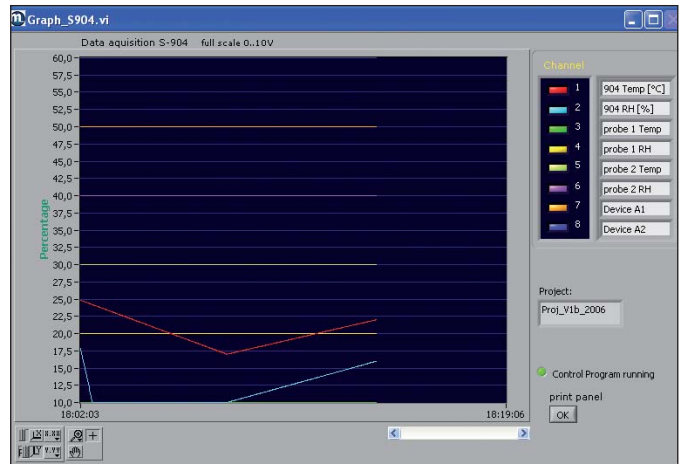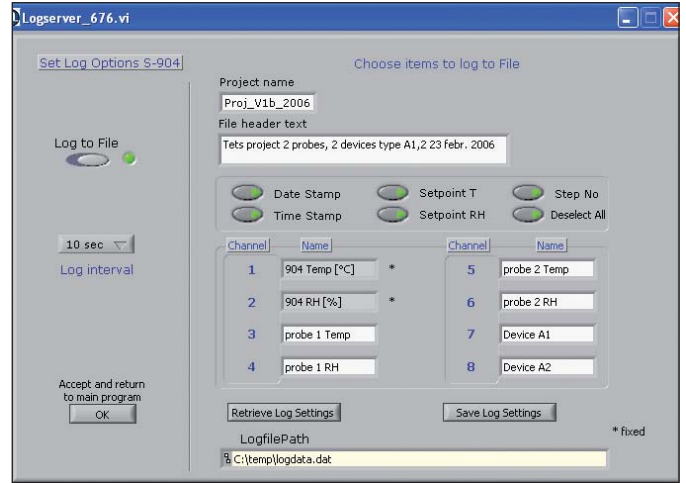
Labview logging software

Order Codes

S904 - Relative Humidity and Temperature Generator for Calibrations		
Feature	**Item**	**Description**
Type	S904	Base unit
	S904-D	Base unit - with RS232/USB interface (data-logging software for PC - 6 channel data-logger)

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