S904

Benefits

- Simple operation and maintenance
- Excellent chamber stability and uniformity
- Manual control or optional straightforward automated set point programming
- Optional in-built data-logging for reference probe and probes under calibration

Applications

- On-site or in-lab verifications
- Validation of RH probes at pharmaceutical manufacturing facilities, meteoritical offices, food manufacturing etc.

Description

General

The S904 is a completely stand-alone and transportable calibrator for humidity sensors, requiring no external services other than mains power. The calibration chamber features 5 interchangeable ports to accommodate virtually any brand, type or model of sensor. This calibrator is ideal for companies or organizations looking to calibrate large numbers of probes in a laboratory or field setting.

High Stability

The environment within the insulated calibration chamber is temperature controlled using a 4-zone fan-assisted Peltier arrangement for maximum stability, and minimum temperature gradient. The humidity of the circulating air is precisely regulated using a closed-loop control system that functions by proportionally mixing flows of dry and saturated air.

Fast Response Time

Two highly visible LED panels on the front of the S904 display the current humidity and temperature within the calibration chamber. The response time to a humidity or temperature step change is typically less than 10 minutes, so a simple 3-point calibration can be carried out in under an hour.

Maintenance

The S904 is easy to maintain. The desiccant changes color to indicate when it needs to be recharged and this is visible through a clear window on the front of the unit. Recharging the desiccant is simply a matter of heating it in a conventional oven at +150°C (+302°F) for 3 hours. The water reservoir at the front of the unit shows the current saturator fill level and makes it easy to top-up with distilled water when required.

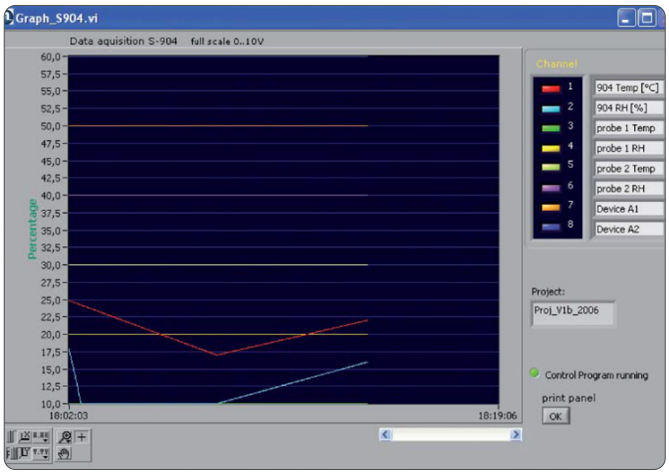
59108E/2022-06

Accessoires & Spare Parts

Order Codes	Product / Description
	Doors and Door Ports
A000266	Door with clear window - no ports
A000268	Door without ports
A000263	Door with 5 ports – please order adaptors separately
A000264	Door kit with 5 ports and 25 adapters - 5 x Ø19 mm (0.75”), 4 x Ø12 mm (0.47”), 4 x Ø13.5 mm (0.53”), 4 x Ø15 mm (0.59”), 4 x Ø18.5 mm (0.73”), 4 x Ø24 mm (0.94”) – and 25 blind stops. Adapter tool included
A000369	Door kit for use with MI OptidewOPT401/501. (Optidew dew-point sensor port opening, PRT port adapter plus 3 x Ø standard sized adapters. Adapter tool included)
A000279	Polymer adapter Ø19 mm to Ø6 mm PRT
A000290	Molded polymer port adapter & blind stop (to be modified by customer) (M30x1)
A000290X	Polymer port adapter Ø client specific & blind stop (check possibility with factory first)
A000291	Polymer port adapter for Ø12.0 mm (0.47") probe, blind stop (M30x1)
A000292	Polymer port adapter for Ø13.5 mm (0.53") probe, blind stop (M30x1)
A000293	Polymer port adapter for Ø14.0 mm (0.55") probe, blind stop (M30x1)
A000294	Polymer port adapter for Ø15.0 mm (0.59") probe, blind stop (M30x1)
A000295	Polymer port adapter for Ø18.5 mm (0.73") probe, blind stop (M30x1)
A000296	Polymer port adapter for Ø19.0 mm (0.75") probe, blind stop (M30x1)
A000297	Polymer port adapter for Ø24.0 mm (0.95") probe, blind stop (M30x1)
A000298	Polymer port adapter for Ø25.0 mm (0.98") probe, blind stop (M30x1)
A000377	Blind stop for Optidew 2 opening
A000378	Blind stop for Optidew 2 Ø6 mm opening
A000265	Tool for changing the port adapters
	Miscellaneous
A000240	Drying module (including desiccant)
A000242	Water bottle
A000171	0.25 kg (0.55 lbs) desiccant (orange)
A000172	3 kg (6.6 lbs) desiccant (orange)
HT961T00	Control sensor. (Please add to order of control sensor, which type of calibration is preferred. See calibration RH tab for choice of calibration and prices)
OCAL-TC	Transport Case for OptiCal and S904
S8K-REM-TSG	S8000 Remote guard for use in S904 and Optical

Software

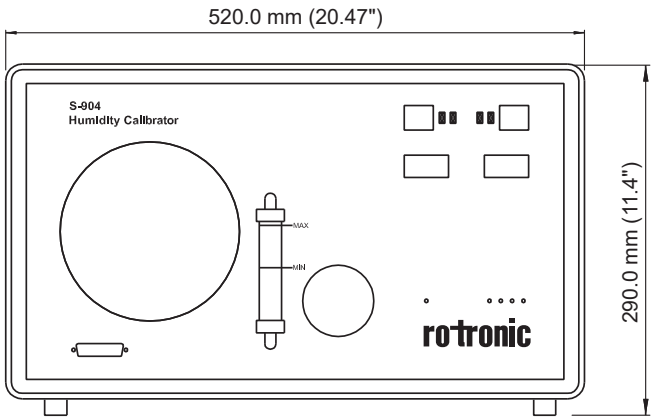
An optional integrated digital interface is available only for the S904-D. This allows the humidity and temperature set points of the chamber to be controlled with the supplied PC application software, enabling the operator to create completely automated calibration profiles for unattended laboratory operation. The software also gives the ability to monitor, chart and log data from the connected probes and calibration reference on a PC for later analysis. Alternatively, the set points can be controlled manually with the front panel controls – making the S904 ideal for field calibrations where a PC is not available.

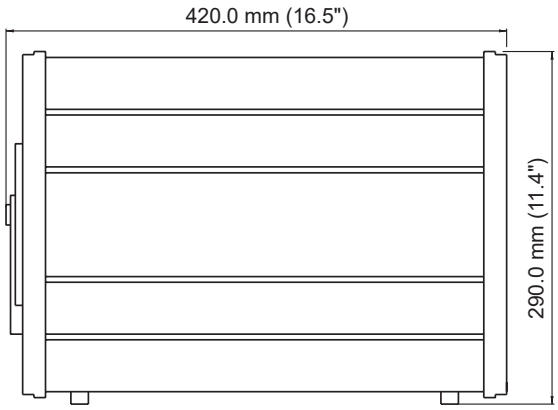


59108E/2022-06

Technical Information

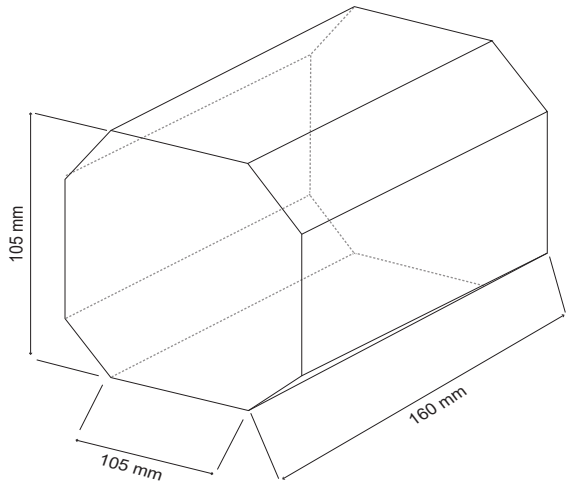
Dimemsions





Humidity	
Generation 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	
Generated range	10...50 °C (50...122 °F) (lowest T set point = 10 °C (18 °F) below ambient)
Accuracy	±0.1 °C (±0.2 °F)
Stability	±0.1 °C (±0.2 °F)
Chamber	
Ramp rate from 20...40 °C (68...104 °F) 40...20 °C (104...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 25 mm (0.2 to 0.98”) accommodated by port adapters
Chamber volume	2000 cm^3 (122.1 in^3)
Chamber dimensions	105 x 105 x 160 mm (4.13 x 4.13 x 6.3”) (h x w x d)
Instrument dimensions	290 x 520 x 420 mm (11.4 x 20.5 x 16.5”) (h x w x d)
Set point resolution	0.1 for humidity and temperature
Displays	3 digit LED, 10 mm (0.39”) characters
Supply	85...264 V AC, 47/63 Hz, 150 VA
Weight	20 kg (44 lbs)

Chamber Dimemsions



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