



Humidity Generator S-503

- Generates and holds levels of 10-90% RH in 0.1% RH steps
- Fast response: 0.5% RH stability in 10 minutes
- Built-in Power Supply for Transmitters
- Accepts up to seven 0.728" dia. (18.5mm) probes
- Adapters for smaller probes available



The S-503 Humidity Generator enables users of humidity sensors, transmitters and read-out devices to quickly and accurately generate reference humidity conditions. RH set points can be selected from 10 to 90% in steps of 0.1% RH.

These lightweight and self-contained units utilize a thin film capacitive sensor and closed loop controllers to modulate the flow of air through saturation and desiccant chambers, while an axial fan continuously

circulates air through the test chamber for optimum humidity and temperature uniformity. This results in a system that stabilizes within 0.5% RH of the set point in about 10 minutes.

The S-503 was designed with calibration technicians in mind. The calibrator is equipped with the convenience of a built in 15 Vdc power supply to power units under test. It provides direct RH readouts for 0-1 V, 0-5 V, 0-10 V and 4-20 mA transmitters, as

well as actual chamber %RH and temperature. The unit has access ports for up to seven 0.728" (18.5 mm) OD Probes. Flanges and adapters are available to fit probes of other diameters.

The S-503 is supplied with a factory certificate traceable to national standards. For higher precision an independent reference standard such as a chilled mirror hygrometer may be utilized.



up to seven different humidity probes simultaneously

Ordering information

Description	Model
Humidity Generator, includes AC Power Supply Adapter, desiccant and calibration certificate	S-503
S-503 calibration kit, includes S-503 (above) plus DM-509-T-03 handheld readout (pictured at left), carrying case, 5 pcs plug, 5 pcs adapter for .472" (12 mm) probes and 2 pcs adapter for .315" (8 mm) probes	S-503-set
Accessories	Part number
Package of 0.55 lbs (0.25 kg) desiccant	A-000170
Adapter for .315" (8 mm) probes	A-000180
Adapter for .472" (12 mm) probes	A-000190
Plug (may be drilled to accept small diameter probes)	A-000200

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Power	12 Vdc (120 / 230 Vac adapter supplied)
Humidity Range	10 to 90% RH
Relative Humidity set points	10 to 90% RH in steps of 0.1% RH
Relative Humidity Accuracy	±2% RH
Relative Humidity Stability	Better than 0.5% RH
Stabilization Time to Set point	~10 Minutes
Operating Temperature (ambient)	15 to 35°C (60 to 95°F)
Temperature accuracy read-out	0.3°C (0.5°F)
Transmitter Power Supply	15 Vdc, ±10% at 30 mA Max.
Display	3½ digit LCD, 0.5" High
Voltage Read-out	0-1, 0-5 & 0-10 Vdc = 0 - 100% RH
Current Readout	4-20 mA DC = 0 - 100.0 %RH
Desiccant Chamber	1.4 oz (40g) capacity
Saturation Chamber	1.5 fl oz. (25 ml) capacity
Dimensions	9.45" x 7.28" x 3.15" (240 x 185 x 80 mm)
Probe Entry	7 x .728" dia. (18.5 mm)
Weight	3.3 lbs (1.5 Kg)

All specifications are subject to change without prior notice.



HEAD OFFICE



Process Measurement & Controls, Inc.
Rense Instruments Division

11 Old Sugar Hollow Road
Danbury, CT 06810 U.S.A.
Tel: 203-792-8686
Fax: 203-743-2051
Email: sales @renseinstruments.com
www.renseinstruments.com

Represented By: