S503
Relative Humidity Generator for Calibrations

The S503 Humidity Generator enables users of humidity sensors, transmitters and portable devices to quickly and accurately generate a stable humidity in a test chamber to validate or calibrate sensors.
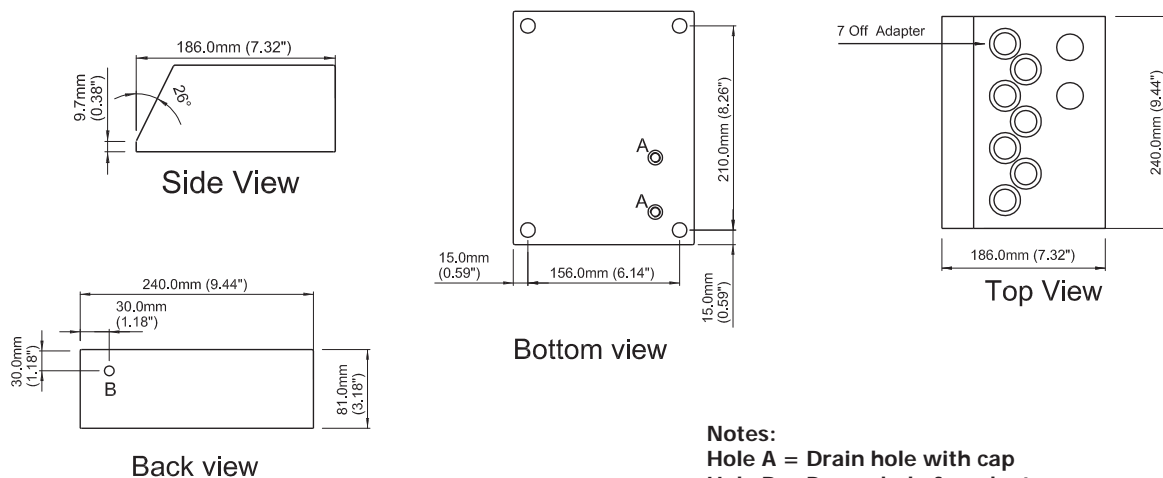
Highlights

- Generates humidity levels between 10–90% RH
- Highly portable
- Fast stabilization of chamber humidity
- Independent reference hygrometer – optional
- Multiple sensors can be calibrated at the same time

Technical Specifications

Humidity

Generation range	10–90% RH in steps of 0.1% RH
Accuracy	±2% RH or better (5–95% RH)
Stability chamber	Better than ±0.5%
Stabilization time to set point	<10 minutes

Temperature

Temperature accuracy	±0.3°C (±0.54°F) - internal reference
Operating temperature (ambient)	+15 to +35°C (+59 to +95°F)

Sensor under Calibration

Voltage read out	0–1, 0–5, 0–10 V
Current read out	4–20 mA
Voltage supply	15 V DC, ±10% at 30 mA max

General

Probe ports	7 off – sensor body diameters 5 to 25mm (0.2 to 0.98") accommodated by port adapters
Desiccant chamber	25g (0.88oz) capacity
Saturation chamber	25ml capacity, distilled water
Display	3½ digit LCD, 13mm (0.5") characters
Supply	12 V DC (100 - 240 V AC adapter included)
Weight	1.85kg (4.08lb)

Dimensions

Side View

Back view

Bottom view

Top View

7 Off Adapter

186.0mm (7.32")
9.7mm (0.38")
26°
240.0mm (9.44")
30.0mm (1.18")
30.0mm (1.18")
81.0mm (3.18")
O B
210.0mm (8.26")
15.0mm (0.59")
156.0mm (6.14")
15.0mm (0.59")
A
A
186.0mm (7.32")
240.0mm (9.44")

Notes:
Hole A = Drain hole with cap
Hole B = Power hole for adapter

Accessories and Spare Parts

S503

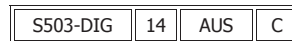|	
0.25kg (0.55lbs) desiccant (orange)	A000171
ø18.5mm (0.73") molded polymer port adpt (for ø8mm (0.31") probes)	A000180
ø18.5mm (0.73") molded polymer port adpt (for ø12mm (0.47") probes)	A000190
ø18.5mm (0.73") blind stop	A000200
Carrying case for the S503	A000230
Water bottle	A000242
Tool for changing the port adapters	A000265
SS port adapter for Optidew	A000272
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
AI adapter & blind stop (to be modified by customer) (M30x1)	A000280
AI port adapter ø client specific & blind stop (M30x1)	A000280X
AI port adpt for ø12mm (0.47") probe, blind stop (M30x1)	A000281
AI port adpt for ø13.5mm (0.53") probe, blind stop (M30x1)	A000282
AI port adpt for ø14mm (0.55") probe, blind stop (M30x1)	A000283
AI port adpt for ø15mm (0.59") probe, blind stop (M30x1)	A000284
AI port adpt for ø18.5mm (0.73") probe, blind stop (M30x1)	A000285
AI port adpt for ø19mm (0.75") probe, blind stop (M30x1)	A000286
AI port adpt for ø24mm (0.95") probe, blind stop (M30x1)	A000287
AI port adpt for ø25mm (0.98") probe, blind stop (M30x1)	A000288
Optidew Vision reference hygrometer with sensor	OPT-V-01
Control sensor	HT757T00

S503 calibration set

S503-DIG-LC

Ordering Codes

To construct the order code, select the relevant feature from the tables below, starting with the base model, which is {Feature A} and then add on options to create a string: {Feature A}+{Feature B}+{Feature C}+{Feature D}

Order example: S503-DIG+14+AUS+C
Relative Humidity Generator for Calibrations

S503-DIG	14	AUS	C

Type {Feature A}	
Base unit - S503, including 7 user-specified port adapters, power adapter, desiccant and adapter tool	S503-DIG
Base unit - S503-DIG with extended chamber (0.54 liter extra)	S503-DIG-LC
Base unit -Calibration kit with Optidew adapters - S503, with 5 user-specified port adapters, 2 Optidew adapters (A000272 and A000273), power adapter, desiccant and adapter tool	S503-DIG-OPT
Base unit -Calibration kit - S503, including hand meter and probe (with calibration certificate), 7 user-specified port adapters, power adapter, desiccant, distilled water bottle (water not included), adapter tool and carrying case	S503-DIG-SET

Adapter {Feature B}	
Port adapter 12mm (0.47")	12
Port adapter 13.5mm (0.53")	13.5
Port adapter 14mm (0.55")	14
Port adapter 15mm (0.59")	15
Port adapter 18.5mm (0.73")	18.5
Port adapter 19mm (0.75")	19
Port adapter 24mm (0.94")	24
Port adapter 25mm (0.98")	25

Display {Feature D}	
Display in deg C	C
Display in deg F	F

Power {Feature C}	
Australian power supply	AUS
European power supply	EUR
North American power supply	NA
UK power supply	UK

MICHELL Instruments