FST-Series

Humidity goes Digital

HygroClip®

Humidity and temperature transmitter designed for tight climate control

- Humidity accuracy: ± 1.0% RH from 30 to 60 %RH
- Temperature accuracy ± 0.2°C from 20 to 25.5°C / ± 0.4°F from 68 to 78°F
- Long term stability of better than 1% RH per year
- Potentiometer free - digital calibration
- On-site loop validation and calibration with HygroPalm 3 calibrator
- Unique, cost effective installation procedure
- Duct and Wall mount configurations
- 2-wire loop-powered or 3-wire versions

rotronic®
LEADING IN HUMIDITY MEASUREMENT

The Digital Advantage

The FST-series humidity and temperature transmitters use the very latest digital technology. Digital signal processing significantly benefits humidity and temperature measurement in the following key areas:

- *Measurement Accuracy:* Digital processing of the sensor signals by the FST transmitters provides more scope and greater flexibility when compensating sensor characteristics such as linearity and temperature coefficient. The ROTRONIC HYGROMER® capacitive sensor has always been the leader in both precision and stability. With the application of digital technology, sensor performance is now further enhanced.

- Calibration and sensor data are retained permanently within each FST transmitter. Software-based calibration is simple and precise; there are no hard-to-reach, hard-to - adjust potentiometers. Multiple calibration points can be selected across the full measurement range.

Transmitters of the FST series are used whenever very tight control of humidity and temperature conditions is required. Typical applications include semiconductor clean rooms, semiconductor fab areas, electronic production areas, pharmaceutical product manufacturing areas and research laboratories.

MAIN FEATURES:

- Measuring range of 30...60% RH for high signal resolution and tight RH accuracy
- Humidity accuracy: ± 1.0% RH from 30 to 60 %RH
- Temperature accuracy ± 0.2°C from 20 to 25.5°C / ± 0.4°F from 68 to 78°F
- Software based transmitter calibration
- Test connector for communication with HygroPalm 3

Ordering a FST Transmitter

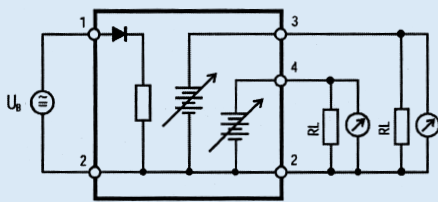| FST 1					
Circuit Type 2 2-wire, loop powered 3 3-wire					
Configuration **D** Duct **W** Wall					
Output Signal Type **1** 0…20 mA (FST-13 only) **2** 4…20 mA **3** 0…1 V (FST-13 only) **4** 0…5 V (FST-13 only) **5** 0…10 V (FST-13 only)					
Temperature Scale **1** 0…50°C **2** 50…100°F **3** 0…100°F					

Field Service made easy with the FST Series

On-site validation and maintenance of the sensors is made simple by using a HygroPalm 3 and service cable to preform the following:
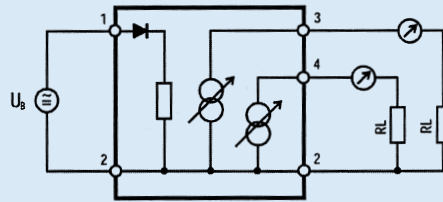
- Display of the RH and temperature values from the transmitter on the HygroPalm 3.

- Single point calibration of the transmitter using a reference probe attached to the HygroPalm 3.
- Single and multipoint calibration of the transmitter against a known reference environment.
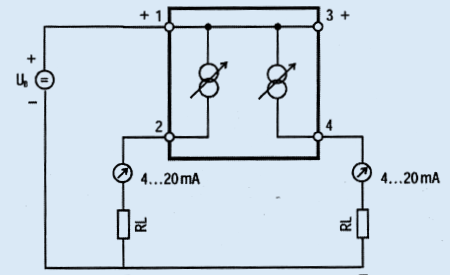
Service cables for the FST-Series

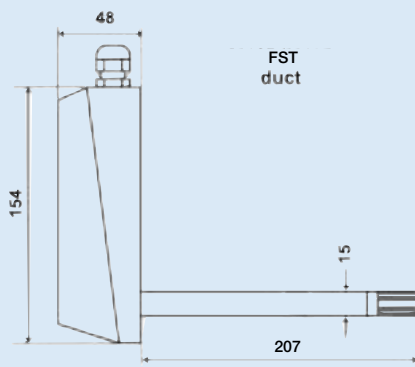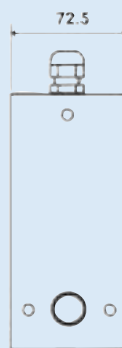| CABLE NUMBER	DESCRIPTION
ACRLXB5	Used to connect the FST transmitter to the HygroPalm 3. This allows for a single point adjustment against the reference probe on the HygroPalm. In addition, it also allows single/multipoint adjustments against a reference environment.
MOK-01-B5	Used to connect HygroClip S reference probe to HygroPalm 3 calibrator

3 wire voltage outputs   3 wire current outputs   2 wire current outputs

dimensions in mm

Installation: The FST series transmitters use Rotronic's proven enclosure which provides:
- Separation of wiring base plate and electronics module
- Installation of base plate during any stage of construction. Electronics module is then simply plugged in after all construction is complete
- Electronics module can be removed without any changes to transmitter wiring

HYGROCLIP ®

Humidity goes Digital

Specifications for the FST-Series

FEATURES	FST12	FST13
Humidity sensor	Rotronic Hygromer ™ C94 thin film capacitive	
Temperature sensor	Pt100 RTD	
OUTPUTS	**FST12**	**FST13**
Circuit type	2-wire loop-powered	3-wire
Signal type	4...20 mA	0...20 mA, 4...20 mA 0...1V, 0...5V, 0...10V
Measuring range	30...60% RH 0...50°C or 50...100°F or 0...100°F	
SPECIFICATIONS	**FST12**	**FST13**
Operating limits	0...99% RH non condensing -40...60°C / -40...140°F	
Accuracy at 23°C	±1.0% RH from 30 to 60 %RH ± 0.2°C from 20 to 25.5°C / ± 0.4°F from 68 to 78°F	
Repeatability	better than 0.5%RH and 0.1°C/0.2°F	
Humidity sensor stability	better than 1% RH per year	
Power supply	10...28 VDC, 10 + 0.02 x load 20 mA per output	10...35 VDC (50 mA) or 12...24 VAC minimum 15 V for current outputs < 50 mA
Maximum load for current outputs	250 Ohm	
Minimum load for voltage outputs	n/a	1000 Ohm
Electrical connections	cable grip and terminals	
Housing material	ABS	
Sensor protection	type D15G, stainless steel wire mesh, PPS frame	
Protection grade	IP65/NEMA 4	
Weight	292 g / 10.3 oz	

Accessories

ACCESSORIES	DESCRIPTION
HygroPalm 3	HygroPalm 3, field calibrator
HygroClip S	Relative humidity and temperature probe for HygroPalm 3.
ACRLXB5	Cable: service connector FST transmitter to HygroPalm 3 for field calibration and loop validation.
ER-15	Calibration device
MOK-01-B5	Used to connect HygroClip S reference probe to HygroPalm 3 calibrator
EAXX-SCS	Certified humidity standards (5 per box) XX = 00, 05, 10, 20, 35, 50, 65, 80, 95%RH