

# ST-723

## High Temperature Conductivity Sensor

### Product Description

The Pyxis ST-723 is a uniquely designed high temperature boiler water conductivity sensor ideal for applications in measuring boiler water and other process water samples at elevated temperature and pressure. The sensor is constructed from a Hastelloy 2-pole electrode head and high temperature plastic body. The sensor is designed with a PEEK type plastic and 316L stainless steel body with integrated cooling fin assembly between the electronic portion of the sensor and the electrode head, allowing this sensor to be utilized on water samples as high as 200°C (392°F) and 300psi. The sensor has a built-in RTD for temperature measurement and utilization allowing sensor configuration with or without Automatic Temperature Compensation (ATC) and a user defined compensation coefficient. The ST-723 offers both 4-20mA & RS-485 Modbus outputs in 8Pin format with Bluetooth access capability for wireless data trending and configuration and calibration using the MA-CR Bluetooth® adapter.



ST-723

### Typical Applications

- Boiler Feedwater
- Pressurized Boiler Surface Sample (Timed Capture)
- Pre-Cooled Boiler Surface Sample (Constant Flow w/ATC)
- Process Water or High Temperature/Pressure

### Features

- Dual analog 4-20mA & RS-485 Modbus for Conductivity & Temperature
- Wireless Configuration & Calibration via MA-CR Bluetooth Adapter & uPyxis APP
- Rugged all 316L Stainless Steel & PEEK construction
- Hastelloy 2-Pole Electrode Head



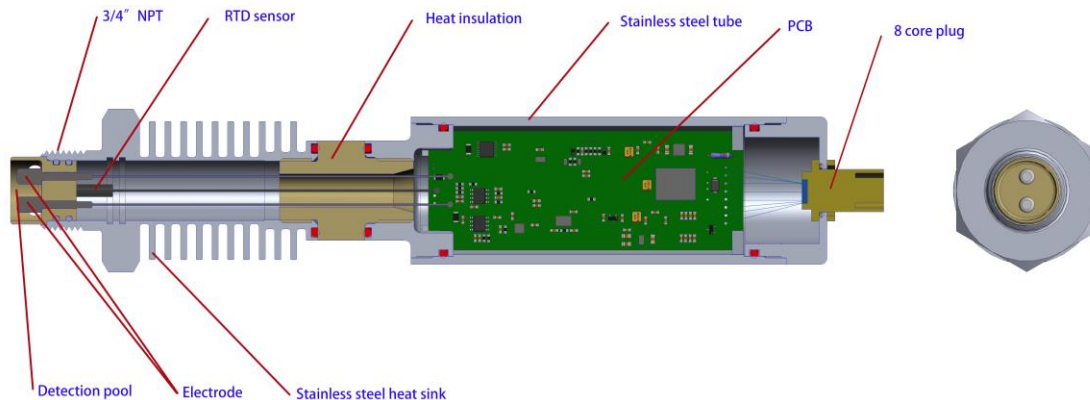
MA-CR

## Specifications

Items	ST-723
P/N	53106
Output Range Conductivity	0 – 20,000 $\mu\text{S}/\text{cm}$
Output Range Temperature	41 - 392 °F (5° - 200° C)
Accuracy	1% of the value or $\pm 5 \mu\text{S}/\text{cm}$
Cell Constant (K)	K = 0.3
Configuration	MA-CR Bluetooth Adapter with uPyxis® Mobile or Desktop APP
Power Supply	24 VDC, 2W
Signal Output	2x4-20mA and RS-485 MODBUS 8Pin Conductivity and temperature output
Rating	IP-67 Electrode Head IP-65 Enclosure and Cooling Fins
Installation	$\frac{3}{4}$ -inch NPT
Operational Temp	41 - 392 °F (5° - 200° C)
Sample Water Pressure	Up to 300 PSI (20.6 bar) at 390°F
Material Construction	2-Pole Electrode: Hastelloy Body: 316 Stainless steel and PEEK O-ring: Perfluoroelastomer
Dimension	273mm (10.74") length / 52mm (2.047") max diameter
Weight	1.1 kg (2.4 lbs.)
Cable	3.0m 8Pin Bulkhead Cable / 1.5m Flying Lead Cable
Regulation	CE / RoHS

\*With Pyxis' continuous improvement policy, this specification is subject to change without notice.

## Diagram



## ST-723 Wiring Table

Wire Color	Designation
Red	24 V +
Brown	Power ground
White	Conductivity, 4 - 20 mA+
Pink	Temperature, 4-20 mA+
Grey	4-20mA-, internally connected to power ground
Blue	RS-485 A
Yellow	RS-485 B
Green	RS-485 Ground

**Order Information**

ST-723 Boiler Conductivity/Temperature Sensor (2x4-20mA &amp; RS-485 Output)

**P/N**

53106

**Accessories**

MA-CR (Bluetooth Adapter 4-20mA &amp; RS-485 – 8Pin)

MA-10CR (10-ft Extension Cable with Adapters – 8Pin)

MA-50CR (50-ft Extension Cable with Adapters – 8Pin)

MA-100CR (100-ft Extension Cable with Adapters – 8Pin)

**P/N**

MA-CR

50741

50743

50744