DynaProbe®

pH Sensors

Pulp & Paper Process

BROADLEY JAMES CORPORATION

Manufacturers of
pH & D.O. Sensors for
Science and Industry

Broadley-James™ pH Sensors for Pulp & Paper Applications are:

Rugged

Broadley-James sensors have been used and tested for more than a decade in the pulp and paper industry under conditions involving strong caustics, high temperatures, and harsh industrial environments. The ST977, ST864, and ST951 are rugged, sealed sensor assemblies designed specifically for in-line applications in pulp and paper mills and related chloralkali plants.

Long-lasting

The solid state reference cell features the unique patented IonTrap™ design for extended service life in the most severe applications. The body is molded from chemical-resistant, conductive Ryton® or Kynar® and the reference junction is porous Teflon®. A built-in Pt 1000 temperature compensator is standard in all sensors, as is the integral solution ground connection in the ST977 and ST951.

Reliable

A good control system provides repeatability to the paper mill operator. It is their knowledge that produces quality paper. The reliable sensor, however, allows them to consistently do this over and over again, with confidence. The DynaProbe's® unique design offers distinct advantages which allow for a longer lifespan with less maintenance.

Compatible

Broadley-James' industry standard designs are compatible with most existing hardware in the pulp and paper industry. In addition, the pH sensors can be used with the majority of electronics and controllers on the market.

High Pressure Hot-Tap Assembly

The pH sensor and housing assembly shown below is used in the majority of measurement points throughout the pulp and paper mill. The sensor can be inserted into, and retracted from, the process without turning off the flow in the pipe. A built-in Pt 1000 temperature compensator is standard, as is the integral solution ground connection.

Typical applications include pH monitoring and control of residual bleach, white liquor, spent acid, black liquor, cationic dyes and pulp stock.

Sensor Part Number ST977-R33H-N07FF

SA877 Valve Retraction Sensor Housing Assembly

All wetted materials are 316 Stainless Steel except for the Titanium insertion sheath

Titanium sheath

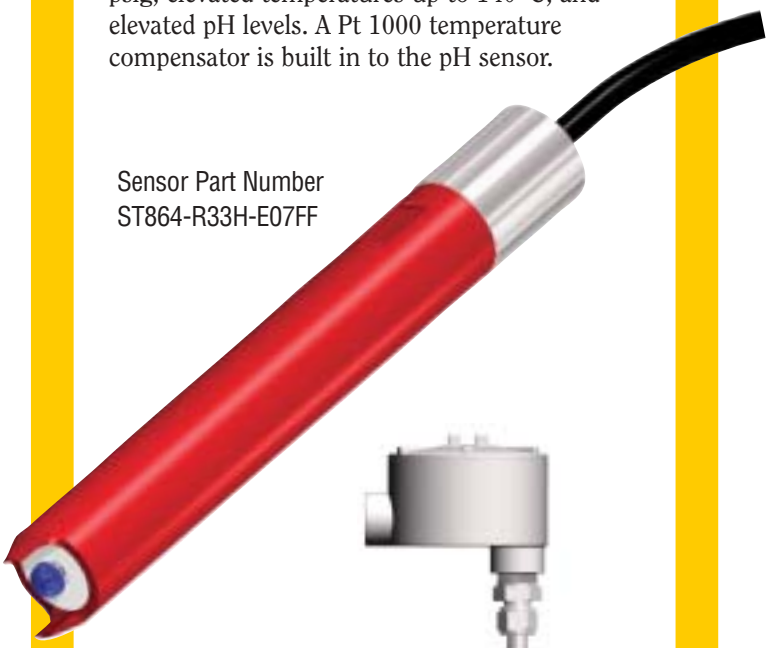
The entire assembly is available with your choice of one of three different insertion lengths:

7 inches	SA877-TL07-J01
11 inches	SA877-TL11-J01
15 inches	SA877-TL15-J01

Extreme Pressure Assembly

This pH sensor and housing assembly is designed specifically for pulp stock applications involving extreme pressures up to 300 psig, elevated temperatures up to 140˚C, and elevated pH levels. A Pt 1000 temperature compensator is built in to the pH sensor.

Sensor Part Number
ST864-R33H-E07FF



SA864 Valve Retraction Sensor Housing Assembly

All wetted materials are 316 Stainless Steel

The entire assembly is available with a maximum sensor insertion length of 2 inches

2 inches SA864-6L02-J01

Twist-Lock Assembly

The pH sensor assembly shown below is used throughout the paper mill where a hot-tap assembly is not needed. Ease of removal for calibration or replacement makes this pH sensor the preferred choice over threaded designs. A built-in Pt 1000 temperature compensator is standard as is the integral solution ground connection.

Typical applications include pH control and monitoring in bypass process lines or water treatment reservoirs.

Sensor Part Number
ST951-R33H-N07FF

Housing
Part Number
AM-9111

The ST951 is used in conjunction with the AM9111 twist-lock adapter. This 316L stainless steel 1” MNPT adapter also includes a threaded safety retainer nut and fits into any standard 1” fitting.

Note:

All DynaProbes come standard with a built-in Pt 1000 temperature compensator. In addition, other temperature compensators are available on these sensors, including 3K and Pt 100.

Specifications

Part Number:
ST977-R33H-N07FF High Pressure

pH Range	0–14 pH
Temperature Range	0–120°C
Pressure Rating	100 psig @ 90°C
Reference System	Ag/AgCl
Glass Membrane Type	HT-3, Low Sodium Ion error
Wetted Materials	Ryton®, Teflon®, Glass & Viton® O-rings

Part Number:
ST864-R33H-E07FF Extreme Pressure

pH Range	0–14 pH
Temperature Range	0–140°C
Pressure Rating	300 psig @ 140°C
Reference System	Ag/AgCl
Glass Membrane Type	HT-3, Low Sodium Ion error
Wetted Materials	Kynar®, Teflon®, Glass & 316 Stainless Steel

Part Number:
ST951-R33H-N07FF Twist-Lock

pH Range	0–14 pH
Temperature Range	0–120°C
Pressure Rating	50 psig @ 120°C
Reference System	Ag/AgCl
Glass Membrane Type	HT-3, Low Sodium Ion error
Wetted Materials	Ryton®, Teflon®, Glass & Viton® O-rings

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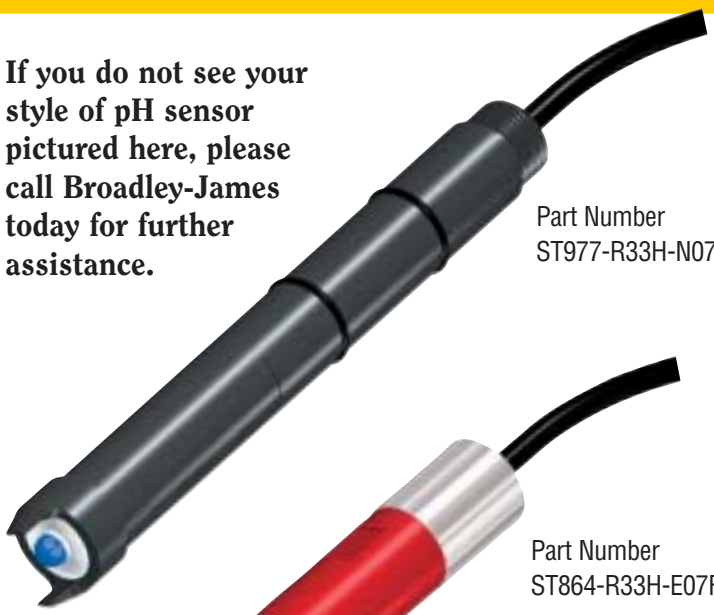
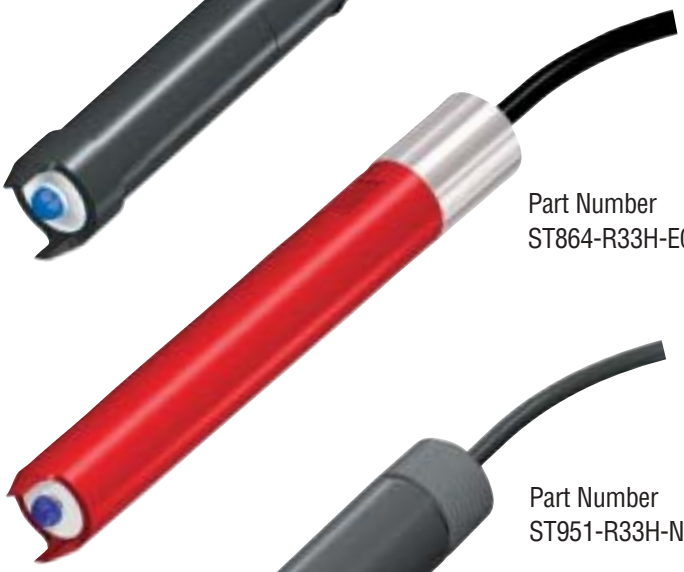
Website: www.broadleyjames.com

If you do not see your style of pH sensor pictured here, please call Broadley-James today for further assistance.



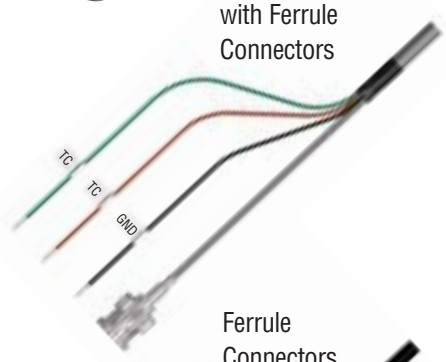
Part Number
ST977-R33H-N07FF



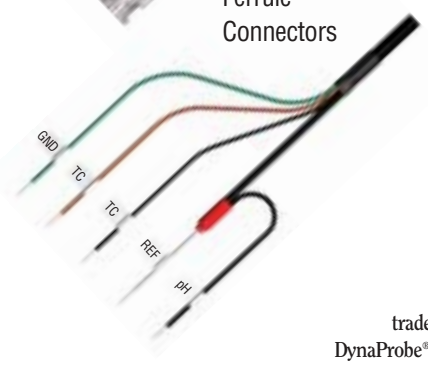
Part Number
ST864-R33H-E07FF

Part Number
ST951-R33H-N07FF

BNC Plug with Ferrule Connectors



Ferrule Connectors



Note:

All electrodes come standard with a 7 foot (2 meter) low noise coaxial cable and either a crimped Ferrule Connector or a BNC Plug on the pH coax. To order an electrode with the BNC Plug, simply change FF to FB at the end of any part number in this brochure. Many other connectors are available.