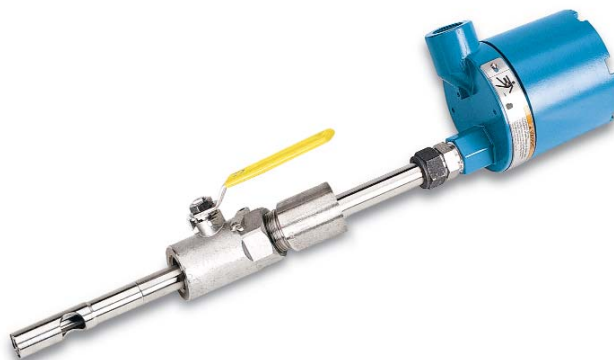


Retractable pH/ORP Sensor

- RETRACTABLE SENSOR can be easily removed and replaced under pressure without process shutdown.
- PLUG-IN COMBINATION ELECTRODE CARTRIDGE is simple to replace thus reducing labor costs.
- LONG-LIFE, SINGLE OR DOUBLE JUNCTION REFERENCE ELECTRODE provides longer service life in applications where poisoning ions are present.
- INTEGRAL PREAMPLIFIER provides noise free long distance transmission of the high impedance pH signal.
- WEATHERPROOF JUNCTION BOX permits installation in most environments.



FEATURES AND APPLICATIONS

The Rosemount Analytical Model 300 pH/ORP Sensor is designed to meet a wide variety of industrial applications. It has been specially designed for applications where the process cannot be shut down and a separate sample stream is difficult or impossible to provide. Paper pulp stock lines and reaction towers are typical applications.

The Model 300 Retractable pH/ORP Sensor is designed for use with a standard one inch ball valve. This makes it ideal for replacing or updating any manufacturer's existing retractable pH/ORP sensors without process shut-down. Initial installations can even be accomplished without process shut-down by hot-tapping a one inch ball valve at the desired point of measurement.

Sensor removal is accomplished by loosening the hex nut of the male connector and retracting the sensor until it reaches the built-in mechanical stop (no cables or chains are required for retraction). The ball valve may then be closed, the male connector completely detached and the sensor pulled out of the ball valve assembly.

After the Model 300 is removed from the process, the disposable electrode cartridge can easily be replaced by removing the threaded cartridge housing, discard-

ing the old cartridge and replacing it with a new one. Once the cartridge housing is replaced, the sensor assembly is ready to be put back into the process.

There are two types of combination electrode cartridges: the side bulb design and the end bulb design. The side bulb design is made of CPVC material and comes with a double junction gel filled reference cell while the end bulb design is made of PPE (Polyphenylene Ether) material and comes with a long, single junction gel-filled reference cell. The end bulb cartridge may be installed in slip streams. Several types of pH measuring electrodes are offered: general purpose glass, high-pH glass, and ruggedized glass (for higher temperatures or abrasive processes). A platinum electrode (Option 13) is available for ORP measurements. A custom seal prevents moisture from reaching the high impedance connection at the back of the electrode.

The plug-in style solid state preamplifier is housed in the weatherproof junction box as an integral part of the sensor. This preamplifier provides noise-free, long distance transmissions of the pH/ORP signal to an analyzer, such as the Models 1181, 1054 Series, 2054, and 2081.

U.S. Patent No. 4,783,252

PERFORMANCE SPECIFICATIONS

Measuring Range:

pH: 0 to 14

ORP: -1500 mV to +1500 mV

Temperature Compensation (pH only): 0°C to 80°C
(32°F to 176°F)

Maximum Pressure: 790 kPa (abs) (100 psig)

Maximum Temperature: 80°C (176°F)

Plug-in Cartridge:

Side Bulb

Code 10: General Purpose Low Resistivity pH Electrode

Code 11: High-pH Electrode

Code 12: Ruggedized pH Electrode

Code 13: Platinum ORP Electrode

End Bulb

Code 14: General Purpose Low Resistivity pH Electrode

Code 15: High pH

PHYSICAL SPECIFICATIONS

Enclosure: Weatherproof

Mounting: Insertion through 1 inch (or larger) ball valve

Process Connection: 1 inch MNPT

Wetted Materials:

Side Bulb:

pH: Glass, 316 stainless steel, Viton¹, CPVC, Silicon

ORP: Glass, 316 stainless steel, Viton, CPVC, Platinum, Silicon

End Bulb:

Glass, 316 stainless steel, EPDM, PPE (Polyphenylene Ether),

Ceramic, Epoxy

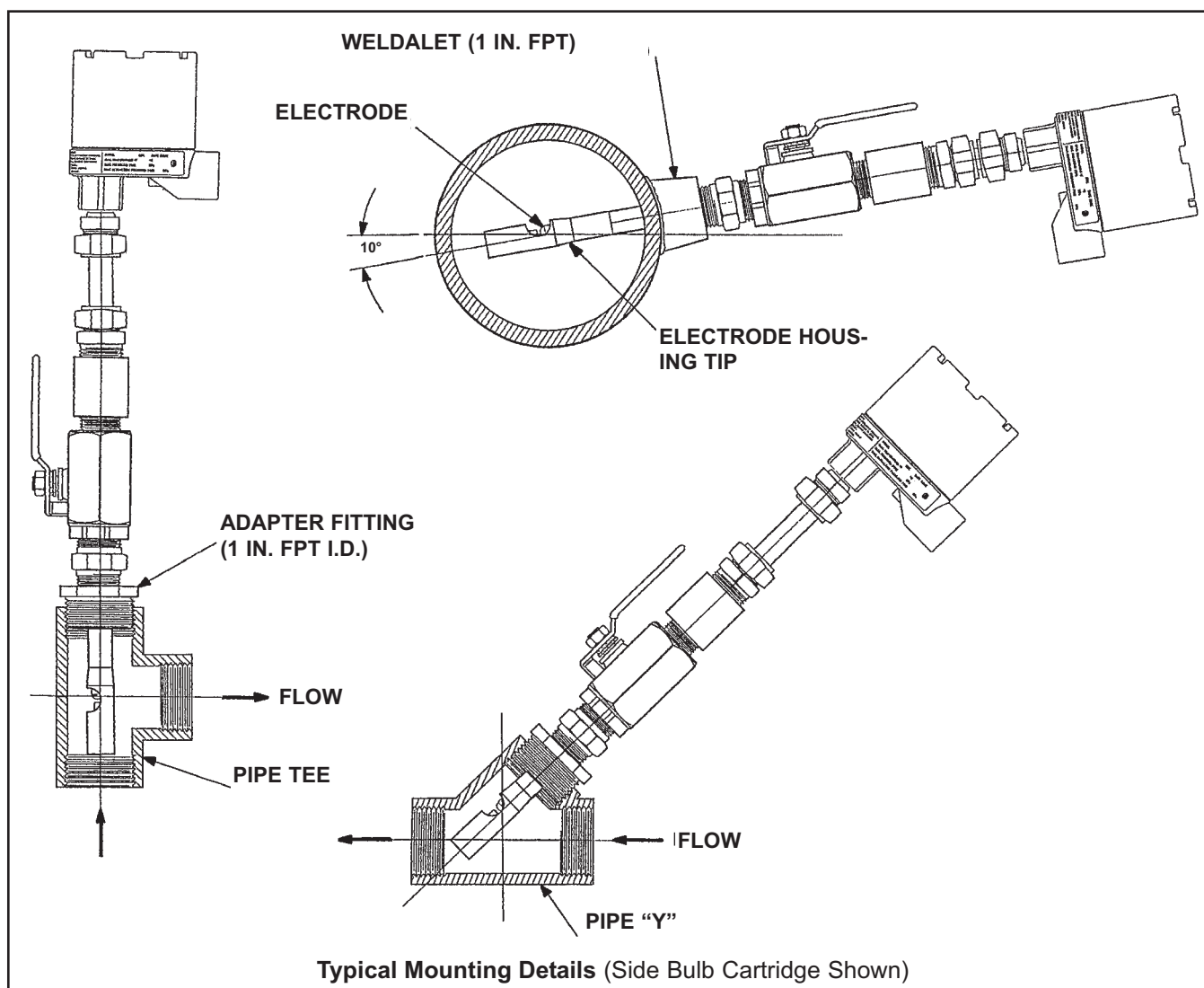
Interconnecting Cable:

Cable P/N 9200000 (Belden type 8722)

Dimensions: See Mounting & Dimensional Drawing

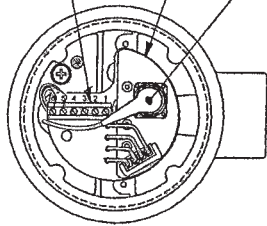
Weight/Shipping Weight: 1.6 kg/2.0 kg (3.5 lb/4.6 lb)

¹Viton is a registered trademark of E.I. du Pont de Nemours & Company.

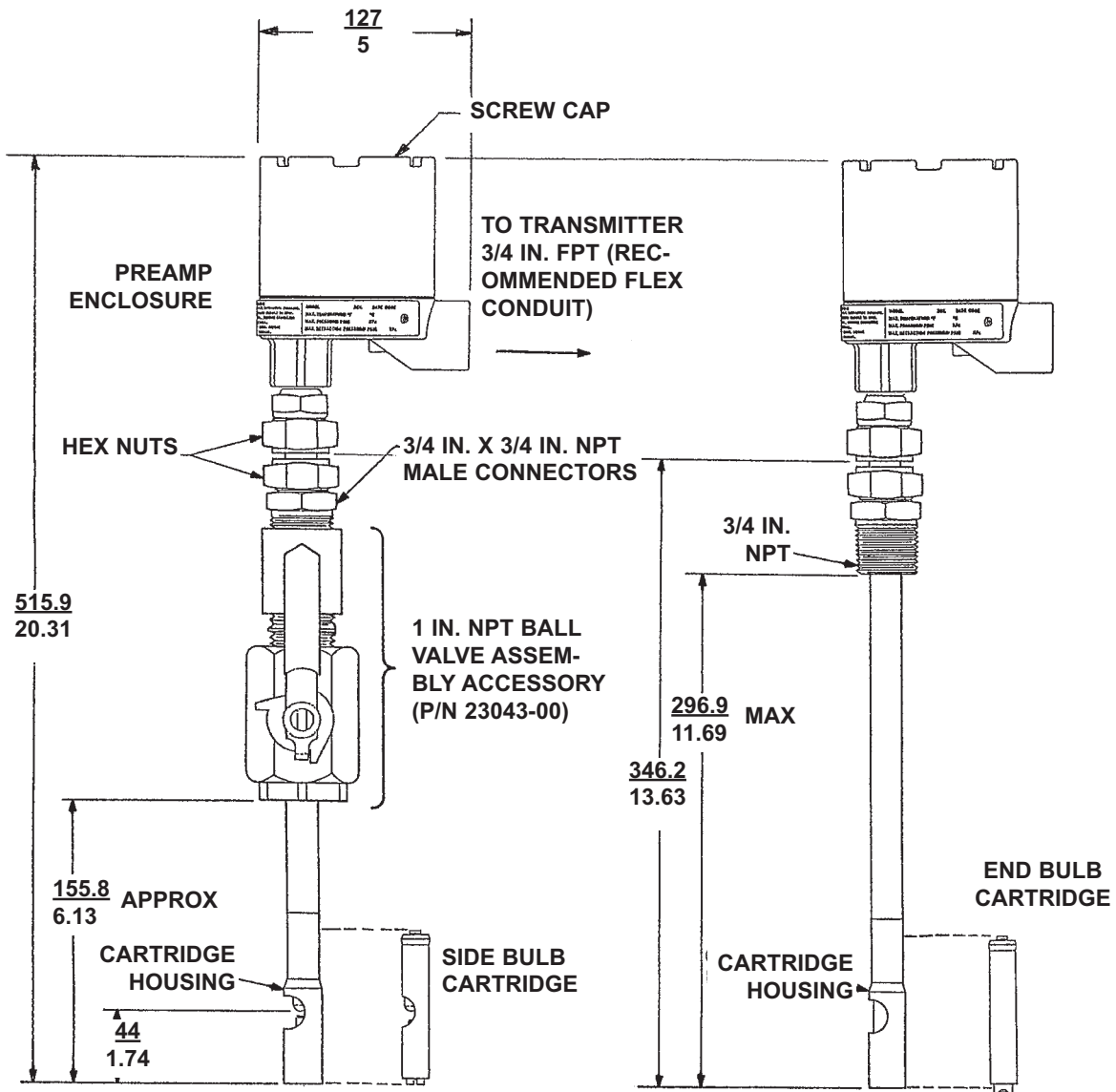




TERMINAL BOARD (TB) INTEGRAL PREAMP BNC



TOP VIEW
(SCREW CAP OMITTED FOR CLARITY)



Mounting and Dimensional Drawings

ORDERING INFORMATION

Model 300 Retractable pH/ORP Sensor: includes a choice of disposable Side Bulb CPVC or End Bulb PPE combination pH/ORP electrode cartridge with ceramic liquid junction. The sensor body is constructed of 316 stainless steel and includes a weatherproof junction box with stainless steel tag and plug-in preamplifier. The sensor is designed for use with all non plus (+) Rosemount Analytical pH/ORP analyzer/transmitters.

MODEL 300 RETRACTABLE pH/ORP SENSOR	
CODE	BODY/T.C. (Required Selection)
01	For use with Models 1003/1023, 1181pH/ORP, 1050/1060 (3K TC)
02	For use with Models 1054/2054 Series & 2081 (Pt 100 TC)
CODE	PREAMPLIFIER (Required Selection)
50	Preamplifier for Models 1181pH/ORP and 1050/1060
51	Preamplifier for Models 1003/1023
54	Preamplifier for Models 1054/2054 Series & 2081
CODE	COMBINATION ELECTRODE (Required Selection)
10	General purpose low resistivity pH, Side Bulb Cartridge (0-13 pH)
11	High pH, Side Bulb Cartridge (0-14 pH)
12	Ruggedized pH, Side Bulb Cartridge
13	ORP electrode, PT, Side Bulb Cartridge
14	General purpose low resistivity pH, End Bulb Cartridge (0-13 pH)
15	High pH, End Bulb Cartridge (0-14 pH)
300	02 54 10 EXAMPLE

NOTES:

- Interconnecting cable is required as follows (Specify length): P/N 9200000 (Belden 8722)
- The Model 300 is designed to fit any one-inch 316SS ball/valve. This is available from Rosemount as P/N 23043-00.



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