

IOTRONTM SENSORS ION SELECTIVE SENSOR SPECIFICATIONS

Part number: AB 6170

Configuration: 3/4" – 1" MNPT Integrated Silver Ion Selective Sensor

General Specifications:

Concentration Range: 1 to 10⁻⁷ Molar, 107,900 to 0.011 ppm

Lowest Limit of Detection 10⁻¹⁷ Molar, 1.1X10⁻¹² ppm

pH Range: 1 to 13

Temperature Range: 5 to 50 ° C

Pressure Range: 1 to 20 psig (6.9 to 138 kPag)

Body Material: Ultem (Poly-Ether-Imide)

<u>Junction Material:</u> Kynar (Poly-Vinylidene-Fluoride)

Dimensions: Drawing <6-2>

Cable: RG 174/U Coaxial (without preamplifier)

Connector: BNC (unless otherwise specified)

Ion Sensor Specifications:

Measuring Membrane: Selective Silver Sensitive Membrane (solid state)

Dimensions: 0.310, (7.8 mm) DIA

Initial Impedance: Less than 1 M Ohms @ 25 °C

Interferring lons:

Given in Ratios of Permissible Excess: Hg²⁺ (Trace)

Interferring Ion / Measured Ion (in Molarity)

Reference System Specifications:

Type: Double Junction

Reference Half Cell: Ag/AgCl, Saturated KCl

Primary Junction: Porous Ceramic, Saturated KCl in crosslinked polymer

Secondary Junction: Porous Kynar, Saturated with KNO₃ in crosslinked polymer

Surface Area: 366,000 mil², (236 mm²)

Special Features: Crosslinked polymer in the reference system is resistant to heat, solvents and to

most chemicals. Sensor holds an excess of KNO₃, assuring saturation at all

temperatures and extending the life of the sensor.

The ion sensitive part of the sensor is designed to resist the attack of silver metal

ions, acids, alkali and most solvents used in chemical processes.

The construction of the sensor permits easy access to the sensing and reference

surfaces for cleaning or inspection.

Recommended Applications: Silver ion concentration in aqueous solution from wastewater or industrial process

solutions

Storage and Shelf Life: At room temperature with closed protector cap, 1 year from date of manufacture.

Standard Hook-Up Options: No Preamp - BNC Connector + TC lead wires

With Preamp - Multiconductor Lead Wires - See Hook Up Schematics

