HM Digital, Inc.

In-Line HM Digital Sensor Specifications

SP-1: TDS/EC Sensor Probe for the Panel Mounted Controllers (PS-100, PC-100, PS-200, PS-202)

- High quality, durable plastic construction
- Stainless steel sensors
- High quality construction
- Probe: 1/2" threaded bushing (detachable from cable)
- Cable: 3 meter (9.8 ft) shielded cable
- Connector: 4-pin
- Cell Constant: 1.8cm^{-1}
- Thermometer pin: Yes
- Pressure Rating: See Below

SP-2: Dual TDS Sensor Probes for the DM-1

- Stainless steel sensors
- Probe: 1/4"
- Cable: 24.5"
- Connector: 8-pin
- Cell Constant: 1.4cm^{-1}
- Thermometer pins: Yes
- Pressure Rating: See Below

SP-3: Dual TDS Sensor Probes for the DM-2

- Stainless steel sensors
- Probe: 1/4"
- Cable: 44" shielded
- Connector: Dual 4-pin
- Cell Constant: 1.4cm^{-1}
- Thermometer pins: Yes
- Pressure Rating: See Below

SP-4: Dual TDS Sensor Probes (pair of 4-pin connectors)

- Stainless steel sensors
- Probe: 1/4"
- Cable: 24.5"
- Connector: Dual 4-pin
- Cell Constant: 1.4cm^{-1}
- Thermometer pins: No
- Pressure Rating: See Below

SP-5: Single TDS Sensor Probes (4-pin connector)

- Stainless steel sensors
- Probe: 1/4"

- Cable: 31.5" shielded
- Connector: Single 4-pin
- Cell Constant: 1.4cm^{-1}
- Thermometer pin: Yes
- Pressure Rating: See Below

SP-6: Tank-Length TDS/EC Sensor Probe for the PSC-150A and PSC-154A controllers

- High quality, durable plastic construction
- Stainless steel and platinum sensors
- Probe Length: 2 inches (52mm)
- High quality construction
- Probe: 1/2" threaded bushing (detachable from cable)
- Cable: 3 meter (9.8 ft) shielded cable
- Connector: 4-pin
- Thermometer pin: Yes
- Pressure Rating: See Below

SP-7: Pipe-Length TDS/EC Sensor Probe for the PSC-150 and PSC-154 controllers

- High quality, durable plastic construction
- Stainless steel and platinum sensors
- Probe Length: 4.1 inches (103mm)
- High quality construction
- Probe: 1/2" threaded bushing (detachable from cable)
- Cable: 3 meter (9.8 ft) shielded cable
- Connector: 4-pin
- Thermometer pin: Yes
- Pressure Rating: See Below

PRESSURE RATING CHART

NOTE: *The following pressure ratings are approximate and are the ratings without fittings. The actual pressure rating will be affected by the fitting size, material and construction quality. Please consult the fitting manufacturer's technical specifications for fitting pressure ratings. HM Digital is not responsible for third-party products nor claims. Third-party products, even if sold by HM Digital, are not covered by HM Digital's warranty. The following ratings are to be used as a general guide.*

TEMP	PRESSURE	
	SP-1/6/7	SP-2/3/4/5
+1°C	15 Bar	16 Bar
+23°C	15 Bar	16 Bar
+70°C	10 Bar	10 Bar

Note: 1 Bar = 14.5 PSIG

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INTERFACING DATA FOR SP-2, SP-3, SP-4, SP-5

Internal Circuitry: None. The sensors may be implemented with any system. Implementation and interfacing is a function of the hardware and program of each individual product or system.

Recommended Range: 0-10,000 ppm

Output: Unamplified (mV)

Pins: For each sensor, half of the pins are output and half are input.

Stimulus: Any type of conductivity signal other than DC (including pulsed DC).

Thermister Response Time: The response time for the thermister varies depending upon the temperature and also where the sensor is located in the water. It could be anywhere from 5 seconds to 5 minutes. Please note that the thermister is in the upper part of the sensor, so distance to the water is a factor.

Temperature Compensation Curve: This is a function of the program that controls the sensor, not the sensor itself. At 25°C, there is no need for compensation. Below or above 25, the following coefficients should be used for the different conversion factors/solutions:

NaCl: 2.14%
442: 1.68%
KCl: 1.88%