



Digital Barometer 7150 Series

OVERVIEW

The 7150 Series of digital barometers, manufactured by AWI, is designed to provide accurate pressure measurements over a wide range of environmental temperatures and pressures. The fully compensated digital barometer is ideal for use in demanding automated weather station applications.

The barometers use pressure transducers with silicon piezoresistive absolute pressure sensors. The pressure sensors have excellent hysteresis and repeatability characteristics, low temperature dependence, and very good long-term stability. The ruggedness of the pressure transducers is outstanding.

The digital barometers communicate using full-duplex RS-232 and half-duplex RS-485 serial protocols. Both the RS-232 and the RS-485 serial ports are available on the DB9 serial interface, but only one communication protocol is normally used at one time.

The 7150 Series of digital barometers is traceable to National Institute of Standards and Technology (NIST) in the United States.



MODELS

Three models are offered based on the number of pressure transducers in the digital barometer. Additional pressure transducers allow for operational redundancy, and can be used to flag the digital barometer for maintenance or replacement if the difference in readings between transducers exceeds a predefined amount.

Model Number	Number of Transducers
7150	2
7150-A	3
7150-B	1

SENSORS

SPECIFICATIONS

Parameter	Specification
Pressure Range	
Standard	14.7-33.0 inHg (500-1117 hPa)
Optional *	1.47-33.0 inHg (50-1117 hPa)
Operating Temperature	-40 to +185°F (-40 to +85°C)
Storage Temperature	-67 to +257°F (-55 to +125°C)
Humidity	noncondensing
Pressure Units	inHg
Resolution	0.001 inHg
Accuracy **	±0.005 inHg (±0.17 hPa)
Baud Rate	4800, 9600, 19200, or 57600 bps
Serial Port Parameter Setting	8-N-1 (8 data bits, no parity, 1 stop bit)
Serial Connector	DB9 (female 9-pin D-sub connector)
Supply Voltage	6–40 V DC, reverse polarity protected
Current Consumption	<50 mA (continuous operation mode)
Pressure Fitting	barbed fitting for 1/8" I.D. tubing
Max. Pressure Limit	60 inHg (absolute)
Min. Pressure Limit	0 inHg
Enclosure	powder-coated aluminum

* Optional range must be specified at time of order.

** Accuracy is the sum of worst case linearity, repeatability, hysteresis, thermal effects, and calibration errors over the operating temperature range.

DIMENSIONS & WEIGHTS

Dimensions	5.60" W x 4.72" H x 2.32" D (142 mm x 120 mm x 59 mm)
Weight	23 oz (0.63 kg)
Shipping Weight	34 oz (1 kg)

ORDERING INFORMATION

Digital Barometer Model Number	DCP Kit
7150	11906
7150-A	11906-A
7150-B	11906-B

OPTIONS

Part Number	Description
11906	Dual Digital Barometer Includes: 7150 Dual Barometer, M104598 Quad Plate Pressure Port, and Power/Data Cable"
11906-A	Triple Digital Barometer Includes: 7150-A Triple Barometer, M104598 Quad Plate Pressure Port, and Power/Data Cable"
11906-B	Single Digital Barometer Includes: 7150-B Single Barometer, M104598 Quad Plate Pressure Port, and Power/Data Cable"



Quad Plate Pressure Port
M104598



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