



Digital Barometer 7150 Series

OVERVIEW

The 7150 Series of digital barometers, manufactured by AWI, is designed to provide accurate pressure measurement 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 peizoresistive absolute pressure sensors. The pressure sensors display low hysteresis, superior repeatability characteristics, low temperature dependence, and superior long-term stability. The durability 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. Only one communication protocol is normally used at one time.

The Model 7150 Barometer is Federal Aviation Administration (FAA) certified, meeting or exceeding the most current regulatory requirements.



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

* An additional model is available for non-certified system configurations, which will allow for pressure measurements down to 50 hPa. Please ask your AWI sales representative for more information.

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

SENSORS

SPECIFICATIONS

Parameter	Specification
Pressure Range	500-1117 hPa (14.7-33.0 inHg)
Operating Temperature	-40 to +85°C (-40 to +185°F)
Storage Temperature	-55 to +125°C (-67 to +257°F)
Humidity	noncondensing
Pressure Units	inHg
Resolution	0.03 hPa (0.001 inHg)
Accuracy @ 25°C full range	±0.07 hPa (±0.002 inHg)
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

DIMENSIONS & WEIGHTS

Dimensions	5.71" W x 4.72" H x 2.56" D (145 mm x 120 mm x 65 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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