

WEATHER

Digital Barometer

Model 7150



Overview

The 7150 Series of digital barometers, manufactured by ADB Safegate, 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 piezoresistive 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 RS485 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.

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

Ordering Information

The Enclosure Installation Kits include the digital barometer, a pressure port, and a power data cable for installation in a DCP enclosure or the F1 AWOS Acquisition Control Unit.

Digital Barometer Model	Enclosure Installation Kit (includes sensor)
7150	11926
7150-A	11926-A
7150-B	11926-B

Options

Part Number	Description
11926	Dual Digital Barometer Includes: <ul style="list-style-type: none">• 7150 Dual Barometer• M104598 Quad Plate Pressure Port• Power/Data Cable
11926-A	Triple Digital Barometer Includes: <ul style="list-style-type: none">• 7150-A Triple Barometer• M104598 Quad Plate Pressure Port• Power/Data Cable
11926-B	Single Digital Barometer Includes: <ul style="list-style-type: none">• 7150-B Single Barometer• M104598 Quad Plate Pressure Port• Power/Data Cable

Quad Plate Pressure Port M104598



Digital Barometer

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	14.5 cm W × 12.0 cm H × 6.5 cm D (5.71" × 4.72" × 2.56")
Weight	0.63 kg (23 oz)
Shipping Weight	1 kg (34 oz)