

Model AI

Intrinsically Safe Pressure Gauge



DESCRIPTION

As an in-process gauge or portable calibrator, the hand-held Model AI delivers long-lasting performance with enhanced accuracy. Accuracy of 0.05 % coupled with an enhanced resolution, 4½-digit display makes this unit an excellent transfer standard for calibrating pressure measuring equipment.

The AI is rugged and features high/low pressure capture with a field-adjustable update rate from three-to-ten times per second. These units are manufactured from stainless steel and use sensor technology which has no moving parts, requires little recalibration and has excellent overpressure tolerance. NEMA 4 construction provides EMI and RFI protection. Units of measure are field-selectable, and the unit is offered with gage, absolute, vacuum, or compound reference.

The Model AIW is powered by one or two common 9 V alkaline batteries. The Model AIV is powered by an 11 Vdc to 32 Vdc power supply.

FEATURES

- High accuracy: 0.05 % full scale
- Factory Mutual approved
- Ranges to 10000 psi - gage, absolute, vacuum, or compound
- Stainless steel construction
- 4½ digit display with 0.5 in height
- On/off switch
- Optional handles
- Optional carrying case and panel mounting ring
- 9 V battery power
- High/low capture and store

The AI Digital Gauges have the following complete Factory Mutual Approved Classifications:

Class I: Gases and vapor

Class II: Combustible dust

Class III: Fibers

Intrinsically safe systems limit the thermal and electrical energy to the hazardous area to help prevent ignition.

Division 1: present or likely to be present in normal operation

Division 2: not present in normal operation

Group A: Acetylene

Group B: Hydrogen

Group C: Acetaldehyde, Ethylene, Methyl Ether

Group D: Acetone, Gasoline, Methanol, Propane

Group E: Metal dust

Group F: Carbon dust

Group G: Grain dust

Model AI

PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Accuracy	0.05 % of full scale BSFL
Pressure range, 0 psi to:	15, 50, 100, 200, 500, 750, 1000, 1500, 2000, 5000, 7500, 10000 psi
High and low capture	Standard
Update speed	Adjustable from 3 to 10 per sec

ENVIRONMENTAL SPECIFICATIONS

Characteristic	Measure
Temperature, operating (standard)	-18 °C to 82 °C [0 °F to 180 °F]

ELECTRICAL SPECIFICATIONS

Characteristic	Measure
Rating	NEMA 4
Power, Model AIW	One or two 9 V alkaline batteries (included)
Power, Model AIV	11 Vdc to 32 Vdc @ 100 mA (3 ft cable included)

MECHANICAL SPECIFICATIONS

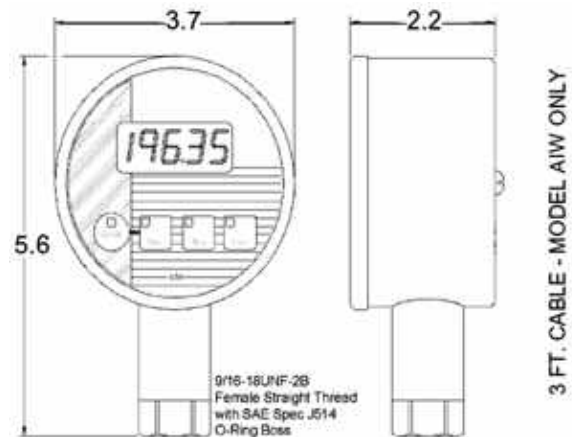
Characteristic	Measure
Diameter	93,98 mm [3.7 in]
Display	4 LCD digits - 12,7 mm [0.5 in] high
Pressure port	9/16-18 UNF-2B - female straight thread with SAE spec J514 o-ring boss
Wetted parts	Stainless steel
Case material	Stainless steel
Low battery indication	Standard
Face membrane	Tactile feedback raised buttons
Calibration data	Stored on memory chip

ADDITIONAL SPECIFICATIONS

Pressure range (psi)	Maximum safe over pressure (psi) ¹	Incremental display steps
0 psi to 15 psi = 15	75	0.005
0 psi to 50 psi = 50	250	0.01
0 psi to 100 psi = 100	500	0.02
0 psi to 200 psi = 200	1000	0.05
0 psi to 500 psi = 500	1500	0.1
0 psi to 750 psi = 750	1500	0.2
0 psi to 1000 psi = 1K	2000	0.2
0 psi to 1500 psi = 1.5K	3000	0.5
0 psi to 2000 psi = 2K	4000	0.5
0 psi to 5000 psi = 5K	7500	1
0 psi to 7500 psi = 7.5K	12000	2
0 psi to 10000 psi = 10K	15000	2

¹ Maximum safe overpressure is the pressure which the unit can experience occasionally without the loss of accuracy or permanent damage

MOUNTING DIMENSIONS AND CHARACTERISTICS



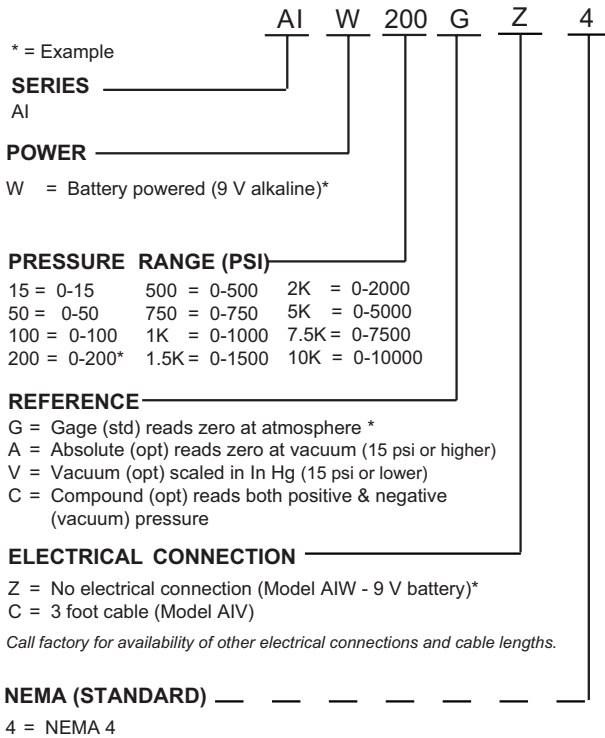
Request certified drawing before designing mountings or fixtures.
Specifications subject to change without notice.

For reference only

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ORDER GUIDE



FIELD SELECTABLE STANDARD UNITS OF MEASURE

Each gauge has the following scaling built in for field selection:

Bar = Bar	Ft H2O = Feet of water
mBar = Millibar	In H2O = Inches of water
kPa = Kilopascals	In Hg = Inches of mercury
MPa = Megapascals	mmHg = mm of mercury

Consult factory for other units of measure not listed

Notes

1. The limit/relay models include two LED status indicators on front face and two form C relays (normally open, common, normally closed) that are rated at a maximum 24 Vdc/Vac at 1 A or 48 Vdc/Vac at 1/2 A.

Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office. To learn more about Honeywell's test and measurement products, call +1-614-850-5000, visit

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Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

WARNING **PERSONAL INJURY**

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARNING **MISUSE OF DOCUMENTATION**

- The information presented in this datasheet is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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