

MODEL 745

High Accuracy Pressure Standard



The Model 745 Portable Transfer Standards provide the highest accuracy pressure measurements for laboratory and metrological applications. Digiquartz® Transducers cover 25 absolute and gauge pressure ranges up to 40,000 psi (276 MPa) with unsurpassed **accuracy, reliability** and **stability**. The **new, simple, intuitive** front-panel **user interface** and **versatile functionality** with the rear-panel RS-232 **computer interface** make the Model 745 the best choice for high performance pressure calibrations.

The Model 745 is **portable, easy to use**, and fully **self-contained** in a **CE marked compact case**. Turn it on and immediately read the pressure values in any of nine different user-selectable engineering units. All pressure readings are fully temperature compensated and linearized. Tare functions, pressure units, temperature units, resolution, sampling time, number of display digits, communication settings, baud rates, sensor address, and password can be selected via the front panel menu system. The choices for second line display include an analog pressure bar graph, sensor temperature, rate of pressure change, stored text or external text. The unit can also be controlled via the bi-directional RS-232 interface with a new, improved command set. Free software is included to read and log data via the RS-232 port.

The unit is either continuously powered from its AC adapter or for up to 20 hours from four AA cells. Pressure readings and an overpressure signal can be displayed remotely with the optionally available Model 715 display.

Paroscientific is certified to the **ISO 9001:2000** International Quality Standard. Our quality system and commitment to excellence ensure customers of outstanding products and services. We offer a **market-leading five year limited warranty** on all Digiquartz® Transducers with the first two years covered at 100%.

PERFORMANCE

0.0001% Resolution
0.008% Full Scale accuracy

RANGES

19 Absolute Pressure Ranges
0-15 psia (0.1 MPa) to 0-40000 psia (276 MPa)
6 Gauge Pressure Ranges
0-15 psig (0.1 MPa) to 0-200 psig (1.38 MPa)

FEATURES

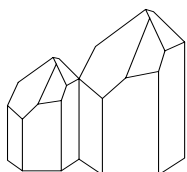
Intuitive front panel menu system
Two-line display with menu selectable functions:
Taring
Engineering units
Pressure bar graph
Sensor temperature
Password protection
Rate of pressure change
Resolution and sampling speed
Adjustable number of display digits
User choice of stored or external text
Rack or panel mount capability
Enhanced RS-232 command set
110V or 220V AC adapter power
Multiple remote display capability
Free configuration and logging software
20 hours battery operation (4 AA size)

QUALITY AND STANDARDS

CE marked
NIST traceable
High stability and reliability
ISO 9001:2000 quality system
Easy installation and low maintenance
Market-leading 5-year limited warranty
3-year stability warranty on barometers

APPLICATION AREAS

Metrology
Aerospace
Meteorology
Oceanography
Energy Exploration
Reference Barometers
Laboratory Instrumentation



Paroscientific, Inc.
Digiquartz® Pressure Instrumentation



High Accuracy Pressure & Barometric Standard

PERFORMANCE

Accuracy⁽¹⁾ Better than 0.008% of Full Scale.⁽²⁾

CHARACTERISTICS

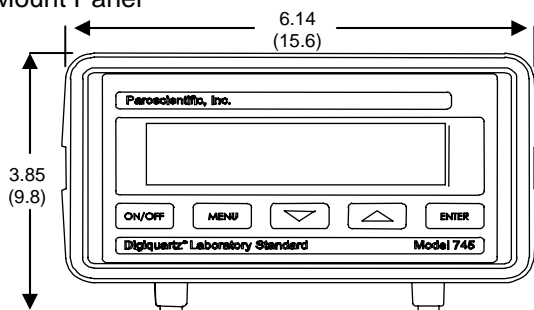
Weight 4.0 lb (1.8 kg) Max
Power Requirements +6 to +25 VDC
Typical Current Consumption 72 mA

ENVIRONMENTAL

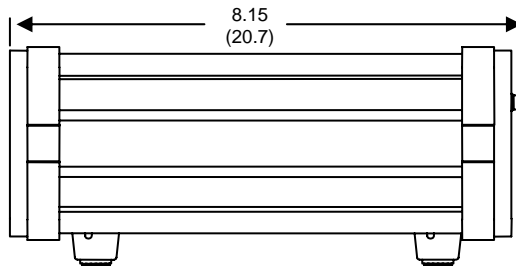
Overpressure 1.2 times Full Scale⁽³⁾
Operating Temperature Range 0 °C to +40 °C

OPTIONAL ACCESSORIES

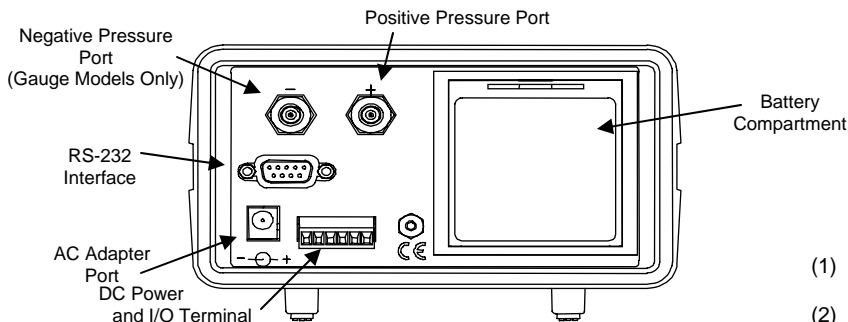
- Model 715 Display
- High Performance Pressure Port (DigiPort) - Model 745-16B Only
- Rack Mount Panel



Model 745 Front View



Model 745 Side View



Model 745 Rear View

Dimensions are in inches - parenthesized dimensions are in centimeters

ORDERING INFORMATION

Absolute Pressure Ranges

psia	MPa	Model	Part Number ^{(4) (5)}
0-15	0-0.1	745-15A	1728-X01
7.2-16	0.05-0.11	745-16B	1728-X10
0-23	0-0.16	745-23A	1728-X02
0-30	0-0.21	745-30A	1728-X03
0-45	0-0.31	745-45A	1728-X04
0-100	0-0.69	745-100A	1728-X05
0-200	0-1.38	745-200A	1728-X06
0-300	0-2.07	745-300A	1728-X07
0-400	0-2.76	745-400A	1728-X08
0-500	0-3.45	745-500A	1728-X09
0-1000	0-6.89	745-1K	1728-X17
0-2000	0-13.8	745-2K	1728-X18
0-3000	0-20.7	745-3K	1728-X19
0-6000	0-41.4	745-6K	1728-X20
0-10000	0-68.9	745-10K	1728-X21
0-15000	0-103	745-15K	1728-X22
0-20000	0-138	745-20K	1728-X23
0-30000	0-207	745-30K	1728-X24
0-40000	0-276	745-40K	1728-X25

Gauge Pressure Ranges

psig	MPa	Model	Part Number ^{(4) (5)}
0-15	0-0.1	745-15G	1728-X11
0-22	0-0.15	745-22G	1728-X12
0-30	0-0.21	745-30G	1728-X13
0-100	0-0.69	745-100G	1728-X14
0-150	0-1.03	745-150G	1728-X15
0-200	0-1.38	745-200G	1728-X16

- (1) Accuracy relative to the primary standard includes resolution, hysteresis, non-repeatability, and non-conformance.
- (2) Accuracy of Model 745-16B is ± 0.08 hPa. Model 745-30K and 745-40K accuracies are better than 0.02% F.S.
- (3) Except Model 745-500A, Model 745-20K and Model 745-40K.
- (4) Replace X with 0 for 110 V, or 1 for 220 V.
- (5) For oil-filled units above 30 psi, add - 0 to part number.



Technology

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Product defined by Specification Control Drawing. Specifications subject to change without prior notice.

Manufactured under one or more of the following U.S. Patents: 4,454,770 - 4,455,874 - 4,592,663 - 4,724,351 - 4,751,849 - 4,757,228 - 4,764,244 - 4,831,252 - 4,872,343 - 4,912,990 Other patents pending.
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