PACE 6000 E-ADC

Rackmount high accuracy air data calibrator

TERPS® Performance

The PACE6000 E-ADC is a twin-channel Ps and Pt pressure control system used for the precision calibration/verification of aircraft pitot-statics, compliant with reduced vertical separation minima (RVSM) requirements.

A separate pressure/vacuum supply unit type PV 103 provides suitable pneumatic supplies.

Fully programmable for a wide range of fixed or rotary wing aircraft, the PACE6000 E-ADC enables vital flight instrumentation, such as altimeters, airspeed indicators, rate of climb indicators, Mach meters and air data computers to be quickly and accurately tested.

The PACE6000 E-ADC has been designed for 483 mm (19 in) rack mounting and being only 132 mm (5.2in) (3U) high with a range of IEEE 488 interfaces available it is ideal for use with existing automatic test equipment (ATE) systems.

The new PACE pneumatic modular pressure controller brings together the latest control and measurement technology from Druck to offer an elegant, fast, flexible and economical solution to pressure control for automated production or test and calibration applications.

PACE6000 E chassis

- Easy to use color touch screen display
- Bench top or rack mounted pressure controller
- Leak and Test program functions
- Multi language
- Ethernet and USB as standard, RS232 and IEEE connectivity optional

PACE CM – high speed pressure control module

- Calibration data stored in the control module (only the CM needs to be sent away for recalibration)
- High speed pressure control

Aeronautical control

- 55,000 ft / 650 kts or 75,000 ft / 1000 kts options
- Simultaneous control of calibrated airspeed and altitude with a “go to ground” function.
- Indication and control available in pure aeronautical units:
- Altitude – feet or meters
- Air Speed – knots or km/hour, mph
- Mach – mach number
- Rate of climb – feet or meters/minute, second

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PACE6000 E-ADC specifications

Display	
PACE6000 E	LCD: Color display with touchscreen. 243 mm x 91 mm (9.6" x 3.6")
Comms update rate	20 times per second
Display update rate	2 times per second
Readout	±99999999
Performance	
Option 1 - Standard accuracy	Altitude range: -3,000 to +75,000 ft Altitude precision: @ Sea level ±2.00 ft, @ 8,500 ft ±3.00 ft, @ 29,000 ft ±6.00 ft, @ 35,000 ft ±9.00 ft, @55,000 ft ±23.00 ft, @75,000 ft ±61.00 ft Altitude RVSM accuracy: @ Sea level ±5.00 ft, @ 29,000 ft ±24.00 ft, @ 35,000 ft ±33.00 ft @ 41,000 ft ±46.00 ft, @55,000 ft ±98.00 ft, @75,000 ft ±273.00 ft Airspeed range: to 650 knots (CM2-A 1 Barg) Airspeed precision: @ 50 knots ±0.31 kts, @ 250 knots ±0.06 kts, @500 knots ±0.03 kts, @650 knots ±0.03 kts Airspeed range: to 1000 knots (CM2 3.5 Barg) Airspeed precision: @ 50 knots ±1.00 kts, @ 250 knots ±0.21 kts, @500 knots ±0.09 kts, @650 knots ±0.07 kt,s @1000 knots ±0.05 kts Precision 0.005% Rdg + 0.005% FS includes linearity, hysteresis, repeatability and temperature effects for gauge pressures and assumes steady state temperature and regular zeroing. 1300 mbar reference precision 0.005% FS, Includes non-linearity, hysteresis, repeatability and temperature effects over calibrated temperature range.
Option 2 - Enhanced accuracy	Altitude range: -3,000 to +75,000 ft Altitude precision: @ Sea level ±0.55 ft, @ 8,500 ft ±0.71 ft, @ 29,000 ft ±1.41 ft, @ 35,000 ft ± 1.76 ft, @55,000 ft ±4.56 ft, @75,000 ft ±12.05 ft Altitude RVSM accuracy: @ Sea level ±2.00 ft, @ 29,000 ft ±4.00 ft, @ 35,000 ft ± 5.00 ft, @ 41,000 ft ±6.00 ft, @55,000 ft ±12.00 ft, @75,000 ft ±33.00 ft Airspeed range: to 650 knots (CM2-A 1 Barg) Airspeed precision: @ 50 knots ±0.31 kts, @ 250 knots ±0.06 kts, @500 knots ±0.03 kts, @650 knots ±0.03 kts Airspeed range: to 1000 knots (CM2 3.5 Barg) Airspeed precision: @ 50 knots ±1.00 kts, @ 250 knots ±0.21 kts, @500 knots ±0.09 kts, @650 knots ±0.07 kt,s @1000 knots ±0.05 kts Precision 0.005% Rdg + 0.005% FS includes linearity, hysteresis, repeatability and temperature effects for gauge pressures and assumes steady state temperature and regular zeroing. 1300 mbar reference precision 0.005% FS, Includes non-linearity, hysteresis, repeatability and temperature effects over calibrated temperature range. CM3 Precision: 0.001% FS for 2, 3.5 bar a includes non-linearity, hysteresis, repeatabilty and temperature effects over calibrated temperaturerange. CM3 Accuracy: Absolute ranges 2, 3.5 bar accuracy (2 Sigma) over calibrated temperature range 0.0004%Rdg + 0.0027% FS. Includes measurement precision, measurement long term stability (see below) and calibration equipment expanded uncertainty.
PACE - Controller stability	0.001% FS

Electrical	
Power supply	Input range: 100-120/200-240 VAC, (50/60 Hz)
Communications	
Communication	USB-A, USB-C, USB Type B/USB TMC, ethernet (LXI conformant) and RS232 (optional), GPIB IEEE-488 (Optional), SCPI99 compliant, emulation (DPI520, DPI500, DPI510 & DPI515 depending on model and PACE 5000 and PACE 6000)
Environmetal	
Temperature	Operating 10°C to 55°C (50°F to 131°F) Calibrated 15°C to 45°C (59°F to 113°F) Storage -20°C to 70°C (-4°F to 158°F)
Humidity	5% RH to 95% RH non-condensing
Sealing	IP20 (EN60529), In door use only
Vibration	Compliant with Def. Stan. 66-31 8.4 Cat 3 and MIL-PRF-28800
Shock	Mechanical shock conforms to EN61010
Conformity	UL 611010-1 EMC EN61326-1, PED, ROHS & WEEE – CE marked
Physical	
PACE chassis – weight	PACE6000 E 7.2 kg or 15.9 lbs
PACE CM – weight	5 Kg or 11 lbs
PACE CM – pressure connection	G 1/8 Female (1/8 NPT Female by adaptor for North America)
PACE 6000 E – dimensions	440 mm X 132 mm (3U) X 320 mm (17.3" X 5.2" X 12.6")

Ordering information

Option 1, standard accuracy:

- PACE6000 E with aero option*
- CM2 1 Barg
- CM2-A 1 Barg (CM2 3.5 Barg for use with 1000 kts option)

Option 2, high accuracy:

- PACE6000 E with aero option*
- CM3 – 2 Bara
- CM2-A 1 Barg (CM2 3.5 Barg for use with 1000 kts option)

*IO-AERO-P6000E-55 PACE6000E Aero Opt 55,000 ft/650 kts

*IO-AERO-P6000E-75 PACE6000E Aero Opt 75,000 ft/1000 kts

Physical accessories

Part number	Description
IO-ADAPT-AN4	Adaptor G 1/8 male to AN4 37 deg male
IO-ADAPT-AN6	Adaptor G 1/8 male to AN6 37 deg male
IO-RMK-P6000	**Rack mount kit PACE6000** 19" rack mount kit
IO-IML-2	**Mains lead-Japan plug**
IO-IML-3	**Mains lead-EU plug**
IO-IML-4	**Mains lead-USA plug**
IO-IML-5	**Mains lead-South Africa/India plug**
IO-IML-6	**Mains lead-China plug**
IO-IML-7	**Mains lead-AUS/NZ plug**

Related products

Pressure/vacuum supply unit

For use with the PACE 6000 E-ADC, the PV103R is a 19" rack mounting module for ATE systems and features low maintenance dry pumps.