

64-CHANNEL PRESSURE SCANNER

This low-cost, high-functionality pressure indexing system is an ideal solution for any multichannel pressure measurement requirements. With self-detecting, hot-swappable modular transducer cards and ranges down to +/- 160 Pa full-scale, this system offers maximum flexibility for rapidly changing requirements.

- Modular, interchangeable transducer cards factory-loaded with calibration data
- Direct-to-digital pressure transducers each locally temperature compensated
- Absolute static pressure and local air temperature sensors for high-accuracy data reduction
- Humidity sensor for density correction and condensation warning
- Six-component IMU for automated levelling and vibration warning
- All software and drivers included for plug-and-play functionality



Specification

Product code	DPS14-160P	DPS14-1K0	DPS14-6K9
Pressure range (custom ranges available)	160 Pa FS	1 kPa FS	6.9 kPa FS
Maximum overpressure	33.5 kPa	37.5 kPa	69 kPa
Sensor repeatability ¹	± 0.05 % FS		
Sensor accuracy ² , inc. calibration	± 0.25 % FS		
Total error band after auto-zero ³	± 1.75 % FS	± 0.5 % FS	± 1 % FS
Ambient absolute pressure sensor specification	30-110 kPa FS, +/- 0.1 kPa		
Absolute pressure limits	0.2 - 1.5 atm		
Operational mode	Absolute and differential configurations available		
Operating temperature range ⁴ (extended ranges available)	-20° to +85° C non-condensing		
Compensated temperature range	0° to +50° C non-condensing		
Storage temperature range	-40° to +85° C		
Ambient temperature sensor specification	0°C - 65°C ± 0.5°C		
Remote temperature probe specification	-40°C - 150°C ± 0.5°C		
Vibration	Sensors rated to 15 g, 10 Hz to 2 Hz		
Maximum relative humidity	95 %		
Relative humidity sensor specification	0 % to 100 % RH, +/- 3%		

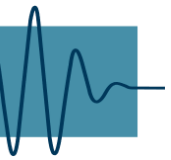
¹ Includes errors due to pressure non-linearity, pressure hysteresis and non-repeatability.

² Includes errors due to pressure non-linearity, pressure hysteresis, non-repeatability and calibration uncertainty.

³ Total residual error after auto-zero, excluding residual temperature sensitivity.

⁴ OEM configuration only. Nylon enclosure maximum temperature 65°C.

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Communications - USB	Data streaming via USB2.0, external trigger and clock ports for scalable multi-system synchronization
Communications - UART	Tx/Rx 3.3 V, 0.5 Mbps
Power	via USB, < 200 mA, 1 W via UART, 5 VDC regulated, min 250 mA required
Data acquisition rate	Maximum 1 kHz simultaneous (equivalent)
Digital resolution	14-bit pressure, 16-bit environmental and IMU
System requirements	Windows 10 or later, minimum 3GHz & 4Gb RAM
IMU specification	3 axis gyro, 245 °/s FS, $\pm 8.75 \times 10^{-3}$ °/s 3 axis accelerometer, 2g FS, ± 0.061 mg

Additional custom modifications available:

- Custom pressure ranges
- 24-bit pressure sensors
- Battery power and wireless telemetry module for remote operation
- Integrated power supply and streaming serial output available for stand-alone operation
- Multichannel quick-change pressure connector
- Custom enclosure design service
- Custom software and driver development service
- Spare transducer cards and card kits
- Bespoke transducer cards with mixed ranges/types
- Extended compensated temperature range
- Extended product support and warranty

Dimensions

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