

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

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|--|--|------------|------------|
| 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.

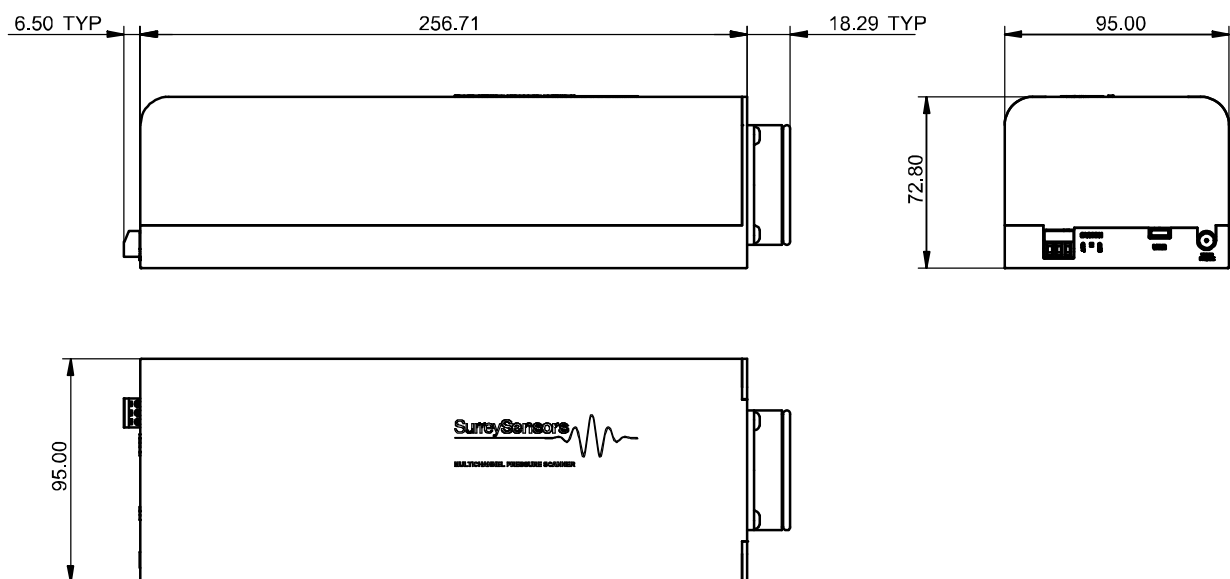
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|--------------------------|---|
| Communications interface | Data streaming via USB2.0, external trigger and clock ports for scalable multi-system synchronization |
| Power | via USB, < 200 mA, 1 W |
| Data acquisition rate | Maximum 1 kHz simultaneous (equivalent) |
| Digital resolution | 14-bit pressure, 16-bit environmental and IMU |
| System requirements | Windows 7 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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