



## SmartReader Plus 4 LPD

### Two-Channel Low Pressure Differential and Temperature Data Logger

The SmartReader Plus 4 LPD (Low Pressure Differential) data logger is a two channel logger with internal pressure and temperature sensors. The low pressure sensor is built into the logger and is capable of measuring low gauge and differential pressure.

#### APPLICATIONS

Commissioning HVAC systems, monitoring air duct velocity, testing and balancing HVAC systems, monitoring wind speed, verifying positive pressure in critical facilities such as medical and manufacturing, etc.

#### GENERAL SPECIFICATIONS

|                        |   |
|------------------------|---|
| Size:                  | 107mm x 74mm x 22mm (4.2" x 2.9" x 0.9")  |
| Weight:                | 110 g (3.75 oz)   |
| Case Material:         | Noryl® Plastic  |
| Battery:               | 3.6 volt Lithium  |
| Resolution:            | 12-bit (1 part in 4096)   |
| Mounting:              | Magnetic backing or locking eyelet  |
| Clock Accuracy:        | ± 2 seconds per day   |
| Sampling Methods:      | Continuous (First-in First-out)*, Stop When Full (Fill-then-stop)<br><i>*Not available with sample rates faster than eight seconds</i>                                |
| Operating Limits:      | -40°C to 70°C (-40°F to 158°F) and 0 to 95% RH (non-condensing)   |
| PC Requirements:       | Windows PC with at least one free USB or serial port (depending on interface)   |
| Software Requirements: | TrendReader® 2 (Compatible with Windows XP SP3, Windows Vista SP2 & Windows 7 (32 bit & 64 bit)   |
| Memory Size:           | 32 KB (capable of storing up to 21,500 readings)  |
| Sampling Rates:        | User selectable rates from 25 per second to once every eight hours (BP-101 battery pack or PS-201 power supply required for sampling rates faster than eight seconds) |
| Number of Channels:    | Two (one for the internal temperature sensor and one for the internal pressure sensor)  |



#### SENSOR SPECIFICATIONS

##### Internal Temperature Sensor

|             |   |
|-------------|---|
| Type:       | NTC Thermistor - 10,000 Ohm @ 25°C (77°F)   |
| Range:      | -40°C to 70°C (-40°F to 158°F)  |
| Accuracy:   | ±0.2°C over the range of 0°C to 70°C (± 0.3°F over the range of 32°F to 158°F)  |
| Resolution: | 0.03°C (0.05°F) @ 25°C; better than 0.07°C (0.12°F) between -25°C and 70°C (-13°F and 158°F); better than 0.13°C (0.23°F) between -40°C and -25°C (-40°F and -13°F) |

##### Pressure Sensor

|  |                                     |
|--|-------------------------------------|
| Type:  | Silicon piezoresistive strain gauge |
| Media:   | Non-corrosive gases and dry air     |
| Maximum Pressure:                                  | Four times full scale               |
| Compensated Thermal Accuracy 0°C-70°C (32°F-158°F) | ±0.01 inWC (±2.5Pa)                 |
| Long Term Stability                                | ±0.01 inWC (±2.5Pa)                 |

| Range:              | Accuracy:              | Resolution:           |
|---------------------|------------------------|-----------------------|
| ±0.5 inWC (±120 Pa) | ±0.05 inWC (±12.5 Pa)* | <0.001 inWC (0.25 Pa) |
| ±2 inWC (±500 Pa)   | ±0.05 inWC (±12.5 Pa)* | <0.001 inWC (0.25 Pa) |
| ±10 inWC (±2.5 kPa) | ±0.1 inWC (±25 Pa)     | <0.01 inWC (2.5 Pa)   |

\* ±0.01 inWC (±2.5Pa) with Pressure Sensor Characterization - Consult Factory

#### ORDERING INFORMATION

|  |                                    |                                |                         |
|--|------------------------------------|--------------------------------|-------------------------|
| <b>Item:</b><br>SRP-004-LPD-0.5<br>SRP-004-LPD-2 | <b>Cat#:</b><br>01-0310<br>01-0312 | <b>Item:</b><br>SRP-004-LPD-10 | <b>Cat#:</b><br>01-0314 |
|--|------------------------------------|--------------------------------|-------------------------|

ACR Systems Inc  
Toll-Free: 1.800.663.7845  
Tel: 1.604.591.1128  
sales@acrsystems.com

[www.acrsystems.com](http://www.acrsystems.com)

ISO 9001 Certified

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