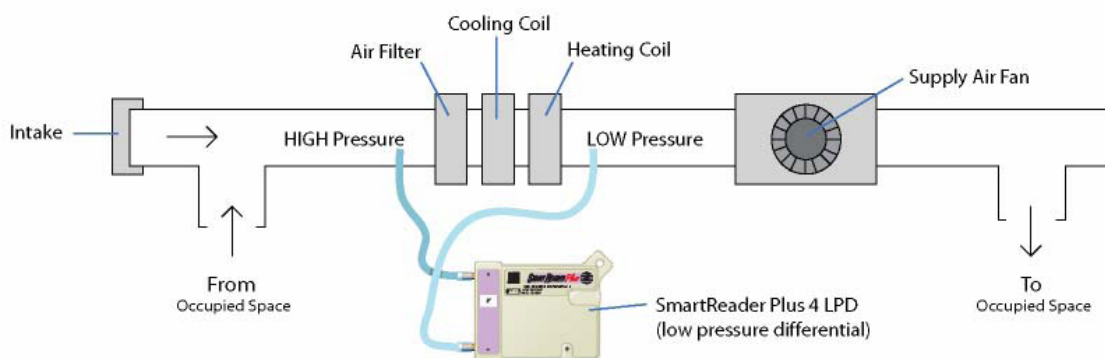


SmartReader Plus 4 LPD

Perfect For Testing HVAC System Filter Efficiency

With advancements in today's building automation systems, few areas of operation are left to guesswork. Today's building control systems precisely monitor a variety of environmental factors. Unfortunately, when it comes to air filtration maintenance, the HVAC industry for the most part lacks a reliable tool. It can only be estimated how many air filters are discarded too early or how often neglected filters are left to strain the system and compromise indoor air quality.

Facilities such as hospitals, pharmaceuticals, and schools etc. rely on high standards of indoor air quality. Such critical environments utilize sophisticated indoor air quality equipment to detect environmental irregularities. Ironically, the first line of defense against air contamination, the air filter bank, is left to relatively inaccurate means of measurement and control.



Challenge:

Knowing when to replace the air filter. The cost of filters and their replacement is substantial. An even greater cost is incurred when filters are replaced prematurely.

Are you faced with:

- Having to guess whether the filter is ready for replacement
- Not knowing how to prevent premature disposal of filters that still have useful life
- Trying to prevent health and maintenance problems caused by overloaded filters that have blown out

Benefit:

Installing a pressure differential data logger across filter banks will prevent personnel from having to guess whether the filter is ready for replacement. An LPD logger with a range of 0 - 1.0" H₂O (WC) can save money and the environment by preventing premature disposal of filters. Timely replacement can also help prevent health and maintenance problems caused by filters blowing micro bacterial contaminants resulting in the need to have the ducts cleaned. Data logging pressure trends over time can provide proof of filter condition.

Monitoring for pressure drop across the filter bank

- Provides assurance that filter is being replaced only when necessary – not too soon and not too late
- Facilities that depend on high standards of indoor air quality can ensure timely filter replacement and help to provide good indoor air quality

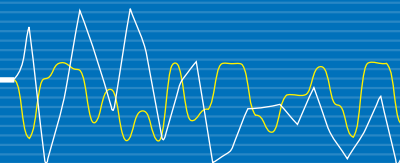
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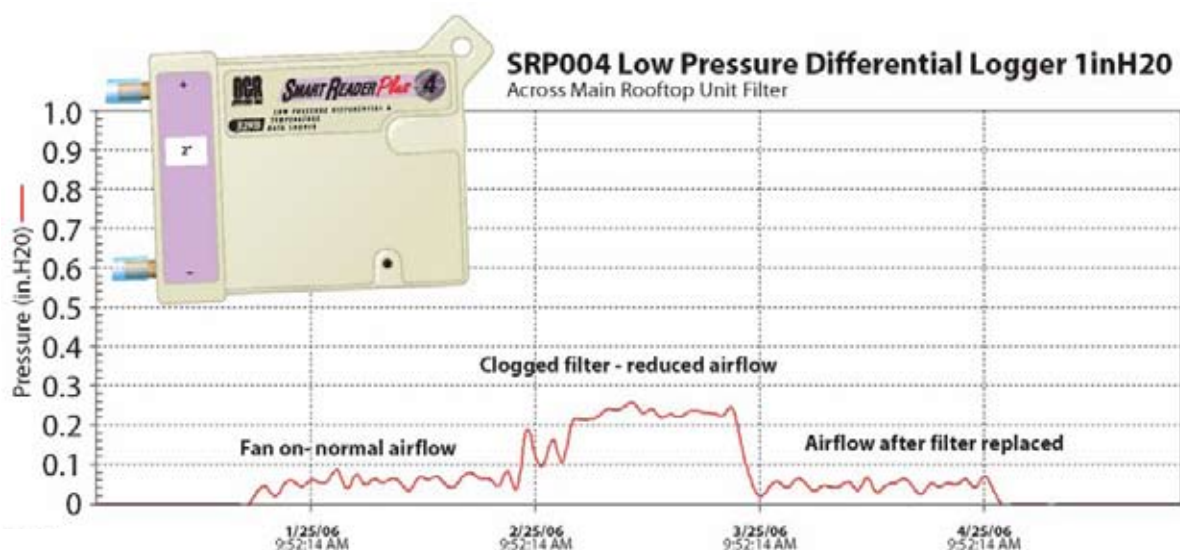
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Deploying the data logger and downloading the data is easy...

1. Simply place the ACR SmartReader Plus 4 LPD logger on the duct in the area between the filter and the fan (the logger has a magnetic strip on the back for easy placement), place the positive port pressure hose in the area between the intake and the filter, place the negative port hose in the area between the filter and the fan. The logger's internal pressure sensor will calculate the differential pressure. (See Fig. 1)
2. Remove the logger and connect it to your PC with the USB communications cable.
3. With TrendReader software installed on your computer, simply download the information collected by the data logger. (See Fig. 2)



Specifications for SmartReader Plus 4 LPD:

Temperature Sensor Accuracy:	$\pm 0.2^{\circ}\text{C}$ over the range of 0 to 70°C ($\pm 0.3^{\circ}\text{F}$ over the range of 32 to 158°F)
Pressure Sensor Accuracy:	Calibrated: $\pm 0.05''$ for 0.5", 1.0" & 2.0" ranges - $\pm 1.0''$ for 5.0" & 10.0" ranges - $\pm 0.5\%$ FS (over compensated range)
Battery:	3.6 volt Lithium (10-year warranty)
Recommended Sampling Rates:	45 minutes – for collecting year of data
Number of Channels:	2 – 1 for the internal temp. sensor & 1 for the internal pressure sensor

Ordering Info:

Equipment	Description	Catalog #
SmartReader Plus 4 LPD 2 – 32 KB	1 ambient temp. & 1 pressure channel - Ideal for monitoring 0.5", 1" & 2" W.C.	01-0312
SmartReader Plus 4 LPD 10 – 32 KB	1 ambient temp. & 1 pressure channel - Ideal for monitoring 5" to 10" W.C.	01-0314
Pressure Hose	Flexible hose for LPD data logger	30-0015
TrendReader 2 Interface Pkg. (IC-102)	Software on CD & USB Interface Cable	01-0226

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