

SMART READER

# SmartReader 9

## Three-Channel Pulse Data Logger

The SmartReader 9 is a versatile data logger designed for counting and recording digital pulses or switch contact closures. It has two input channels, each with three selectable frequency ranges. Data can be displayed in custom engineering units using the simple equation editor of ACR's TrendReader® 2 Software. It also has one internal channel for recording ambient temperature.

## **APPLICATIONS**

Food process verification, pharmaceutical and/or laboratory storage, transportation of temperature-sensitive goods, equipment run time, HVAC system testing and balancing, etc.

## **GENERAL SPECIFICATIONS**

Size: 107mm x 74mm x 22mm (4.2" x 2.9" x 0.9")

110 g (3.75 oz) Weight: Noryl® Plastic Case Material: Battery: 3.6 volt Lithium Resolution: 8-bit (1 part in 256)

Magnetic backing or locking eyelet Mounting:

Clock Accuracy: ± 2 seconds per day

Sampling Methods: Continuous (First-in First-out), Stop When Full (Fill-then-stop)  $-40^{\circ}$ C to  $70^{\circ}$ C ( $-40^{\circ}$ F to  $158^{\circ}$ F) and 0 to 95% RH (non-condensing) Operating Limits:

Windows PC with at least one free USB or serial port (depending on interface) PC Requirements:

Software Requirements: TrendReader® 2 (Compatible with Windows XP, Vista, Windows 7 and

Windows 8 [32 bit & 64 bit])

Memory Size: 32 KB (capable of storing up to 32,767 readings)

User selectable rates from 8 seconds to 5 days in 4-second increments Sampling Rates: Number of Channels: Three (One for internal temperature sensor and two external inputs for pulse

signals or dry switch contact closures) NOTE: For "switch status" logging, see

SmartReader Plus 8

### SENSOR SPECIFICATIONS

## **Internal Temperature Sensor**

NTC Thermistor - 10,000 Ohm @ 25°C (77°F) Type:

-40°C to 70°C (-40°F to 158°F) Range:

 $\pm 0.2$ °C over the range of 0°C to 70°C ( $\pm 0.3$ °F over the range of 32°F to 158°F) Accuracy:

 $0.4^{\circ}$ C ( $0.7^{\circ}$ F) @  $25^{\circ}$ C; better than  $1^{\circ}$ C ( $1.8^{\circ}$ F) between - $25^{\circ}$ C and  $70^{\circ}$ C ( $-13^{\circ}$ F and  $158^{\circ}$ F); better than  $2.0^{\circ}$ C ( $3.6^{\circ}$ F) between - $40^{\circ}$ C and - $25^{\circ}$ C Resolution:

(-40°F and -13°F)

**External Inputs** 

Switch Contact Type: Uncommitted switch or relay contacts

Logic Input Type: Active logic signals Ranges: 32 pulses/second 64 pulses/second

128 pulses/second 4 milliseconds

Minimum Pulse Width: Low = 0 to 0.5 volts DC Input Voltage:

High = 4.5 to 24 volts DC

Input Impedance: 750K Ohm

### **ORDERING INFORMATION**

**Item** Cat#: SR-009-32K 01-0037



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