



SmartReader Plus 5

Three-Channel Temperature Data Logger

The SmartReader Plus 5 data logger is ideal for those applications that require monitoring extremely high temperatures or monitoring temperature over a wide range. The logger has one internal channel for measuring ambient temperature and two external channels for use with ACR thermocouple wire or any J, K, S, T or E type thermocouple wire.

APPLICATIONS

Monitor performance of gas-fired heating equipment, verifying concrete curing temperatures, process verification, 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)
	<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 2000 SP4, XP SP1 and Vista 32 bit)
Memory Size:	32 KB (capable of storing up to 21,500 readings)
(2 models available)	128 KB (capable of storing up to 87,000 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:	Three (one internal thermistor for cold-junction compensation and two external channels for narrow range and wide range thermocouples)



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)

Thermocouple Wire

	Range	Resolution
J Type	-50°C to 600°C (-55°F to 1100°F)	0.30°C (0.55°F)
K Type	-100°C to 1150°C (-145°F to 2100°F)	0.50°C (0.90°F)
S Type	0°C to 1450°C (32°F to 2642°F)	1°C (1.8°F)
T Type	-200°C to 400°C (-325°F to 750°F)	0.40°C (0.75°F)
E Type	-50°C to 680°C (-58°F to 1250°F)	0.24°C (0.44°F)

Accuracy: ±0.5% of range + resolution