



Temperature Measuring / Instrumentation



Stock No. 40576

Temperature Chart Recorders

Mannings stocks the highest quality in temperature recording instruments on the market today. Each unit is built for rugged dependability and light weight portability. Thermocouple jack panels are built in for ease of connections.

Major features of 12 Channel Hybrid Recorders:

- The instrument records temperature and various other industrial parameters on a 180mm chart in 6, 12 or 24 channels. Trace Printing is differentiated by using colored dots with channel numbers printed in the dot color at regularly timed intervals. In addition to the dot matrix printing, digital printing of measured values can be selected or deselected. This feature allows for easy to read numerical documentation of process values.
- Universal input. The recording range can be individually selected for every channel if so desired. The selection parameters include 10 DC Voltage ranges, 36 thermocouple ranges and 11 resistance thermometer ranges.
- Universal power supply. The working voltage range is 100 to 240Vac, 50/60Hz.
- Conforms to international safety standards: CE, UL and CSA (C-UL) approved.
- All programming operations are done at the front keypad
- The keypad can be locked out after programming to prevent unauthorized operators from accessing the recording parameters. This security feature is invaluable to Quality Assurance related documentation of critical path procedures.

Certificate of Calibration: Is included and mandatory in accordance to the Mannings quality control program.

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Temperature Recorders

Stock No.	Description
40556	6-Point Sekonic Type K : Call office for information and availability
40565	6-Point Chino Recorder : Type "K" Calibration, 0-2000 degrees "F". Multi-Color Print Points, complete with 6 Point Jack Panel, Handles and Feet, 7" Chart (180mm)
40566	12 Point Chino Temperature Recorder : Type "K" Calibration, 0-2000 degrees "F". Multi-Color Print Points, complete with 12 Point Jack Panel, Handles and Feet, 7" Chart (180mm)
40567	12-Point Sekonic Type K : Call office for information and availability
40576	12 Point Chino "Hybrid" Recorder : Multicolor print points and numbers, 0-2000 degrees "F", Scaleable self writing, Digital display, Rugged portable steel case with handles & feet, 12-point jack strip, 7" Chart (180mm) and various type T/C inputs can be selected. (Type K is standard)
40657	24 Point Chino Temperature Recorder : Type "K" Calibration 0-2000 degrees "F", On/Off select channel features, Complete with 24 Point Jack Panel, Handles and Feet, 7" Chart (180mm)
40665	24 Point Chino Temperature Recorder : Type "K" Calibration 0-2000 degrees "F". Multi-Color Print Points and numbers, Complete with 24 Point Jack Panel, Select On/Off features, 10" Chart (25mm)

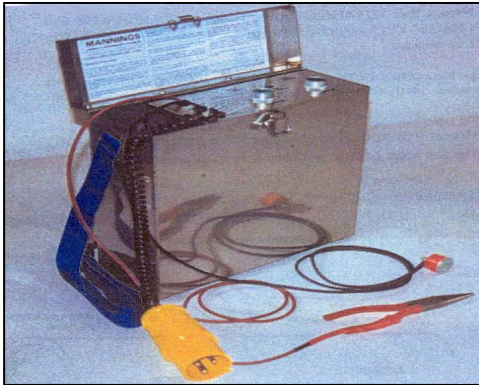
Temperature Recorder Accessories

Stock No.	Description
42705	Chart Paper for AH/EH "Hybrid" Recorder : 0-2000 degrees "F" - 7" chart (180mm) fan fold chart - interchangeable with EH Recorder. (3 per box - 5 boxes a case)
42707	Chart Paper for Yokagawa Recorder : 0-2000 degrees "F" - E906ANJ - (180mm) fanfold, for UR180 recorder in 20 degree divisions
42708	Chart Paper for Yokagawa Recorder : 0-2000 degrees "F" - B9573AN - (180mm) fanfold for UR180 Recorder, "Percentage" paper 100 divisions
42715	Chart Paper for Chino EA Recorder : 0-2000 degrees "F" - 11" chart (250mm) fan fold chart
42725	Chart Paper for Chino AA Recorder : 0-2000 degrees "F" - 10" chart (250mm) fan fold chart
42730	(6) Multi-Color Ribbon Set for Chino AH 3000 : Chart ref.#-(22026-01330)

Thermocouple Welding Units (T.W.U.)

Tests by many authorities have shown that capacitance welding of thermocouples directly to the work piece is the only way of ensuring accurate temperature measurement. During this method of attachment the surface of the work piece becomes the hot junction of the thermocouple, thus an accurate process reading of the work piece temperature Obtained. Other methods of thermocouple attachment have been documented to produce errors of up to 125 degrees Fahrenheit.

Thermocouple Welding Unit - (STD10)



- High Output
- Self Contained Unit with adjustable carrying strap
- Completely equipped with pliers and ground magnet
- Rechargeable Battery plus V.A.C. plug and cord for recharging

Stock No. **43500**

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Mini Weld



- Ultra small capacitive discharge welder
- Variable output; approximately 20-50 joules
- 3 1/2" x 1 1/2" x 6", at 26 ounces
- 4-AA batteries, Re-chargeable or disposable
- Auto / Manual / Off selector switch
- Automatic shut off to conserve batteries
- "Wait", "Ready" and "Flat" (Low Battery) LED's
- Needle nose pliers and magnet
- Carrying case with tool pouch and belt loop for Mini Welder

Stock No. **43640**

Auto / Manual Variable Output Thermocouple Welding Unit



- Portable Capacitive Discharge Unit
- Variable High Output, 12 to 50 watt seconds
- Self-contained in a 8" x 10.5" x 4" case
- Round permanent magnet with needle nose pliers for the discharge circuit
- 110Vac 3-wire power cord with grounding plug
- Operates from AC mains or internal rechargeable battery
- "Start" and "Weld" push button switches
- "Wait", "Low Battery", "Ready" and "Mains" LED indicators
- Auto / Manual Switch

Stock No. **43630**

Hot Spot "2"



- Portable Capacitive Discharge Unit
- **Consists of:** 6 1/2 inch pliers, Safety Goggles, Carbon Block, Instruction Book
- The unit can effectively weld wire pairs from No. 30 to No. 14 gauge, pins or studs as heavy as No. 12 gauge



Stock No. **43620**

Inconel Sheathed Thermocouples (Non-Grounded Type)

Stock No.	Description
44001	18" Inconel Sheathed 1/8" O.D.: Complete with male plug, Type "KK" Calibration, Ungrounded junction
44011	12" Inconel Sheathed 1/8" O.D.: Complete with male plug, Type "KK" Calibration, Ungrounded junction
44000	24" Inconel Sheathed 1/8" O.D.: Complete with male plug, Type "KK" Calibration, Ungrounded junction
44002	30" Inconel Sheathed 1/8" O.D.: Complete with male plug, Type "KK" Calibration Ungrounded junction
44003	36" Inconel Sheathed 1/8" O.D.: Complete with male plug, Type "KK" Calibration, Ungrounded junction
44010	48" Inconel Sheathed 1/8" O.D.: Complete with male plug, Type "KK" Calibration Ungrounded junction
44200	24" Ceramic Beaded. 11 Gauge - B.S.: Complete with male plug, Type "KK", Calibration




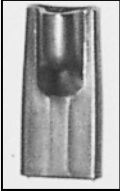
NOTE: For Longer lengths - Call your nearest Mannings office for ordering details

Thermocouple Wire

Stock No.	Description
44410	Thermocouple Wire - with Plug: 72" of Stock #44450 with Thermocouple plug (male)
44450	Thermocouple Wire - Nextell Ceramic Insulated: 20 gauge solid Chromel / Alu-mel - Type "KK" Calibration, 1300 degrees "F" continuous operating temperature 1600 degree "F" single exposure
	
44510	Thermocouple Wire - Nextell Ceramic Insulated: 20 gauge solid Chromel / Alu-mel - Type "KK" Calibration, Premium grade, stabilized for operating temperatures up to 2200 degrees "F"
53040	Thermocouple Extension Lead Wire: Poly - Poly / 20 gauge solid, Type "KX" calibration
	
53041	Thermocouple Extension Lead Wire: Poly outer jacket with Mylar shield and Drain wire, Twisted Pair - 20 gauge solid, Type "KX" Calibration

NOTE: All Thermocouple products sold by Mannings U.S.A. comes with a Certificate of Conformance (ANSI MC 96.1.)

Thermocouple Accessories

Stock No.	Description
45000	<u>1/2" Thermocouple Slotted Nut:</u> Complete with set screw. For use with beaded Thermocouples
45010	
	<u>3/8" Thermocouple Slotted Nut:</u> Complete with set screw. For use with beaded Thermocouples
45200	
	<u>Thermocouple Putty:</u> 1-lb. Wide mouth plastic container. Protects thermocouple junction from radiant heat (approved for nuclear use)
45401	
	<u>Weldet - Stainless Steel (Clip Style):</u>
45402	
	<u>Weldet - Stainless Steel (Spade Style):</u>
46300	<u>Magnetic Temperature Indicator:</u> 0 - 550 degrees "F"

Stock No.

Description

55600



Thermocouple In-Line Plug: Type "K" (male)

55610



Thermocouple In-Line Socket: Type "K" (female)

Potentiometric Devices



EZ Cal 4
Stock No. **46207**



Digital Thermometer*
Stock No. **46203**



Stock No. **44014**

Stock No.

Description

46203 **Digital Thermometer:** Receives Thermocouple Signals, -58 degrees "F" to 2000 degrees "F", Accuracy .3% of reading

46205 **Calibration Traceable to N.I.S.T.:** For all potentiometric devices supplied or repaired by Mannings

46207 **Precision Portable:** Calibration unit - (EZ Cal 4)

46301 **1R Dector Module:** For ADM unit

44014 Use for contact measurements- 15" overall length (handle/probe) complete with 5" cable with miniature plug

*Used in conjunction with item **44014**