9. TEMPERATURE RECORDERS

CR4-220   **TWO PEN RECORDER without sensor**
CR4-220/KTH   **TWO PEN RECORDER** with temperature / humidity probe
CR4-220/KTT   **TWO PEN RECORDER** with dual temperature probe
CR4-220/KTP   **TWO PEN RECORDER** with temperature / pressure probe
CR4-220/KPP   **TWO PEN RECORDER** with dual pressure probe
CR4-220/KTE   **TWO PEN RECORDER** with temperature / event probe

FEATURES
- Two pen, remote reading, chart recorder.
- Recordings are displayed digitally as well as on paper chart.
- Offers numerous measurement applications when connected with one of our 5 plug-in probes (not included).
- Recorder automatically recognizes and controls whichever probes are attached.
- All functions are managed through simple menus and shown on a backlit alphanumeric LCD display (16 characters x 2 lines).
- Touch pad provides simple operation.
- All settings retained during power off and power loss, no need to restore settings after power failure.
- Battery backup, 8 x AA alkaline batteries (48 h continuous use), to continue operation during power failure (batteries not included).
- 12 V operation allows use in vehicle or marine applications (adapter not included).
- Two independent channel alarms give an audible alarm + relay.
- Probe is field replaceable and calibrated with no special equipment.
- Free standing or wall mounted + fold away carrying handle.

SPECIFICATIONS
- Ambient operating temperature: **0°C** to **+49°C** (+32°F to +120°F).
- °C or °F selectable.
- Chart rotation speed, selectable: **1,5, 3, 6, 12** and **24 hours**, **7** and **31 days**.
- Chart rotation mode, selectable: continuous or single turn.
- Chart speed accuracy: **± 1 %**.
- Chart diameter: **152 mm** (6") (60 assorted charts supplied).
- Temperature alarm range: **-30°C** to **+50°C** (-20°F to +120°F).
- Relative humidity alarm range: **0 %** to **100 % RH**.
- Pressure alarm range: **0 bar** to **35 bar** (0 psi to 500 psi).
- Selectable alarm delay (No delay, 10 min, 30 min, 1 h, 2 h) to prevent nuisance alarms.
- Remote alarm connection: normally open contacts **48 V AC/DC, 0,1 A** resistive load.
- **220 V AC - 240 V AC - 50 Hz / 60 Hz** adapter included.
- Power consumption: **3,5 W** / hour.
- Dimensions: **185 mm x 70 mm x 235 mm** (7,25" x 2,75" x 9,25").
  Weight: **1,13 kg** (2,5 lb).
- CE approved.

CR4-220 + KTH probe

SPARE PARTS

CRPENR   Replacement pen red
CRPENB   Replacement pen blue

SEPARATE PROBE SELECTION, to be used on CR4-220

PART N°	PROBE TYPE	TEMP. RANGE / ACCURACY	VOLTAGE RANGE	RH RANGE / ACCURACY	PRESS. RANGE / ACCURACY	DEW POINT RANGE
KTH	Temperature / humidity	-40°C to +55°C ±1°C (-40°F to +130°F ± 2°F)	-	0 %-100 % at 0°C to +55°C (+32°F to +130°F) ambient, ± 2 %	-	0°C to +55°C (+32°F to +130°F)
KTT	Dual temperature	-40°C to +55°C ± 1°C (-40°F to +130°F ± 2°F)	-	-	-	-
KTP	Temperature / pressure	-40°C to +55°C ± 1°C (-40°F to +130°F ± 2°F)	-	-	0 bar to 35 bar (0 psi to 500 psi) ± 1 % FS	-
KPP	Dual pressure	-	-	-	0 bar to 35 bar (0 psi to 500 psi) ± 1 % FS	-
KTE	Temperature / event	-40°C to +55°C ± 1°C (-40°F to +130°F ± 2°F)	24 V AC-270 V AC 24 V DC-180 V DC	-	-	-
Maximum ranges on different charts		-30°C to +50°C (-20°F to +120°F)	ON – OFF	0 % to 100 %	0 bar to 35 bar (0 psi to 500 psi)	

CR87B-220C **TEMPERATURE RECORDER**
Remote reading, with 3 different temperature ranges and 4 different recording speeds

FEATURES

- Designed specifically for refrigerator, freezer and environmental temperature measurement.
- Employs advanced microcontroller design that enables this versatile instrument to accurately measure and record temperatures in air, gas, liquids, powders, solids, and semi-solids.
- Recordings can be made from any distance up to 30 meters (100 feet) away by using an optional long length sensor wire.
- All controls on front panel for fast and easy setup.
- Furnished complete with 2 cartridge pens and 60 assorted charts.
- Convenient fold down carrying handle.
- Free standing or wall mounted.

SPECIFICATIONS

- Temp. scale selectable: **-40°C** to **0°C**, **-30°C** to **+10°C**, **+10°C** to **+50°C**.
- Ambient operating temperature range: **0°C** to **+49°C**.
- Ambient operating relative humidity: 96 % maximum.
- Temperature accuracy: ± **1°C**.
- Chart speed selectable: **6 h**, **24 h**, **7 days**, **31 days**.
- Chart rotation mode: Selectable - single turn or continuous.
- Chart speed accuracy: ± **1 %**.
- Chart diameter: **152 mm** (6").
- Large 3 digit LED display 13 mm (0,5").
- Temperature sensor: **4,5 m** (15') long sensor wire with **102 mm** (4") stainless steel submersible probe.
- Primary power supply: 220 V AC - 240 V AC, 50 Hz / 60 Hz.
- Alternative power: 12 Volt vehicle operation with optional adapter.
- Battery backup: 8 AA Alkaline batteries (not supplied).
- Battery life: 48 hours continuous use.
- Ink type recording pen (black).
- Case size: **235 mm x 184 mm x 70 mm** (9^{1}/4" x 7^{1}/4" x 2^{3}/4").
- Weight: **2 kg** (4,7 lbs).

SPARE PARTS

CR87-10	Replacement charts -40°C to 0°C / 24 h (60 charts)
CR87-14	Replacement charts -30°C to +10°C / 6 h (60 charts)
CR87-16	Replacement charts -40°C to 0°C / 7 days (60 charts)
CR87-17	Replacement charts -30°C to +10°C / 7 days (60 charts)
CR87-18	Replacement charts +10°C to +50°C / 7 days (60 charts)
CR87-22	Replacement charts -40°C to 0°C / 31 days (60 charts)
CRPEN	Replacement pen black
CRPENR	Replacement pen (standard) red
CRPENB	Replacement pen (standard) blue

CR87B-220C