

# Compact Vertical or Flatbed Recorders

## Single or Dual Channel, Operate on External or Battery Power



With KTIN-18G-12 thermocouple probe and TAC80B-K temperature-to-analog converter.

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### RD3057 Series



- ✓ AC, DC, or Battery Power Options
- ✓ Single or Dual Channel
- ✓ 12 Input Ranges from 10 mV to 50 V FS
- ✓ 8 Chart Speeds from 60 cm/min to 2 cm/hr
- ✓ Chart Speed Accuracy:  $\pm 0.25\%$
- ✓ Fast Response: 300 mm/s Max

- ✓ Tilting Chart Plate Lets User Write Comments Directly Onto the Chart
- ✓ Vertical or Flatbed Operation

The RD3057 150 mm (6") portable recorder excels in virtually every application, including field and laboratory work. Available in single- and dual-channel models, the RD3057 functions as either a vertical or flatbed recorder and offers 3 power options: AC line; AC, Ni-Cad battery, and external DC; and AC, 1.5 V batteries, and external DC.

The non-contacting ultrasonic pen position transducer in the servo mechanism eliminates many moving parts, resulting in higher reliability and longer operating life. The RD3057 also features a chart drive using a pulse motor and crystal oscillator, which provides a chart speed accuracy of  $\pm 0.25\%$ .

The RD3057 offers 12 input ranges from 10 mV to 50 V FS and 8 chart speeds from 60 cm/min to 2 cm/hr. In addition, it operates with either Z-fold or roll chart paper and has a tilting chart plate to facilitate note-taking.

#### Specifications

**Drive System:** Automatic null-balancing DC servo mechanism using non-contacting ultrasonic pen position transducer

#### Number of Pens:

**RD3057-11/13:** 1-pen

**RD3057-21/23:** 2-pens; pen distance approximately 5 mm on time axis

**Writing System:** Disposable felt-tip pen cartridges; red ink for 1st pen, green for 2nd pen

**Effective Recording Span:** 150 mm

**Accuracy:**  $\pm 0.5\%$  of effective recording span (includes non-linearity and deadband) at an ambient temperature of  $23 \pm 5^\circ\text{C}$  ( $73 \pm 9^\circ\text{F}$ ) on 500 mV range

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**Deadband:** Less than 0.2% of effective recording span

**Maximum Pen Speed (Nominal):** 300 mm/s

**Chart:** Z-fold chart (174 mm x 15 m) or roll chart (174 mm x 20 m), with calibrated width of 150 mm (100 uniform divisions at 1.5 mm/division), 5 mm uniform divisions on time axis

**Chart Drive:** Pulse motor drive using crystal oscillator

**Chart Speeds:** 2, 6, 20, 60 cm/min and cm/h (chart speed accuracy,  $\pm 0.25\%$ )

**Type of Input:** Floating

**Voltage Ranges (FS):** 10, 20, 50, 100, 200, 500 mV; 1, 2, 5, 10, 20, 50 V (12 calibrated ranges)

**Zero Set:** Adjustable for each pen over full effective recording span

**Input Resistance:** Approx 1 M $\Omega$  constant on all voltage ranges

**Maximum Allowable Source Resistance:** 10 k $\Omega$

**Maximum Allowable Input Voltage (Continuous):**

50 Vdc on 10 to 500 mV ranges, 250 Vdc on 1 to 50 V ranges

**Maximum Common Mode Voltage:** 130 Vrms (sine wave), 180 Vdc

**Common Mode Rejection:**

More than 130 dB at power line frequency, or at DC

**Normal Mode Rejection:** More than 50 dB at power line frequency

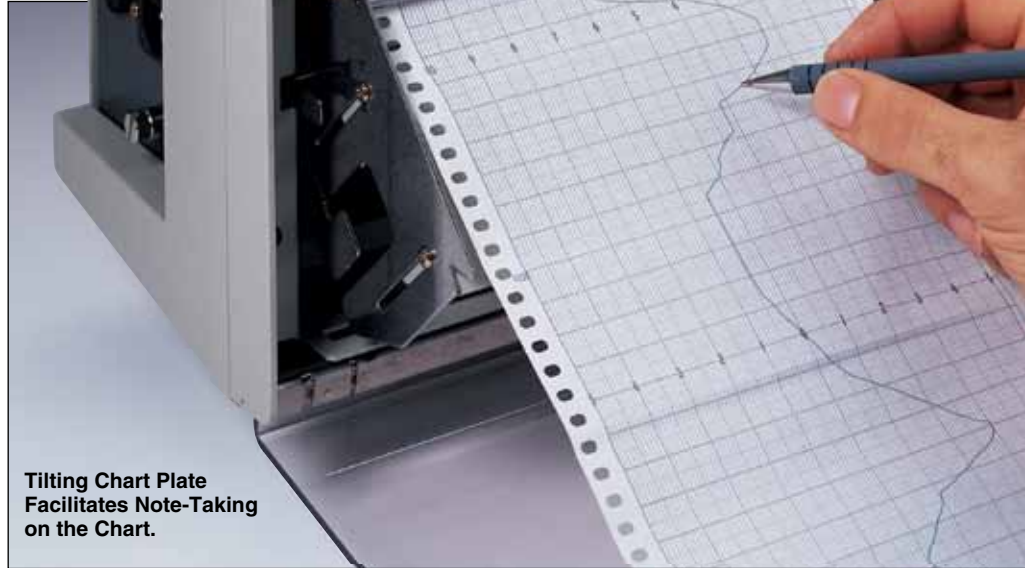
**Pen Lift:** Mechanical for both pens

**Operating Position:** Vertical or horizontal (vertical only for Z-fold chart)

**Warm-Up Time:** Approx 15 min

Remember to Order Extra Pens and Paper!

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Tilting Chart Plate Facilitates Note-Taking on the Chart.

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**Operating Temperature Range:** 0 to 50°C (32 to 122°F)

**Humidity Range:** 40 to 80% relative humidity

**Dielectric Strength:** 1500 Vac for 1 minute between power line and case, 1000 Vac for 1 minute between input terminals and case

**Insulation Resistance:** More than 100 M $\Omega$  at 500 Vdc between power line and case, and between input terminals and case

**Power Requirements:**

**RD3057-11/21:** External 115 Vac standard (230 Vac optional) 50 to 60 Hz

**RD3057-13/23:** External 115 Vac standard (230 Vac optional), 10 internal 1.5 V batteries (included) (supplied in an accessory box), or external 12 Vdc

**Power Consumption (Approx.):**

**1-Pen Model:** 16 VA max, 13 VA balanced

**2-Pen Model:** 22 VA max, 16 VA balanced

**Dimensions:**

223 H x 332 W x 174 mm D (8 7/8" x 13 1/8" x 6 7/8")

**Weight:**

**RD3057-11:** 5 kg (11.0 lb)

**RD3057-21:** 6 kg (13.2 lb)

**RD3057-22/23:** 8 kg (17.6 lb)

### To Order

Model No.	Description
RD3057-11	1-pen portable recorder
RD3057-13	1-pen portable recorder, AC/BATT/DC
RD3057-21	2-pen portable recorder
RD3057-23	2-pen portable recorder, AC/BATT/DC

Comes with 3 pens for each channel (red for channel 1, green for channel 2), Z-fold chart (15 m), ten 1.5 V batteries (RD3057-13/23), external DC power source connector (RD3057-12/13/22/23), power cord and operator's manual.

OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners. Ask your sales representative for full details when placing an order.

**Ordering Example:** RD3057-21, 2-pen portable recorder, RD3057-RP, roll chart paper, RD3057-01 and RD3057-02, red and green pens.

OCW-3, OMEGACARE<sup>SM</sup> extends standard 2-year warranty to a total of 5 years.

## accessories still available

### Accessories

Model No.	Description
RD3057-RP	10 rolls chart paper, 20 m (65')
RD3057-ZFP	10 Z-fold charts, 15 m (50')
RD3057-01	9 red pens, channel-1
RD3057-02	9 green pens, channel-2