

# High-Performance DISCONTINUED PRODUCT X-Y Recorders

RD3025-1  
Starts at  
**\$3245**



RD3023-2, \$6468,  
2-pen recorder, A-3 format,  
shown smaller than actual size.

RD3025-2/TIME, \$4649,  
2-pen recorder, A-4 format,  
shown smaller than actual size.



## DISCONTINUED PRODUCT

- ✓ **Fast Pen Response:** Slewing Speed of 2200 mm/s (86.6 in/s) in the Y-Axis, 2000 mm/s (78.7 in/s) in the X-Axis
- ✓ **High Acceleration:** 7.6 G in the Y-Axis and 5.1 G in the X-Axis (1-Pen Model)
- ✓ **±0.2% Accuracy (RD3023/24), ±0.25% Accuracy (RD3025)**
- ✓ **50  $\mu$ V/cm Max Sensitivity**
- ✓ **Electrostatic Paper and Backlit LED for Accurate Paper Alignment**
- ✓ **10 Scales of Calibrated Offset (Standard), 16 Speeds of Time Base (Standard on RD3023/24, Optional for RD3025)**
- ✓ **Remote Control of Sweep Start and Reset, and Pen Lift by External Contact or TTL Level Signals**

**1 and 2-Pen  
Models Available!**



RD3023-2, \$6468, 2-pen recorder, A-3 format, shown smaller than actual size.

The RD3023/3024/3025 Series recorders are fast, high-performance X-Y recorders, available in either 1- or 2-pen models. The RD3023/3024 are size A3 X-Y recorders, and the RD3025 is an A4 X-Y recorder. These recorders offer high slewing speed and high acceleration. The slewing speed and acceleration of the 1-pen model in the Y-axis is 2200 mm/s (86.6 in/sec) 7.6 G, and 2000 mm/s (78.7 in/sec) 5.1 G in the X-axis (2-pen model is 7.0 G in the Y-axis and 4.5 G in the X-axis).

Excellent phase and frequency characteristics ensure precision recording of fast-changing signals. For optimal convenience, these recorders come with easy-to-use, felt-tip pen cartridges, a 10-position offset input dial, 16 speeds of internal time base (standard on RD3023/3024, optional on RD3025), remote control of sweep start and reset, and pen lift by external contact or TTL level signals.

The arrangement of controls on the front panel is neat and logical, including convenient servo ON/OFF polarity reversal switches, and preamplifiers separated from the input terminals for safety input wiring. The noise performance of these recorders is excellent, eliminating the low-pass filter switch.

**DISCONTINUED PRODUCT**



## Specifications

**Drive System:** Automatic null-balancing DC servo mechanism

**Writing Area (Effective Recording Span):**

**RD3023/24:** X-axis 381 mm (15"),  
Y-axis 254 mm (10")

**RD3025:** X-axis 254 mm (10"),  
Y-axis 180 mm (7 $\frac{1}{8}$ ")

**Number of Pens:**

**RD3023-1/24-1/25-1:** 1-pen

**RD3023-2/24-2/25-2:** 2-pen

**Writing System:** Ink writing using disposable felt-tip pen cartridges

**Ink Colors:**

Red for 1st pen, green for 2nd pen

**Basic Accuracy:**  $\pm 0.2\%$  (RD3023/24);  
 $\pm 0.25\%$  (RD3025) of effective recording span (including non-linearity and deadband) at  $23 \pm 5^\circ\text{C}$  ( $73 \pm 9^\circ\text{F}$ ) on 50 mV/cm range

**Error Between Ranges:**

Less than  $\pm 0.1\%$  of pen deflection

**Deadband:** Less than 0.1% of effective recording span

**Slewing Speed (Nominal):** X-axis 2000 mm/s, Y-axis 2200 mm/s

**Acceleration (Nominal):**

**One-pen models:** X-axis 5.1 G,  
Y-axis 7.6 G

**Two-pen models:** X-axis 4.5 G,  
Y-axis 7.0 G

**Pen Lift:** All pens simultaneously lifted or lowered by PEN UP-DOWN switch on front panel, or by an external contact or TTL level signal

**Chart Paper:**

**RD3023/24:** A3-size graph paper

**RD3025:** A4-size graph paper

**Paper Hold-Down:**

Electrostatic paper hold-down with LED spot paper alignment

**Type of Input:** Front (RD3023/25) or rear (RD3024) input, floating, guarded and shielded (polarity reversal switch on front panel)

**Input Ranges:** 50  $\mu\text{V}/\text{cm}$ ; 0.1, 0.25, 0.5, 1, 2.5, 5, 10, 25, 50 mV/cm; 0.1, 0.25, 0.5, 1, 2.5, 5 V/cm (16 calibrated ranges plus continuous vernier between ranges)

**Zero Set:** Adjustable to any point on the writing area

**Input Impedance:** Approx 1 M $\Omega$  constant on all input ranges

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

**Zero Stability (Nominal):**  $\pm(1.5 \mu\text{V} \pm 0.02\%$  of effective recording span) $^\circ\text{C}$

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

50 Vdc on 50  $\mu\text{V}/\text{cm}$  to 50 mV/cm ranges, or 250 Vdc on 0.1 V/cm to 5 V/cm ranges

**Maximum Common**

**Mode Voltage:**

**RD3023/25:** 250 Vrms AC,  
or 350 Vdc

**RD3024:** 130 Vrms AC,  
or 180 Vdc

**Common Mode Rejection:**

More than 140 dB at power line frequency or at DC

**Normal Mode Rejection:**

More than 50 dB

**Offset Input:** Selectable to  $\pm 20$ , 40, 60, 80, 100 cm ( $\pm 7.87$ , 15.7, 23.6, 31.5, 39.4 in) (10 ranges) or 0 (OFF) by front-panel dial

**Accuracy of Offset Input:**

$\pm 0.2\%$  of offset setting range

**Temperature Drift of Offset Input:**

$\pm 100 \text{ ppm}/^\circ\text{C}$

**Time Base (Standard for RD3023/24, Optional for RD3025):** Sweep rates 0.25, 0.5, 1, 2.5, 5,

10, 25, 50 s/cm and min/cm

(1 cm = 0.3937 in) (accuracy  $\pm 0.5\%$ ); pens automatically lifted after sweep or reset; trial sweep available with pens lifted

**Operating Position:**

Horizontal, vertical or inclined

**Operating Temperature Range:**

5 to  $40^\circ\text{C}$  (41 to  $104^\circ\text{F}$ )

**Humidity Range:**

40 to 80% relative humidity

**Dielectric Strength:**

1500 Vac (RD3023/25) or 1000 Vac (RD3024) for 1 minute between power line and case, and between input-guard terminals and case

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

**Power Requirements:**

100, 115, 200 or 230 Vac (must be specified), for both 50 and 60 Hz

**Power Consumption (Approx):**

**RD3023/24-1:** 210 VA max,  
70 VA min

**RD3023/24-2:** 250 VA max,  
80 VA min

**RD3025-1:** 180 VA max,  
40 VA min

**RD3025-2:** 210 VA max,  
50 VA min

**Dimensions:**

**RD3023/24:** 441 x 482 x 136 mm  
(17.4 x 19 x 5.4")

**RD3025:** 299 x 413 x 152 mm  
(11 $\frac{3}{4}$  x 16 $\frac{1}{4}$  x 6")

**Weight:**

**RD3023/24-1:** 17 kg (37.45 lb)

**RD3023/24-2:** 18 kg (39.6 lb)

**RD3025-1:** 13 kg (28.6 lb)

**RD3025-2:** 14 kg (30.8 lb)



Model, SXXXX, shown smaller than actual size.

**DISCONTINUED PRODUCT**



**DISCONTINUED PRODUCT**

RD3025-2/TIME, \$4649, shown smaller than actual size.



RD3025 models use A4-size paper and feature front inputs.

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.



**Options and Accessories**

Model No.	Price	Description
/TIME*	\$231	16 speeds of internal time base for RD3025
RD3025-RP	25	Paper, A4 size**, 100 sheets
RD3020-RP	31	Paper, A3 size**, 100 sheets
RD3020-01	12	3 red pens (for channel-1)
RD3020-02	12	3 green pens (for channel-2)
PE-1402	79	Reference Book: Instrumentation and Control System Documentation

\* When ordering, add "/TIME" to model number of RD3025 recorder.  
 \*\* Standard European paper sizes that approximately correspond to 8½ x 11" and 11 x 17", respectively.  
**Example: RD3025-2/TIME, \$4418 + 231 = \$4649.**  
**Ordering Example: RD3024-2, 2-pen, A3 X-Y recorder, rear input, comes standard with 10 scales of calibrated offset, 16 speeds of time base, remote control of sweep start and reset, and pen lift by external contact or TTL level signals, RD3020-01 and RD3020-02, extra pens, and RD3020-RP, A3-size paper, \$6468 + 12 + 12 + 31 = \$6523.**  
**OCW-3, OMEGACARE<sup>SM</sup> extends standard 2-year warranty to a total of 5 years (\$350), \$6523 + 350 = \$6873.**

**Remember to Order Extra Pens and Paper!**

**DISCONTINUED PRODUCT**

**MOST POPULAR MODELS HIGHLIGHTED!**

To Order (Specify Model Number)		
Model No.	Price	Description
RD3023-1	\$4458	1-pen, A3 X-Y recorder, front input
RD3023-2	6468	2-pen, A3 X-Y recorder, front input
RD3024-1	4458	1-pen, A3 X-Y recorder, rear input
RD3024-2	6468	2-pen, A3 X-Y recorder, rear input
RD3025-1	3245	1-pen, A4 X-Y recorder, front input
RD3025-2	4418	2-pen, A4 X-Y recorder, front input

Comes complete with 50 sheets of A3 (RD3023/24) or A4 (RD3025) size chart paper, 3 pens for each channel (red for channel-1, green for channel-2), 4 rack mounting screws, 2 fuses, 1 power cord, 24-contact connector plug for remote control and operator's manual.







#### UNITED STATES

[www.omega.com](http://www.omega.com)  
1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)  
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1-800-TC-OMEGA

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