

3025 X-Y Recorder



3025 (Two-pen model)
483 × 299 × 152 mm 14.0 kg
(19 × 11-3/4 × 6" 30.9 lbs)

The 3025 is a fast, high-performance A4 X-Y recorder, available as a one- or two-pen model. Both models offer high slewing speed and high acceleration. The slewing speed and acceleration of the one-pen model in the Y axis is 2,200 mm/s 7.6 G, and 2,000 mm/s 5.1 G in the X axis.

FEATURES

- **Fast Pen Response — Slewing Speed of 2,200 mm/s in the Y axis, 2,000 mm/s in the X axis**
The use of high-torque DC servomotors and new pen mechanism results in high slewing speed and excellent phase characteristics.
- **High Acceleration — 7.6 G in the Y axis and 5.1 G in the X axis (One-Pen Model)**
By combining high slewing speed and high acceleration, the 3025 can follow fast-changing input signals.
- **High-Quality Traces by Using Disposable, Quick-Change Felt-Tip Pen Cartridges, and by a Lightweight Pen Mechanism**
- **Excellent Frequency Characteristics**
- **±0.25% Accuracy, 50 μV/cm MAX. Sensitivity**
- **Quick, Convenient Operation**
Major design features include the addition of convenient servo ON/OFF and polarity reversal switches, and pre-amplifiers separated from the input terminals for safety input wiring.
- **Trouble-Free Electrostatic Paper Hold-Down with Back-Lighted Led for Accurate Paper Alignment**
- **10 Scales of Calibrated Offset (Standard), 16 Speeds of Time Base (Optional)**
- **Versatile Remote Controls**
As a standard feature, the 3025 provides remote controls of sweep start and reset, and pen lift by external contact or TTL-level signals.

SPECIFICATIONS

- Drive System:** Automatic null-balancing DC servo mechanism
- Writing Area (Effective Recording Span):** X-axis 254 mm (10"), Y-axis 180 mm (7-1/8")
- Number of Pens:** 1 (302513), or 2 (302523)
- Writing System:** Ink writing using disposable felt-tip pen cartridges
- Ink Colors:** Red for Y₁ 1st pen, green for Y₂ 2nd pen
- Basic Accuracy:** ±0.25% of effective recording span (including non-linearity and dead band) at 23 ±5°C on 50 mV/cm range
- Error between Ranges:** Less than ±0.1% of pen deflection
- Deadband:** Less than 0.1% of effective recording span
- Slewing Speed (Nominal):** X-axis 2,000 mm/s, Y-axis 2,200 mm/s
- Acceleration (Nominal):** One-pen model ... X-axis 5.1 G, Y-axis 7.6 G, two-pen model ... X-axis 4.5 G, Y-axis 7.0 G
- Pen Lift:** All pens simultaneously lifted or lowered by PEN UP-DOWN switch on the front panel, or by an external contact or TTL-level signal
- Chart Paper:** A4 size graph paper, or roll chart (optional Chart Stock and Chart Drive Unit required)
- Paper Holddown:** Electrostatic paper holddown with LED spot paper alignment
- Type of Input:** Floating, guarded and shielded (polarity reversal switch on the front panel)
- Input Ranges:** 50 μV/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 MΩ constant on all input ranges
- Maximum Source Resistance:** 10 kΩ
- Zero Stability (Nominal):** ±(1.5 μV + 0.02% of effective recording span)/°C
- Maximum Allowable Input Voltage (Continuous):** 50 V DC on 50 μV/cm to 50 mV/cm ranges, or 250 V DC on 0.1 V/cm to 5 V/cm ranges
- Maximum Common Mode Voltage:** 250 Vrms AC, or 350 V DC
- 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 ±20, ±40, ±60, ±80, ±100 cm (10 ranges) or 0 (OFF) by front panel dial
- Time Base (Optional):** Sweep rates ... 0.25, 0.5, 1, 2.5, 5, 10, 25, 50 s/cm & min/cm (accuracy: ±0.5%), Pens automatically lifted after sweep or reset. Trial sweep available with pens lifted
- Operating Position:** Horizontal, vertical or inclined
- Power Requirements:** 100, 115, 200 or 230 V AC (must be specified), for both 50 and 60 Hz
- Weight:** One-pen model ... approx. 13 kg (28.7 lbs), two-pen model ... approx. 14 kg (30.9 lbs)

- **Remote Controls by External Contact or TTL-Level Signals (Standard)**

Function	Description
Remote pen lift control	All pens are simultaneously lifted or lowered.
Remote time base control	Remote control of sweep start (SWEEP TRIAL or SWEEP RECORD) and reset (RESET).
Remote chart drive control	Remote control of chart drive START/STOP and chart speed (optional chart drive unit is required).