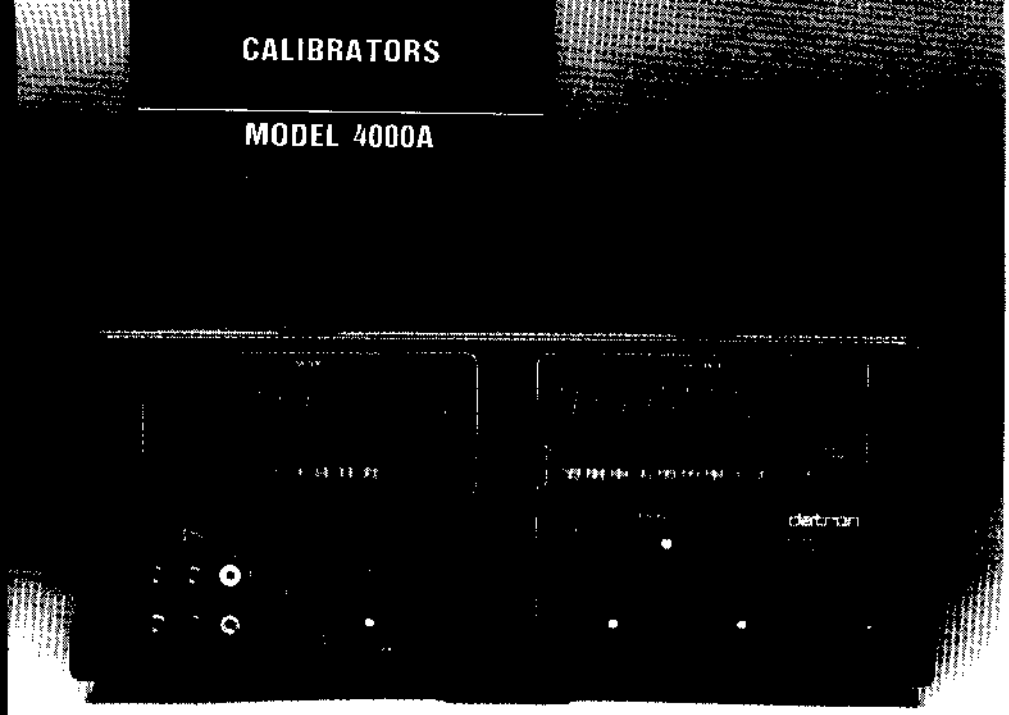
MODEL 4000A



Autocal DC Standard

- **DCV, DCI and Ω Functions**
- **IEEE-488, Autocal, 4101B Compatible**
- **Calibrates up to 8½ Digit DMMs**

The 4000 Autocal Standard is a DC voltage, DC current and resistance calibrator specially designed for transportable accuracy, speed of operation and ease of use, both in the standards laboratory and in the production environment. 4000A includes all of the 4000's features, but extends the performance still further, achieving levels of stability and accuracy in hostile environments previously only available in temperature controlled laboratories.

In their most basic format, these calibrators offer very high accuracy DC voltage outputs up to 1100V, controllable from the front panel and via the integral IEEE-488 interface. Addition of the combined DC current and resistance option extends the functionality of these instruments still further, offering DC current to 2A and Resistances between 1Ω and 10MΩ.

Ease of Use
The 4000/A calibrators are "user friendly." Output setting, for example, is fast and easy using rapid rolling up/down keys. Two extra dedicated keys are provided for fast selection of full range and zero. The selected output is shown at all times on a 7½ digit high brightness display, while the deviation controls, "Error" and "Offset" allow the output of the calibrator to differ from that indicated on the main output display. This is particularly useful when checking the linearity of measuring instruments.

SPECIFICATIONS

DC Voltage (4000A)
Ranges: 100μV to 1000V in decades.
Full Scale: 2X range, except 1000V range, where max output=1100V.
Resolution: 1 digit in 19,999,999 or 10nV, whichever is greater.
Total Uncertainty: 90 day, 23° ±1° C, (±ppm Output ±μV).
100μV to 100mV Ranges: 8±1.4.
1V Range: 5±0.8.
10V Range: 3.5±5.
100V Range: 5±100.
1000V Range: 6±500.

DC Voltage (4000): As 4000A, except:
Total Uncertainty: 90 day, 23° ±1°C, (±ppm Output ±μV).
100μV to 100mV Ranges: 10±1.5.
1V Range: 6±2.
10V Range: 4.5±10.
100V Range: 6±200.
1000V Range: 8±3mV.

DC Current (4000 and 4000A, Op 20)
Ranges: 100μA to 1A in decades.
Full Scale: 2X range.
Resolution: 1 digit in 1,999,999 or 100pA, whichever is greater.
Total Uncertainty: 90 day, 23° ±1°C, (±ppm Output ±nA).
100μA Range: 29±1.
1mA Range: 29±10.
10mA Range: 29±100.
100mA Range: 29±1μA.
1A Range: 71±20μA.

Resistance (4000 and 4000A, Op 20)
Ranges: 1Ω to 10MΩ in decades. (Ranges are nominal, actual calibrated values are displayed.)
Display Resolution: 1 digit in 19,999,999.
Total Uncertainty: 90 day, 23°±1°C (±ppm Output).
1Ω: ±30.
10Ω: ±20.
100Ω & 1kΩ: ±8.
10kΩ: ±7.
100kΩ: ±13.
1MΩ: ±27.
10MΩ: ±42.

GENERAL
Calibration: Autocal from front panel or via the IEEE-488 interface.
Environmental:
Operating Temp: 0° to +50°C.
Storage Temp: −40° to +70°C.
Dimensions: 178 mm (7 in.) high; 455 mm (17.9 in.) wide; 563 mm (22.2 in.) deep.
Weight: 30 kg (66 lb.) net.
Power: 100/120/220/240 Vac ±10%, 50 or 60 Hz. Consumption <300 VA.

OPTIONS
20: DCI and Ω Functions.
42: Alternative Rear Output.
80: 115V 60 Hz Line Operation.
81: 115V 50 Hz Line Operation.
90: Rack Mount Kit.

FACTORY/FOB
Indianapolis, IN
Norwich, England

PRICE

Model 4000	**$8,995**
Model 4000A	**$10,925**
Option 20	**$6,995**
Option 42	**$200**
Option 80	**NC**
Option 81	**NC**
Option 90	**$200**