

Precision DC Calibrator 2553A

The 2553A is a novel calibrator combining Yokogawa's high-precision DC voltage and current generation technologies. This calibrator outputs DC voltage in a range of ± 32 V and DC current in a range of ± 120 mA with high accuracy and stability. In addition to voltmeters and ammeters, the 2553A can calibrate thermometers and temperature controllers using a thermocouple or resistance temperature detector (RTD). By using its setting dials provided for each digit of the output value, users can intuitively change it. As a successor of the 2553 model, this model offers greatly improved performance.



MAJOR FEATURES

- **Calibrating versatile temperature measuring instruments**
The 2553A can calibrate thermometers using a thermocouple, of which supported types include popular J, T, E, and K types as well as all ten types regulated in the International Electrotechnical Commission (IEC). The 2553A can also calibrate thermometers using Pt100 widely used as an RTD. In addition to temperature, the 2553A can have a set resistance as its output value, and so both temperature and resistance value can be calibrated.
- **Highly accurate and stable output**
In the case of 1 V range, the DC voltage accuracy in one year is ± 75 ppm, and in the case of 1 mA range, it is ± 120 ppm. Its stability in the case of 1 V range is ± 15 ppm in one hour, and the noise is 2 μ Vrms, securing reliable output.
- **Intuitive operation**
Switches and setting dials are provided for each function and digit of the output value enable intuitive operation, allowing easy operation. Traditional 7-segment LEDs offer clear visibility.
- **Communication compatibility**
Software programs developed for communication with the 2553 can be used as it is. Users can upgrade the 2553 to the 2553A without changing their communication programs by setting 2553A to 2553 compatible mode.

MAJOR SPECIFICATIONS

Voltage generation range:	10 mV, 100 mV, 1 V, 10 V, 30 V
Range:	± 32 V
Accuracy (1 year):	± 75 ppm (1 V range)
Stability:	± 15 ppm/h (1 V range)
Current generation range:	1 mA, 10 mA, 30 mA, 100 mA
Range:	± 120 mA
Accuracy (1 year):	± 120 ppm (1 mA range)
Stability:	± 20 ppm/h (1 mA range)
Thermocouple type:	R, S, B, J, T, E, K, N, C, A
Range:	-270 to 1300 °C (type K)
Accuracy (1 year):	± 0.11 °C (type K, at 0 °C)
Reference junction compensation:	Internal, External, or by value setting
RTD type:	Pt100
Range:	-200 to 850 °C
Accuracy (1 year):	± 0.15 °C
Resistance generation range:	400 Ω
Range:	18 to 400 Ω
Accuracy (1 year):	$\pm (75$ ppm of setting + 0.015 $\Omega)$
User-defined function:	Thermocouple and RTD
Dimensions:	213 (W) \times 132 (H) \times 300 (D) mm
Weight:	Approx. 3 kg

APPLICATIONS AND USAGE

- **Calibration, development and inspection of temperature measuring instruments**
Owing to its high-precision output, the 2553A can calibrate thermometers and temperature controllers that were difficult for the previous 2553 model to calibrate due to its insufficient accuracy.
- **Calibration and testing sensor transformers**
The 2553A is suitable for calibrating transducers and transmitters for pressure, flow rate and temperature, and for calibrating transducer components in analytical instruments such as pH meters, oxidation-reduction potentiometers (ORP), conductivity meters and dissolved oxygen analyzers. With its high-accuracy voltage output, the 2553A can also be used in development and inspection of transducers that require high accuracy.

Contact us:

To Yokogawa Japan:

Yokogawa Meters & Instruments Corporation: in Japan

URL: <http://tmi.yokogawa.com/>

E-mail: tm@cs.jp.yokogawa.com

For worldwide locations, please see the back cover.