

AM50D

DC AMPLIFIER



- 7-segment LED display with 8mm character height
- High-accuracy DC amplifier with high-pass and low-pass filter
- High gain (Max. gain: 10000 times) at DC to 20kHz band
- Equipped with easy-to-use strain gage simulator function for calibration
- Zero drift : within $\pm 0.3\mu\text{V}/^\circ\text{C}$
- Auto zero function

Specifications

INPUT RESISTANCE RANGE	60 to 2k
EXCITATION VOLTAGE	DC2.5, 5, 10, 15V $\pm 0.3\%$ Output current: within 50mA
ZERO ADJUSTMENT RANGE	$\pm 1.5\text{mV/V}$ 10 turn potentiometer dial knob
GAIN ADJUSTMENT RANGE	Coarse adjustment: 0, 1/50, 1/20, 1/10, 1/5, 1/2, 1/1 Error $\pm 0.2\%$ Fine adjustment: 1 to 1/6 of each range variable
INPUT VOLTAGE RANGE	0 to $\pm 100\text{mV}$
INPUT RESISTANCE	10M or more (balanced differential direct-connect type)
VOLTAGE AMPLIFICATION	Max. 10000 times
NON-LINEARITY	Within $\pm 0.01\%/FS$
ZERO DRIFT (at gain max.)	Within $\pm 0.3\mu\text{V}/^\circ\text{C}$ RTI (after a lapse of 30 min. after power ON)
GAIN DRIFT	Within $0.01\%/^\circ\text{C}$ (after a lapse of 30 min. after power ON)
NOISE (at gain max.)	Within $20\mu\text{Vp-p}$ RTI (full band) Within $6\mu\text{Vp-p}$ RTI (1kHz band) Within $0.8\mu\text{Vp-p}$ RTI (10Hz band)
OUTPUT SIGNAL	Voltage output: 0 to $\pm 10\text{V}$ $\pm 5\text{mA}$ Output resistance: 0.2 (BNC connector output (Two lines)) Voltage output: 0 to $\pm 10\text{V}$ $\pm 30\text{mA}$ Output resistance: 300 (External I/O connector)
RESPONSE CHARACTERISTIC	DC to Approx. 20kHz/−3dB
HIGH-PASS FILTER	0.5Hz (−3dB) $\pm 15\%$ −6dB/oct. (AC mode)
LOW-PASS FILTER	Bessel type (−12dB/oct.) 1, 10, 30, 100, 300, 1kHz (−3dB) $\pm 15\%$ and PASS
CALIBRATION VALUE	Strain calibration: ± 1 to 9999×10^{-6} strain (superimposed on input signal) Setting method: 4-digits digital switch Accuracy: $\pm 0.2\% \pm 0.5 \times 10^{-6}$ strain
EXTERNAL CONTROL	Auto zero function Auto zero range: $\pm 1\text{V}$ Resolution: 12bit ($\pm 1/2000$) Auto zero command ON and OFF, panel face switch and external signal (negative pulse with a pulse width of 100ms or more) CAL command CAL+ and CAL−, panel face switch and external signal
VOLTAGE MONITOR	Display: Character height 8mm numerical display, 7 segment red LED Display value: −19999 to 19999 sign: minus sign on most significant digit Unit: V fixed Minimum scale value: 1, 2, 5, 10 (Rounding off)
POWER SUPPLY VOLTAGE	AC100V $\pm 10\%$ 50/60Hz
POWER CONSUMPTION	Approx. 10VA
OPERATING CONDITIONS	Temperature Operation temperature range: 0 to $+40^\circ\text{C}$ Storage temperature range: -30 to $+80^\circ\text{C}$ Humidity 85%RH or less (non-condensing)
EXTERNAL DIMENSIONS	49.5(W) \times 138(H) \times 310(D) mm (not including protrusions)
WEIGHT	Approx. 1.6kg
ATTACHMENTS	AC input cord 1 Spare fuse (0.5A) 1 CA8 (BNC-BNC-alligator clip cable 1.5m) ... 1 Operation manual 1
OPTIONAL ACCESSORIES	CA3Y31: Cable with PRC connector at one end (6 wire) 3m CA451: Cable with PRC connector at both end (6 wire) 5m CA7: Coaxial cable with BNC 1.5m CA8: BNC-alligator clip cable 1.5m

External dimension

