

Dynamic strain amplifier DSA - 631

Discontinued Products

2023/03/22

Alternative

A&D Company  
Limited Industrial Measuring Instruments/Signal Conditioners/AC Strain Amplifier AS3000 Series/Strain amplifier AC bridge method  
general-purpose  
low bandwidth type AS3603

Features



- Equipped the wire length correcting function and open circuit check function.
- High sensitivity and high gain
- Excellent visibility and operativeness
- Two power supply types

Specification

Specification name	Specification contents
Measuring point	1 point/1unit
Applicable gage resistance	60 Ω ~ 1kΩ
Gage factor	2
Bridge power supply	0.5 VACrms, 2 VACrms, 5 kHz sine wave, Sync input/output signal 2.5 VACrms

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Balancing adjustable range	Deviation of resistive value :Approx. $\pm 2\%$ ( $\pm 10\,000\,\mu\Omega$ ) Capacitive imbalance : Approx. $2\,000\,\text{pF}$ Balancing adjusting Accuracy $\pm 0.4\,\mu\Omega$ (RANGE=200, without FINE, BV=2 V)
Maximum input range	$\pm 200\,000\,\mu\Omega$ (RANGE=20k, FINE= $\times 2.5$ , BV=0.5 V)
Sensitivity	$\pm 10\,\text{V}$ within $\pm 200\,\mu\Omega$
Shift of measuring range	200, 500, 1k, 2k, 5k, 10k, 20k( $\mu\Omega$ , $\times 2/\text{BV}$ in value), OFF Fine adjustment Continuously changeable in FINE ~ RANGE 2 steps changing amount can be selected.
Non-linearity	$\pm 0.01\%$ F.S.
Standard equivalent strain(CAL)	Set by digi-switch : $\pm 1$ to 9 999 $\mu\Omega$ Accuracy $\pm 0.5\%$ rdg + $0.5\,\mu\Omega$
Frequency response range	DC to 2 kHz $\pm 10\%$
Hi-pass filter	0.5 Hz : 2-pole butterworth type (Filter descent response : -12 dB/oct)
Low-pass filter	10 Hz, 30 Hz, 100 Hz, 300Hz, 500 Hz : 4-pole butterworth type (Filter descent response : -24 dB/oct)
Temperature efficient	Zero drift : Within $\pm 0.1\,\mu\Omega/^\circ\text{C}$ , Sensitivity : Within $\pm 0.05\%$ F.S./ $^\circ\text{C}$
Efficient due to time	Zero drift : Within $\pm 0.5\,\mu\Omega/24\text{h}$ , Sensitivity : Within $\pm 0.2\%$ F.S./24 h
Noise	$2.0 \times 10^{-6}$ in strain p-p RTI (W/B, RANGE=200, Without FINE, BV=2 V, 120 $\Omega$ in bridge) $0.6 \times 10^{-6}$ in strain p-p RTI (DC ~ 100 Hz, RANGE=200, Without FINE, BV=2 V, 120 $\Omega$ in bridge)
Output	OUTPUT1 $\pm 10\,\text{V}$ , $\pm 5\,\text{mA}$ , Load resistance 2 k $\Omega$ OUTPUT2 $\pm 10\,\text{V}$ , $\pm 10\,\text{mA}$ , Load resistance 1 k $\Omega$ Output impedance 0.5 $\Omega$ or less, Capacitive load Operable up to 0.1 $\mu\text{F}$
Output adjustment	OUTPUT2 ADJ (Can be independently varied continuously from 1 to 1/10)
Operating temp./humidity range	Temp. -10 $^\circ\text{C}$ to 50 $^\circ\text{C}$ , Humidity 20 % to 85 %RH or less(Non condensing)
Power supply voltage, Power consumption	AC85 V to AC132 V/AC180V to AC264 V (Internal switch must be changed) 9 VA or less DC10 V to DC30 V, 6 VA or less
Outline dimensions(WxHxD)	49.5 mm x 143 mm x 253mm (excludes protruding parts)
Weight	Approx. 1.4 kg

## Options

Current output DSA-631-07

Bridge Box Unit FA410-072