

## High S/N is ensured by the strain DC amplifiers Working time is reduced thanks to easy setting

### Features

**High Sensitivity**  
(up to 10000 times)

**Fast Response**  
(DC to 500kHz)

**Long-distance Testing**  
(up to 2km)

**Excellent Nonlinearity**  
(within  $\pm 0.01\%$ FS)

**CE Marking Compliance**  
(CDV/CDA-900A-DC only)



(CDV-900A-DC and CDA-900A-DC are CE marking compliance only.)

Model	CDV-900A	CDV-900A-DC	CDA-900A	CDA-900A-DC
Bridge excitation mode	Constant voltage		Constant current	
Bridge excitation *1	1, 2, 5 and 10V		120Ω: 8.3 and 16.7mA 350Ω: 5.7, 14.3 and 28.6mA	
Applicable bridge resistance	60 to 1000 Ω		120Ω and 350Ω	
User's function	Bridge resistance compensation		Bridge resistance compensation	
Remote sensing mode	Auto (on/off automatically) Manual (on constantly)		N/A	
Extension cable length	Up to 2km *2 (by using a sensing cable)		Up to 2km *3	
CE Marking	N/A	Compliant	N/A	Compliant

Note: \*1: Setting by DIP switch 1 to 4 on rear panel

\*2: By a 6-conductor (0.5mm<sup>2</sup>) shielded cable with remote sensing

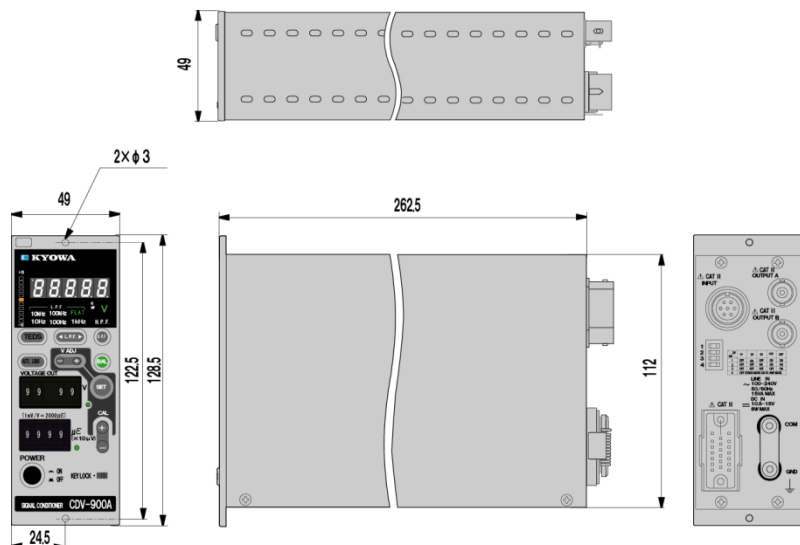
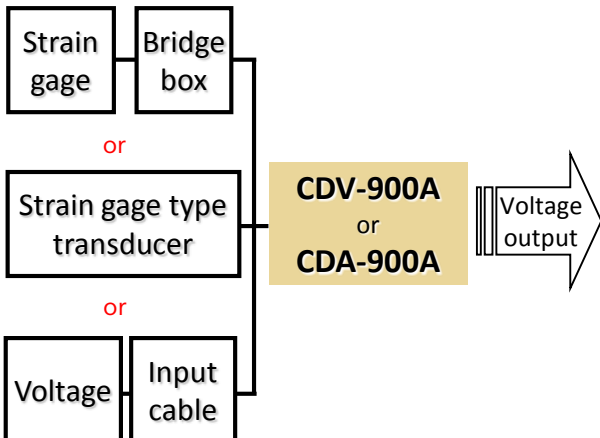
\*3: By a 4-conductor (0.5mm<sup>2</sup>) shielded cable

### Block diagram

### Dimensions

(CDV-900A and CDA-900A)

(CDV-900A-DC and CDA-900A-DC are the same dimensions)



Note: Output noise will increase in case of combining with a torque transducer.

# Specifications

Applicable sensors	Strain gage, strain gage transducer and voltage
No. of input channels	1
Gage factor	2.00 fixed
Balance adjustment (Auto BAL)	Accuracy: $\pm 1\mu\text{m/m}$ (at sensitivity of 10V/1000 $\mu\text{m/m}$ ) Storage: saved in nonvolatile memory
Nonlinearity	Within $\pm 0.01\%F_S$
Input impedance	10M $\Omega$ +10M $\Omega$ or more
Output impedance	Approx. 2 $\Omega$
Calibration (CAL)	Equivalent strain: $\pm(1 \text{ to } 9999\mu\text{m/m})$ DC Voltage: $\pm(10 \text{ to } 99990\mu\text{V})$ Setting SW: 4-digit CAL SW Accuracy: Within $\pm(0.2\%+0.5\mu\text{m/m})$ Within $\pm(0.1\%+5.0\mu\text{V RTI})$
Sensitivity SW	Setting SW: both CAL SW and VOLTAGE OUT SW CAL SW: 100 to 9999 $\mu\text{m/m}(1\mu\text{m/m step})$ 1000 to 99990 $\mu\text{V}(10\mu\text{V step})$ VOLTAGE OUT SW: 1.00 to 10.00V(0.01V step) Accuracy: Within $\pm(0.5\%+5\text{mV})$ Range: 200 to $\times 10000$
Fine sensitivity	Adjustment range: 1 to 1/2.5
Frequency response	Range: DC to 500kHz(Amplitude deviation: +1, -3dB)
Low pass filter(LPF)	Transfer characteristic: 4 <sup>th</sup> order Butterworth Cutoff frequency: 10, 100, 1k, 10k, 100kHz and FLAT Amplitude ratio: $-3\pm 1\text{dB}$ Attenuation: $-24\pm 1\text{dB/oct.}$
High pass filter(HPF)	Cutoff frequency: 0.2Hz and OFF
Output	OUTPUT A: $\pm 10\text{V}$ (Load resistance: 5k $\Omega$ or more) OUTPUT B: $\pm 10\text{V}$ (Load resistance: 5k $\Omega$ or more)

Noise (At BV:2V, bridge resistance:120 $\Omega$ , sensitivity: 10V/1000 $\mu\text{m/m}$ )						
LPF	FLAT	100kHz	10kHz	1kHz	100Hz	10Hz
Noise( $\mu\text{Vp-p RTI}$ )	40 or less	16 or less	6 or less	4 or less	3 or less	2 or less
Safe input voltage	$\pm 15\text{V}$					
Safe common mode voltage	$\pm 10\text{V}$					
CMRR	100dB or more					
Stability(At sensitivity: 10V/1000 $\mu\text{m/m}$ )						
	Temperature	Time	Power supply			
Zero	$\pm 1\mu\text{m/m}/^\circ\text{C}$	$\pm 5\mu\text{m/m}/24\text{h}$	$\pm 0.05\%F_S$ /(power fluctuation: $\pm 10\%$ )			
Sensitivity	$\pm 0.01\%/^\circ\text{C}$	$\pm 0.01\%/24\text{h}$	$\pm 0.05\%$ /(power fluctuation: $\pm 10\%$ )			
Voltage withstand	1000VAC between AC line and chassis for 1 minute. (CDV/CDA-900A only)					
Display	4 1/2 digits 7-segment LED and 11-segment LED bar meter					
Overflow alarm	Flashing display(4 1/2 digits 7-segment LED)					
Check function	Bridge resistance check					
Key-lock function	Only POWER SW and dip SW can be operated					
Remote function	Performs BAL, CAL and key-lock					
TEDS	Read the TEDS information and set the VOLTAGE OUT data as output					
Actual load calibration	Registers VOLTAGE OUT data as output by the actual load applied					
Vibration resistance	5 to 200Hz, with 29.4m/s <sup>2</sup> (3G) in X, Y and Z directions, for 12 cycles, 10 minutes/cycle					
Shock resistance	15G, 11ms or less, in X, Y and Z directions, every 3 cycles					
Temperature	Operating range: -10 to 50 $^\circ\text{C}$					
Humidity	Operating range: 20 to 85%RH(Non-condensing)					
Storage temperature	Range: -30 to 70 $^\circ\text{C}$					
Power supply	100 to 240VAC approx. 8VA(100VAC) 10.5 to 15VDC approx. 4W(12VDC) (CDV-900A-DC and CDA-900A-DC only)					
Dimensions	49(W) $\times$ 128.5(H) $\times$ 262.5(D)mm (excluding protrusions)					
Weight	Approx. 1 kg					
EMC directive	EN61326-1(class A). (CDV/CDA-900A-DC only)					

## Standard Accessories

- AC power cable: P-25(With a conversion adapter CM-39 for CDV/CDA-900A)
- DC power cable: P-69(CDV/CDA-900A-DC only)
- Output cable: U-08 and U-59
- Instruction manual and simplified instruction manual seal

## Optional Accessories

### Housing cases YC-A



Model	YC-3A	YC-4A	YC-6A	YC-8A
No. of channels	3	4	6	8

### Amplifier stand FA-1B



### AC adapter SA-10A-AMP (For CDV/CDA-900A-DC)



### Bridge boxes

#### 1-channel type

DB-120A (for 120 $\Omega$ )  
DB-350A (for 350 $\Omega$ )



DB-120T-8



#### 8-channel type

DB-120C-2 (for 2-wire system)  
DB-120C-3 (for 3-wire system)



DBS-120A-8 (120 $\Omega$ )  
DBS-350A-8 (350 $\Omega$ )  
For quarter bridge system



A cable N-104 is required

### Extension cable N-81 to 85 and N-100

Model	N-81	N-82	N-83	N-84	N-85	N-100
Length	5m	10m	20m	30m	50m	100m



### Input cable U-37 (For voltage measurement)



Move into the future with reliable measurements

**KYOWA**

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JQA-0821  
JQA-EM4824

Specifications are subject to change without notice for improvement.



### Safety precautions

Be sure to observe the safety precautions given in the instruction manual, in order to ensure correct and safe operation.

Manufacturer's Representative