CDV-900A, CDV-900A
Signal Conditioners

INSTRUMENTS TECHNO TEST

Move into the future with reliable measurements
KYOWA

NEW PRODUCT INFORMATION

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

CE TEDS

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

Features

High Sensitivity
(up to 10000 times)

Fast Response
(DC to 500kHz)

Long-distance Testing
(up to 2km)

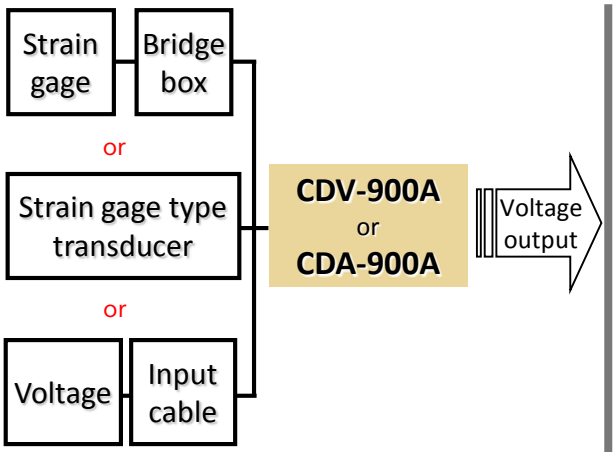
Excellent Nonlinearity
(within ±0.01%FS)

CE Marking Compliance
(CDV/CDA-900A-DC 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 (0.5mm²) shielded cable with remote sensing
*3: By a 4-conductor (0.5mm²) shielded cable

Block diagram

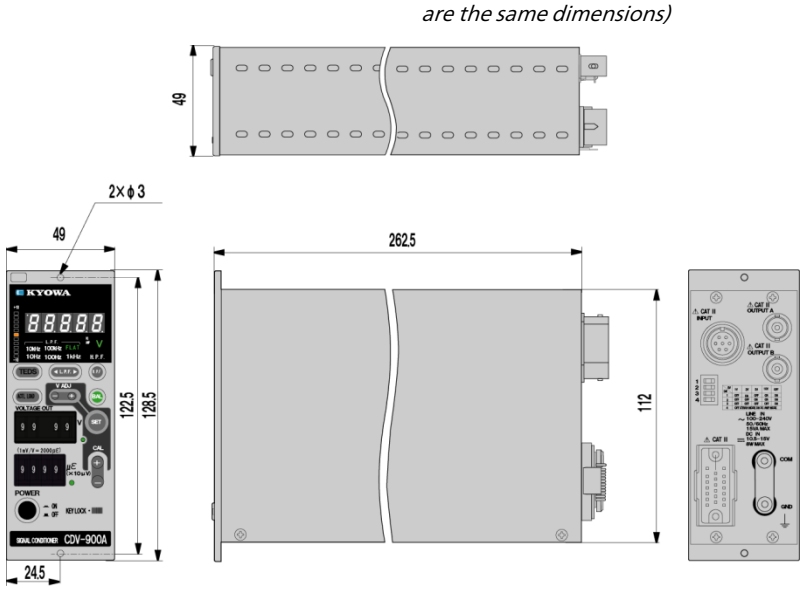


Note: Output noise will increase in case of combining with a torque transducer.

Dimensions

(CDV-900A and CDA-900A)

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



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: ±1μm/m (at sensitivity of 10V/1000μm/m) Storage: saved in nonvolatile memory
Nonlinearity	Within ±0.01%FS
Input impedance	10MΩ+10MΩ or more
Output impedance	Approx. 2Ω
Calibration (CAL)	Equivalent strain: ±(1 to 9999μm/m) DC Voltage: ±(10 to 99990μV) Setting SW: 4-digit CAL SW Accuracy: Within ±(0.2%+0.5μm/m) Within ±(0.1%+5.0μV RTI)
Sensitivity SW	Setting SW: both CAL SW and VOLTAGE OUT SW CAL SW: 100 to 9999μm/m(1μm/m step) 1000 to 99990μV(10μV step) VOLTAGE OUT SW: 1.00 to 10.00V(0.01V step) Accuracy: Within ±(0.5%+5mV) Range: 200 to ×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: 4th order Butterworth Cutoff frequency: 10, 100, 1k, 10k, 100kHz and FLAT Amplitude ratio: -3±1dB Attenuation: -24±1dB/oct.
High pass filter(HPF)	Cutoff frequency: 0.2Hz and OFF
Output	OUTPUT A: ±10V(Load resistance: 5kΩ or more) OUTPUT B: ±10V(Load resistance: 5kΩ or more)

Noise (At BV:2V, bridge resistance:120Ω, sensitivity: 10V/1000μm/m)

LPF	FLAT	100kHz	10kHz	1kHz	100Hz	10Hz
Noise(μVp-p RTI)	40 or less	16 or less	6 or less	4 or less	3 or less	2 or less

Safe input voltage	±15V
Safe common mode voltage	±10V
CMRR	100dB or more

Stability(At sensitivity: 10V/1000μm/m)

	Temperature	Time	Power supply
Zero	±1μm/m/℃	±5μm/m/24h	±0.05FS/(power fluctuation:±10%)
Sensitivity	±0.01%/℃	±0.01%/24h	±0.05/(power fluctuation:±10%)

Voltage withstand	1000VAC between AC line and chassis for 1 minute. (CDV/CDA-900A only)
Display	4 ½ digits 7-segment LED and 11-segment LED bar meter
Overflow alarm	Flashing display(4 ½ 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/s²(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℃
Humidity	Operating range: 20 to 85%RH(Non-condensing)
Storage temperature	Range: -30 to 70℃
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)×128.5(H)×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	8-channel type
DB-120A (for 120Ω) DB-350A (for 350Ω)	DB-120C-2 (for 2-wire system) DB-120C-3 (for 3-wire system)
	
DB-120T-8	DBS-120A-8 (120Ω) DBS-350A-8 (350Ω) 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

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

KYOWA ELECTRONIC INSTRUMENTS CO., LTD.
Overseas Department:
3-5-1, Chofugaoka, Chofu-shi, Tokyo 182-8520, Japan
Phone: +81-42-489-7220 Facsimile: +81-42-488-1122
URL: http: //www.kyowa-ei.com Email: overseas@kyowa-ei.co.jp