EDX Series

Conditioner card is common with EDX-100A

If you choose an all-in-one type, Memory recorder/analyzer

EDX-3000A

High-speed sampling 200kHz/32 channels
Simultaneous data recording for video data

TEDS compatible

EDX-3000A is the advanced stationary type measuring instrument with sophisticated functions and high-speed processing capabilities. Online/offline control is possible, and if equipping with the optional display and keyboard, this instrument can be also used as an all-in-one logger.
Since the software, which has equal operation with a well-received dynamic data recording software (DCS-100A) has been installed, you can not only monitor and record the data during measuring with the versatile graphic window, but also simultaneous data recording of the measured data and video, and the computation processing such as rosette analysis on real time can be performed.

- High-speed sampling at 200kHz/32 channels
- Up to 64 channels
- Simultaneous data recording of video data
- Conditioner card selectable according to purpose
- Outstanding operability
- Enriched real time processing function
- Usuable as an all-in-one logger
- Data recording is possible by only the main body
- Confirm at a glance the status of each channel by the LED lamp
- Remote control of the multiple EDX-3000A online
- Rich external input/output connector (BNC)
- Remote control unit RCU-42A (Optional goods)
- Backup battery built-in
- Time of day synchronous measurement (Option)

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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.

IQNet

JQA ISO 9001 ISO 14001
JQA-0821
JQA-EM4824

Reliability through integration

KYOWA

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Cat. No.909c-U57

Printed in Japan 05/12

KYOWA

UNIVERSAL RECORDER

EDX-100A

Online/offline measurement with high-speed sampling!

CE

www.kyowa-ei.com

Pictures are in image format.

Can select freely according to the application from small-scale measurement to large-scale measurement of up to 256 channels.

Universal Recorder EDX-100A TEDS-compatible

EDX-100A-1H
1slot

EDX-100A-2H
2slots

EDX-100A-4H
4slots

Main features

3 models of 1, 2 and 4 slots

Can select according to application from 1 slot (Maximum 8 channels) to 4 slots (Maximum 32 channels). Synchronous measurement (Maximum 256 channels) of up to 8 units is possible.

High-speed sampling

High-speed sampling of 100kHz (10kHz in recording 16 channels)

Connection with a PC is by LAN or USB.

Multiple channel measurement is operable through the network via LAN interface. Also, it is easily connectable through UBS interface.
However, LAN and USB can not be connected simultaneously.
(In the case of LAN connection, connect via the hub using straight cables.)

Also corresponds to a single measurement

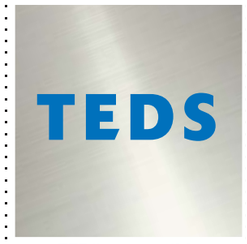
Condition settings and the data collection can be performed by the compact flash memory card, and this system can be used use singly offline.

Rich conditioner cards

The system corresponds to a wide variety of measurements by rich conditioner cards capable of selections according to the purpose of measurement. The conditioner cards can be used together with the memory recorder/analyzer EDX-2000A. →For details, see pages 5.

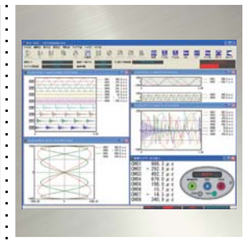
Voice memo also possible

The system can record voice memos together with measured data using the optional remote control unit RCU-41A.



TEDS compatible

The system can read out the information of the TEDS (Transducer Electronic Data Sheet)-mounted sensor, and can be set up easily without any worries for incorrect settings.
∗Corresponding conditioner card:
CDV-40B/-F, DPM-42A/-F,
CCA-40A/-D



Data recording software standard accessories

Standard attachment of dynamic data recording software DCS-100A.
→Pages 4 in details

CONDITIONER CARDS

Selection possible according to the applicationS

Conditioner card is common with EDX series.

★Upon connecting TEDS-mounted sensor to the TEDS (Transducer Electronic Data Sheet)compatible card, sensor data can be read to main body, and can be easily set up without any worries of incorrect setting.
★Anti-aliasing filter is a low-pass filter to prevent the pseudo signal output by limiting the band width of the input signal.

TEDS compatible

Carrier wave type is excellent againt-noise and is most suitable for strain measurement
Equipped with 8th Butterworth type anti-aliasing fitter

Dynamic strain measurement card
DPM-42A-F

★DPM-42A is also available with no anti-aliasing filter.

TEDS compatible

Strain input or voltage input is selectable for every channel.
Equipped with 8th Butterworth type anti-aliasing fitter

Strain/voltage measuring card
CDV-40B-F

★CDV-40B is also available with no anti-aliasing filter.

TEDS compatible

Voltage output type
For piezoelectric type accelerometers
Equipped with 8th Butterworth type anti-aliasing fitter

Charge amp card
CCA-40A-F

★CCA-40A is also available with no anti-aliasing filter.

For temperature measurements suitable for K type, and T type thermocouples

Thermocouple card
CTA-40A

For measurement of pulse frequency of rotation sensars

F/V converter card
CFV-40A

For data frame measurement on Controller Area Network

CAN card
CAN-40A

2 input CAN card for EDX series

CAN card
CAN-41A

*For the detail specifications of the conditioner cards, see Pages 6~7.

EDX-100A battery unit
for momentary power interraption
EDB-41A

Distributed layout for EDX-3000A/100A
ESYN-30A

Main body specifications

Model

Model	Card Slots	Max. Number of Analog Input Channels	Remark
EDX-100A-1	1	8	
EDX-100A-2	2	16	
EDX-100A-4	4	32	
EDX-100A-1H	1	8	With handle
EDX-100A-2H	2	16	
EDX-100A-4H	4	32	

Number of Input Channels Refer to table above.

Analog Input
Provided by optional conditioner cards (common to EDX-2000B).
For the conditioner cards, refer to conditioner card specifications.

CAN Data Input Povided by the optional CAN-40A or CAN-41A

Voice Memo Input
1 channel. An optional dedicated remote control unit RCU-41A enables recording of voice memo during reproduction of recorded voice memo requires an optional data analysis software DAS-100A.

Sampling Method Simultaneous sampling of all channels

Sampling Frequency Selection Systems
1/2/5 sysem in a range of 1 Hz to 100 kHz
2^n system in a range of 2 Hz to 65536 Hz

Sampling Frequency (1-2-5 system)
1 Hz to 100 kHz for 1-channel measurement
1 Hz to 50 kHz for 3-channel measurement
1 Hz to 20 kHz for 8-channel measurement
1 Hz to 10 kHz for 16-channel measurement
1 Hz to 5 kHz for 32-channel measurement
1 Hz to 1 kHz for CAN data measurement

Data Storage
Compact flash memory card (128 MB to 8 GB; 45x speed or higher)
Up to 2 GB data for 1 time of measurement

Setting Conditions
Online : From the PC through LAN or USB port
Offline : By reading from the CF card which has measuring conditions written with the DCS-100A data acquisition software

Saving Conditions
Amplifier setting conditions and measuring conditions are saved in the internal nonvolatile memory, enabling immediate setup with previous conditions upon power-on.

Measurement Modes
Manual
Data recording is manually started/pause or stopped when data is recorded to a preset number of measured data.
Manual mode allows recording of voice memo during data recording.
Trigger
Data recording is automatically started when the preset trigger condition is satisfied. Note that any CAN data cannot be used as the trigger condition.
Interval
Data recording is periodically made at preset intervals.

Manual Start/Stop of Data Recording
Possible through the PC or by pressing the switch on the front panel or from the dedicated remote control unit

Balance Adjustment
Strain input channels can be balanced by pressing the BAL. switch on the front panel or from the dedicated remote control unit or through the PC.

Saved Data Format
KYOWA standard format KS2, which enables data analysis with the optional data analysis software DAS-200A

Collecting Data
LAN or USB port enables online data transfer to the PC, while CF card enables offline data transfer.

TEDS Function
Usable when the EDX-100A is under the online control of the PC.
Compatible conditioner cards are CDV-40B(-F), DPM-42A(-F) and CCA-40A(-F). The suffix F denotes that the card is equipped with 8th order Butterworth antialiasing filter.

Synchronous Operation
Synchronous cable enables cascade connection of up to 4 units of the EDX-100A. While data is recorded as a separate file in the CF card inserted into each unit, files of all cards can be combined into a single file after online or offline data transfer to the PC.

Analog Output
Except for CDV-40B(-F) and CAN-40A, conditioner cards provide an analog output connector, enabling voltage monitoring (5 V FS).

CF Card Slot 1 (for data recording and condition setting)

Communication Ports
LAN and USB (for control and data transfer), switchable
LAN I/F
10BASE-T／100BASE-TX Connector: RJ45 modular jack
USB I/F
Conforms to USB 2.0 (high speed).
Connector: Series B receptacle

Operation Switches
REC/PAUSE : Start/pause data recording.
STOP : Stop data recording.
BAL. : Execute balance adjustment.
READ : Read and set conditions.
ID : Set ID No. of EDX-100A.
LAN/USB : Switch communication port.

Indicators
Operation status indicator LEDs : 7
Channel status indicator LEDs : The number corresponds to the number of channels provided.

External Control Connectors
CONT IN and CONT OUT(for remote control and synchronous operation)

Operating Temperature Range 0 to 50℃

Operating Humidity Range 20 to 90%RH (noncondensing)

Storage Temperature Range –20 to 60℃

Vibration Resistance
29.42 m/s² (3G), 5 to 55Hz (when operating)
49.03 m/s² (5G), 5 to 55Hz(when not operating)

Shock Resistance 196.1 m/s² (20G) /11msec

EMC Standards IEC61326-1 (Class A)

Safety standards IEC61010-1 (set certificate Ⅱ, pollution degree 2)

Power Supply 10 to 18 VDC
Connector: RM12BRD-4PH (Hirose)
DC power supply or optional dedicated AC adapter is required.

Current Consumption
EDX-100A-1 : Approx. 1.2 A (when operated on 12 VDC with 1 CDV-40B card mounted and full load applied)
EDX-100A-2 : Approx. 1.8 A (when operated on 12 VDC with 2 CDV-40B cards mounted and full load applied)
EDX-100A-4 : Approx. 2.8 A (when operated on 12 VDC with 4 CDV-40B cards mounted and full load applied)

Dimensions
EDX-100A-1 : 70.0 (W) X 132.5 (H) X 255 (D) mm
EDX-100A-2 : 92.5 (W) X 132.5 (H) X 255 (D) mm
EDX-100A-4 : 137.5 (W) X 132.5 (H) X 255 (D) mm
excluding protrusions

Weight, Approx.
EDX-100A-1 : 1.6kg (1.7 kg with 1 CDV-40B card mounted)
EDX-100A-2 : 1.8kg (2.0 kg with 2 CDV-40B cards mounted)
EDX-100A-4 : 2.6kg (2.6 kg with 4 CDV-40B cards mounted)

Standard Accessory
Power cable P-57,USB cable N-38
Dynamic Data Acquisition Software DCS-100A
CF card

Optional Accessories
USB cable (N-39) 2 m long
Synchronous cable N-95 2 m long
AC adapter UIA 345-12
Input: 100 to 240 VAC, 50/60 Hz, 1.2 A
Output: 2 VDC, 3.8 A
Dummy panel EDX-DUMMY

Built-in conditioner card specifications

■Strain/Voltage Measuring Card
CDV-40B,CDV-40B-F (With an anti-aliasing filter)

The CDV-40B enables measurement of signals detected by strain gages, strain gage transducers and voltage-output sensors.
CDV-40B-F equipped with antialiasing filter is also available.

Number of Input Channels 8 (centralized connector)

Input Mode
Strain Meas. : Balanced differential
Voltage meas : Unbalanced

Input Resistance
Strain Meas. : Approx. (10MΩ+10MΩ)
Voltage meas : Approx. (1MΩ)

Coupling DC/AC (DC cut)

Applicable Gage Factor Strain Meas. : 2.00

Bridge Excitation Strain Meas. : 2.00 VDC ±2% (120 to 1kΩ)

Balance Adjustment Range
Strain Meas. : Resistance ±2.4% (±12000μm/m)

Measuring Range
Strain Meas.: 500, 1k, 2k, 5k, 10k, 20k, 50k [μm/m], OFF
Voltage meas : 0.1, 0.2, 0.5, 1, 2, 5, 10V, OFF

Range Accuracy ±0.2% FS with each range

Calibration ±100%, ±50% of each range

Nonlinearity ±0.1%FS

Frequency Response Range
DC coupling : DC to 50 kHz, dev. +1 dB-3 dB
AC coupling (DC cut) : 0.2, 1 Hz to 50 kHz (Refer to high-pass filter.)

Low-pass Filter
Transfer characteristics : 2nd order Butterworth
Cutoff frequency : 8 steps of 10, 30, 100, 300, 1k, 3k, 10k [Hz] and FLAT
Amplitude ratio at cutoff point : -3 dB, ±1dB
Attenuation : -12 dB/oct. ±1dB/oct.

Antialiasing Filter (CDV-40B-F only)
8th order Butterworth
Cutoff frequency : Automatically set at sampling frequency x 0.25
Attenuation : -48 dB±5 dB(at sampling frequency x 0.5)
Provided that low-pass filter is set to AUTO on EDX-2000B.

High-pass Filter (DC cut)
Cutofff frequency : 0.2 Hz, 1 Hz
Attenuation : -6 dB/oct.

A-D Conversion 16 bits

Additional Function Reading information of TEDS-installed sensor

Optional Accessories
●Voltage conversion adapter FV-1A
●8-channel input cables U-38 to U-48
N81 to N85 should be used in combination for remote-sensing transducers.

■Dynamic Strain Amplifier Card
DPM-42A,DPM-42A-F

Designed for strain gages and strain gage transducers, the DPM-42A uses carrier for bridge excitation, making it suitable for measurement of low level strain. The input and output as well as channels are isolated from each other.

Applicable Sensors Strain gages, strain gage transducers

Number of Measuring Channels 4

Frequency Response Range DC to 5 kHz (deviation ±10%)

Carrier Frequency 12kHz

Applicable Bridge Resistance 120 to 1000Ω

Gage Factor 2.00 fixed

Bridge Excitation 2 V/0.5 V rms, switchable, 12 kHz sine wave

Balance Adjustment Range
Resistance : ±2.4% (12000μm/m)
Capacitance : 2000 pF

Balance Adjustment Method
Resistance : True electron auto-balancing method
Capacitance : CST (self-tracking) method

Range
8 steps of 200, 500, 1000, 2000, 5000, 10000, 20000μm/m and OFF with bridge voltage 2 V rms
7 steps of 1000, 2000, 5000, 10000, 20000, 50000μm/m and OFF with bridge voltage 0.5 V rms

Calibration ±100% and ±50% in each range

Nonlinearity Within± 0.2% FS

Low-pass Filter 2nd order Butterworth
Cutoff frequency : 10, 30, 100, 300, 1k [Hz] and FLAT (6 steps)
Cutoff accuracy : -3dB ±1dB
Attenuation : -12 dB/oct.±1 dB/oct.

Antialiasing Filter (DPM-42A-F only) 8th order Butterworth
Cutoff frequency : Automatically set at sampling frequency x 0.25
Cutoff characteristic : -48 dB±5dB (at sampling frequency x 0.5)
Provided that low-pass filter is set to AUTO on EDX-2000B.

Resolution 16 bits

Additional Functions
Checking input by inserting a resistor to a side of the bridge Reading information of TEDSinstalled sensor

Monitor Output
Accuracy : Within ±5 V/±0.5% (full scale in plus and minus directions)
Nonlinearity : Within ±0.5% FS

Withstand Voltage 250 VAC for 1 minute between input and output

Optional Accessory — Monitor output cable H-10296

■Thermocouple Card CTA-40A

The CTA-40A enables temperature measurement with 2 types of thermocouples, K(CA) and T (CC). The input and output as well as channels are isolated from each other.

Applicable Sensors Thermocouples K (CA) and T (CC)

Number of Input Channels 8

Thermocouple Resistance
200Ω or less with burnout ON
1000Ω or less with burnout OFF

Measuring Range 6 steps including OFF

Range Mode	Measuring Range
K1230	–200 to 1230℃
K480	–200 to 480℃
K240	–200 to 240℃
T400	–200 to 400℃
T210	–200 to 210℃

System Accuracy
Within± (0.5% rdg + 1)℃ at an ambient temperature of 20±3℃
Within ±(0.5% rdg + 2)℃ in a temperature range of 0 to 40℃

Calibration
100%, 50% in each range and absolute 0℃

Frequency Response Range DC to 10 Hz

Resolution 16 bits

Burnout Built-in burnout display ON/OFF
Note: If the thermocouple resistance is high, accurate measurement is made possible by turning the burnout function OFF.

Monitor Output
Accuracy : Within ±5 V ±0.5% (full scale in plus direction)
Nonlinearity : Within ±0.5% FS

Insulation Resistance
50 MΩ or more (500 VDC) between input and output and between channels

Standard Accessories — 8-channel input cable U-104, Temperature adapter CT-2A (8 pcs.)

Optional Accessory — Centralized output cable U-62

■F/V Converter Card CFV-40A

Designed for measurement of input pulse frequency. The CFV-40A has a power supply for sensors. Isolated between input and output.

Applicable Sensors AC signal output sensors

Number of Input Channels 4

Input Signals
AC (zero-cross), TTL level (including open collector signals)

Input Voltage Range
±(0.5 V to 50 V) with large hysteresis
±(0.1 V to 50 V) with small hysteresis

Measuring Range
9 steps of 50, 100, 500, 1k, 2k, 5k, 10k, 20k [Hz] and OFF

Accuracy Within ±0.1% FS

Calibration 100%, 50% (added) in each range and 0% (absolute)

Response Time
10 μsec or less with pulse input continued
2 cycles of input frequency + 50 sec or less with pulse input discontinued

Resolution 16 bits

Sensor Power Supply 12 VDC within ±10% (50 mA or less for each channel)

Monitor Output 5V
Accuracy : Within ±0.5% (for full scale in plus direction)
Nonlinearity : Within ±0.1% FS

Insulation Resistance
50ΩM or more (500 VDC) between input and output and between channels

Remarks
Up to two F/V converter cards can be mounted to the 32-channel EDX-2000A/B.
For the 64-channel type, when two F/V converter cards are mounted, up to 4 other cards, and when one F/V converter card is mounted, up to 6 other cards can be mounted.

Standard Accessory — Voltage conversion adapter FV-1A (4 pcs.)

Optional Accessories — Input cable U-12, Monitor output cable H-10296

■Charge Amplifier Card CCA-40A,CCA-40A-F

For piezoelectric accelerometers. (CCA-40A-F with antialiasing filter is also available.)

Applicable Sensors Voltage-output piezoelectric accelerometers with built-in amplifier

Number of Measuring Channels 8

Sensor Power Supply
Constant-current 4 mA. applied voltage
approx. 24 VDC, load 1kΩ or less

Frequency Response Range 1 Hz to 20 kHz (dev. +1 dB, -3 dB)

Range Selection
9 steps of 20, 50, 100, 200, 500, 1000, 2000, 5000 mV and OFF.
Accuracy : Within±1% FS

Calibration
DC calibration : ±100%, ±50% in each range
Accuacy : Within ±0.2% FS
AC calibration : 100%, 50% in each range
Accuracy : Within±1% FS
Frequency accuracy : 100 Hz within ±5%

Low-pass Filter
2nd order Butterworth
Cutoff frequency : 5 steps of 300, 1k, 3k, 10k [Hz] and FLAT
Cutoff accuracy : -3 dB±1dB
Attenuation : -12 dB/oct. ±1dB/oct.

Antialiasing Filter (CCA-40A-F only) 8th order Butterworth
Cutoff frequency : Automatically set at sampling frequency x 0.25
Cutoff characteristic : -48dB±5dB (with sampling frequency x 0.5)
Provided that low-pass filter is set to AUTO on EDX-2000A.

Distortion 1% or less

Resolution 16 bits

Monitor Output 5 V

Accuracy Within±1% (for full scale in plus and minus directions)

Additional Function Reading information of TEDS-installed sensor

Standard Accessory — Input cable U-111

Optional Accessories — Centralized output cable U-62
Conversion adapter BNCP-C25J-A (BNC - Miniature)

■CAN card
CAN-40A,CAN-41A
(※NOTE : CAN-41A is for EDX-100A or EDX-3000A)

For measurement of data frames on the controller area network.
CAN-40A records a maximum of 16 different data frames, and dualinput
CAN-41A records data frames of two systems (up to 32 frames)
simultaneously with usual analog data.

Number of CAN Ports CAN-40A : 1 CAN-41A : 2 (two nodes)

Connectors D-sub 9-pin for high and low speed CANs

Compatible CAN Version
Bosch 2.0B active (conforms to ISO 11898)
Switchable between high-speed CAN and low-speed CAN

Number of Measured IDs CAN-40A : Max. 16 CAN-41A : Max. 32

CAN Controller Operating Clock 40 MHz, 32 MHz

Communication Speed
High-speed CAN : 1000/800/500/250/125/100/83.3/62.5/50/33.3/25/20/10 kbps
Low-speed CAN : 125/100/83.3/62.5/50/33.3/25/20/10 kbps

Communication Conditions
Sampling point, number of sampling times, re-synchronization jump width

Measuring Channel Conditions
Start bit, bit length, data type, calibration coefficient (parameters to convert the extracted CAN data to physical quantities)

Graph Display Together with numeric display, frame display, and analog data

Remarks
Only one CAN card can be mounted to the last slot of the EDX.
The maximum sampling frequency is 10 kHz when CAN data is measured.

■DA Card DAC-40A

For analog reproduction of the data recorded with EDX-2000A.

Number of Output Channels 8

Resolution 14 bits

Connectors
OUTPUT 1 : BNC connector outputs data of a selected channel.
OUTPUT 2 : D-sub 9-pin connector outputs 8-channel data.

Output Voltage ±5 V FS (load resistance: 5 k or more)
Accuracy : Within ±0.15% FS
Nonlinearity : Within ±0.05% FS

Setting Conditions for D-A Conversion
Reproduction rate : 1 to 10 kHz (selected from internal sampling clock)
Simultaneous playback of voice data: Yes/No
Number of reproducing times : 1 to 1000 or infinite Recording data channels, output full scale and shift level

Reproduce Data All measured data or data in a display range

Calibration Absolute values of ±50% and ±100% of full scale

Standard Accessory — Centralized output cable U-62

DCS-100A software specifications (In EDX-100A controlling)

Number of Controllable Units
Max. 4 (To control 2 or more units, all units should be operated in synchronization.)

Applicable Conditioner Cards
CDV-40A/B(-F), DPM-42A(-F), CCA-40A(-F), CTA-40A, CFV-40A, CAN-40A/41A

Setting Channel Conditions
Measuring channel, measuring mode, range, high-pass filter, low-pass filter, balance ON/OFF, calibration range, calibration ON/OFF, calibration coefficient, offset, unit, channel name, measuring range, rated capacity, rated output, number of display digits (Display items can freely be selected.)

Reading TEDS Information
Possible for automatic setting by reading conditions

Measuring Conditions for Saving Data in CF Card
Sampling frequency 1 Hz to 100 kHz
(depends on the number of measuring channels.)
Data file size Max. 2 GB
Manual measurement
Measurement is made from a press of the REC button to a press of the STOP button or to completion of recording to the preset number of measurements.
Interval measurement
Measurement is made automatically at preset intervals from the preset starting time.
Trigger measurement
・**Common trigger conditions**
(1) End trigger Can be set.
(2) Delay
Max. 262144 values for both start and end Delay differs depending on sampling frequency and the number of measuring channels.
・**Analog trigger conditions**
(1) Trigger channel
1 desired channel of stand-alone or master unit
(2) Trigger level Set in a proper engineering unit
(3) Trigger slope Rise or fall
・**External trigger condition**
(1) Trigger slope Rise or fall
・**Composite trigger conditions**
(1) Trigger source
Selectable from 2 desired channels of standalone or master unit and external trigger
(2) And/Or
Signals of selected trigger channels and external trigger signal can be AND or OR.
(3) Trigger level Set in a proper engineering unit
(4) Trigger slope Rise or fall

Measuring Conditions for Saving Data in Hard Disk of PC
Sampling frequency 1 Hz to 100 kHz
(depends on the number of measuring channels.)
Data file size Capacity of hard disk
Manual measurement
Measurement is made from a press of the REC button to a press of the STOP button or to completion of recording to the preset number of measurements.
Interval measurement
Measurement is automatically made at preset intervals from the preset starting time.
Trigger measurement
Measurement starts/stops based on preset trigger conditions.
・**Analog trigger conditions**
(1) End trigger Can be set.
(2) Delay
Max. 262144 values for both start and end Delay differs depending on sampling frequency and the number of measuring channels.
(3) Trigger channel Desired measuring channel
(4) Trigger level Set in a proper engineering unit
(5) Trigger slope Rise or fall

Setting/Reading Measuring Conditions
Measuring conditions can be saved in and read from CF card.
They can also be set from the PC connected via USB or LAN port.

Measurement-Related Operations
Monitor measurement, start/pause/stop of data recording, balance adjustment and calibration can be executed from the PC.

Monitor Display
Y-Time graph
Physical variables are graphed on Y axis with X axis for time. Up to 16 channels can be graphed and 1 to 4 graphs can be presented on a window.
Y-Time (DIV) graph
X Physical variables of up to 16 channels are graphed on Y axis with X axis for time. Different from the above Y-Time graph, zero point of channel can freely be moved to a desired position on a division of Y axis.
X-Y graph
Variables of desired 8 channels each for both X and Y axes are graphed in free combinations.
Bar graph
One bar graph can contain up to 32 channels and 1 to 4 graphs can be presented on a window. Peak hold ON/OFF is possible.F
Bar meter
Variable of 1 desired channel can be displayed on a horizontal or vertical bar meter.
Circular meter
Variable of 1 desired channel can be displayed on a circular meter.
Numeric window
Presents numeric data of desired 1 or 16 channels or all channels.
Display color Freely changeable graph by graph
Title and labels A desired title and labels for X and Y axes can be set.

Number of simultaneously displayed windows
10 numeric windows and 10 graph windows, 20 in total, can simultaneously displayed, including reproduced data windows.
Note however that the maximum number of windows may not be available depending on the CPU speed and memory of the PC.

Data Reproduction
Y-Time graph
Physical variables of up to 16 channels are graphed on Y axis with X axis for time.
Y-Time (DIV) graph
Physical variables of up to 16 channels are graphed on Y axis with X axis for time. Different from the above Y-Time graph, zero point of channel can freely be moved to a desired position on a division of Y axis.
X-Y graph
Variables of desired 8 channels each for both X and Y axes are graphed in free combinations.

Numeric window Presents data in a list.

Display color Freely changeable graph by graph

Title and labels A desired title and labels for X and Y axes can be set.

Cursor Enables indication of the value at the cursor position in a proper engineering unit.

Number of simultaneously displayed windowsr
10 numeric windows and 10 graph windows, 20 in total, can simultaneously displayed, including graph and numeric windows in monitor measurement.
Note however that the maximum number of windows may not be available depending on the CPU speed and memory of the PC.

Size of data file available on a single screen
Size of data file which can be displayed at a time on graph and numeric windows is maximum 10 MB. If the file size exceeds 10 MB, 10 MB data of a desired portion can be displayed by setting the range.

File conversion
Desired range or data of a desired channel can be cropped and converted to CSV or Excel format file.

Data File
Saving format
KYOWA standard file format KS2 to save data in the PC.
Readable format
File format with which the data is saved in the medium of the controlled recorder, and KS2 format used by the DCS-100A to save data
File coupling
Data files saved in controlled recorders operated in synchronization can be combined to a single data file at the time of collection by the PC.
Collecting data
Data can automatically be collected and converted to CSV file upon completion of data recording, if the PC is connected. Data saved in CF card may be ransferred to the PC, online or offline.
Erasing data
Data can be erased from CF card by commanding via USB or LAN.

Setting Environment
Hardware configuration
Number of connected recorders, types of mounted conditioner cards.
Number of slots and types of conditioner cards can freely be set.
Hardware configuration of the recorder can be read if it is connected to the PC via USB or LAN.
IP address
Can be set from the PC via USB or LAN, or saved in CF card.
Communication status
Checked by reading the version of the EDX-100A
Destination of saving data
Measured data is saved in CF card inserted into the controlled recorder.
Also possible is direct saving in the hard disk of PC without using CF card, while it is limited by the sampling frequency and the number of measuring channels.
Optional units
3 user-defined units can be registered.

Operating Environment

CPU	PentiumⅢ 1GHz or higher (Pentium 4 2 GHz or higher recommended)
OS	Windows 2000 Professional/XP Home or Professional Edition/ Vista (only when connected via 100BASE-TX). 7
Memory	512 MB or more 2G or more is required for vista or Windows 7
Interface	100BASE-TX/USB 2.0
Hard disk	Blank space 10 MB or more
Display	1024 x 768 dots or more, full color or more
Disk drive	CD-ROM drive

EDX-100A Instantaneous stop battery units EDB-41A

Built-in Battery
Battery type : Ni-MH rechargeable battery
Nominal capacity : 730mAh, nominal voltage : 12V

External Power Input DC11V to 18V
[DC IN] terminal model: RM12BRD-4PH (Hirose)
Use DC power or EDX-100A AC adaptor (optional)

Power Output
External power voltage when using external power drive
Approx. 11 to 15V when using this units drive (in instantaneous stop)
[DC OUT] terminal model : RM12BRD-4S (Hirose)

Charging Method
Start automatic charging (max. 3.5hs) through the external power supply
Start discharging through resetting button to ON (Recovery time: Max.6.5hs)

Display
BATTERY LEVEL LED (Residual capacity display)
CHARGE (charge/discharge display)

Buzzer Alarm through buzzing sound in instantaneous stop

Operating Temperature Range
0～50℃ (0～30℃ in recovery during the charging)

Operating Temperature Range 20 to 90%RH (noncondensing)

Storage Temperature Range -20 to 50℃

Dimensions 25(W)×132.5(H)×255(D)mm (excluding protrusions)

Weight Approx. 500g

Backup time ＊(reference value)
Approx.30min with 1 (8CH) CDV-40B card mounted on EDX-100A-1 (H) and full load applied
Approx.15min with 2 (16CH) CDV-40B cards mounted on EDX-100A-2 (H) and full load applied
Approx. 5min with 4 (32CH) CDV-40B cards mounted on EDX-100A-4 (H) and full load applied
＊Built-in battery is fully charged when ambient temperature is 20 to 30℃

Remote Control Unit RCU-41A

Control Buttons RCU-41A
(1) REC/PAUSE : Start/pause data recording.
(2) STOP : Stop data recording.
(3) BAL. : Execute balance adjustment.
(4) VOICE MEMO : Record voice memo.

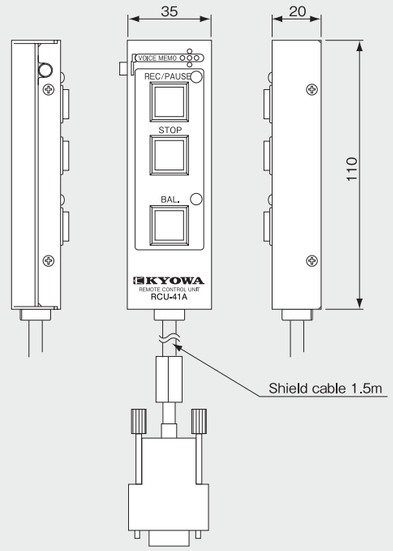
LED Indicators REC/PAUSE, BAL

Cable 1.5 m long (to be connected to CONT IN connector of EDX-100A)

Dimensions 35(W)×110(H)×20(D) mm (excluding protrusions)

Weight Approx. 200g

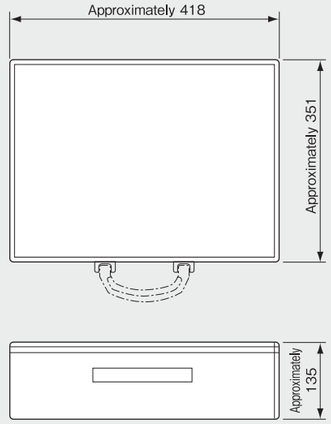
■Outside dimension diagram



Aluminum trunk EDX-100A-1(H) for H-11247

This is an aluminum trunk capable of storing EDX-100A-1(H), and the remote control unit, RCU-41A and cables.

■Outside dimension diagram



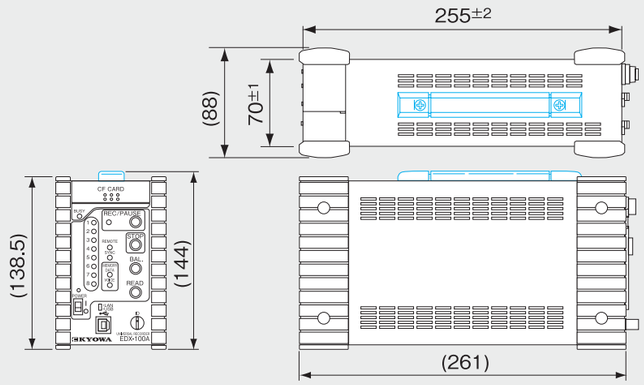
Synchronous cable N-95

Length 2m

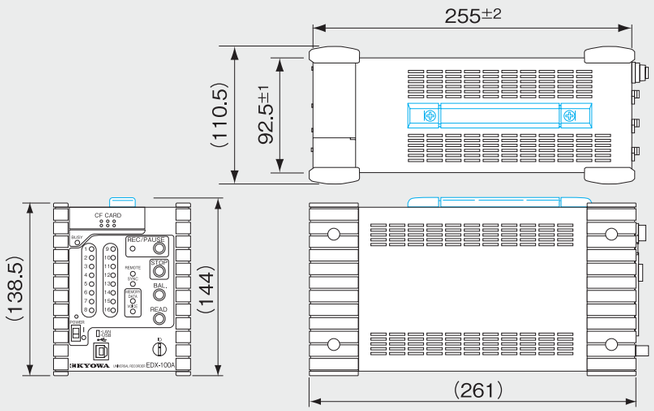
Data recoding time by 128M bytes compact flash memory card (Reference value)

Sampling frequency	Measuring channel number				
	1	3	8	16	32
100kHz	8 min.				
50kHz	16 min.	5 min.			
20kHz	40 min.	13 min.	5 min.		
10kHz	80 min.	26 min.	10 min.	5 min.	
5kHz	160 min.	53 min.	20 min.	10 min.	5 min.
2kHz	6.6 hours	133 min.	50 min.	25 min.	12 min.
1kHz	13 hours	4.4 hours	100 min.	50 min.	25 min.
500Hz	26 hours	8.8 hours	200 min.	100 min.	50 min.
200Hz	2.7 days	22 hours	8.3 hours	4.1 hours	125 min.
100Hz	5.5 days	44 hours	16 hours	8.3 hours	4.1 hours
50Hz	11 days	3.7 days	33 hours	16 hours	8.3 hours
20Hz	27 days	9.2 days	3.4 days	41 hours	20 hours
10Hz	55 days	18 days	6.9 days	3.4 days	41 hours
5Hz	111 days	37 days	13 days	6.9 days	3.4 days
2Hz	277 days	92 days	34 days	17 days	8.6 days
1Hz	555 days	185 days	69 days	34 days	17 days

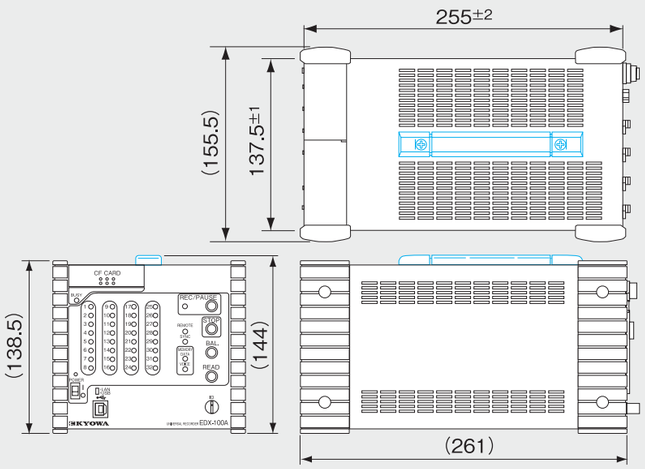
■Main body outside dimension diagram
(Blue section is a handle.)



●1 slot
EDX-100A-1H
EDX-100A-1 (No handle)



●2 slots
EDX-100A-2H
EDX-100A-2 (No handle)



●4 slots
EDX-100A-4H
EDX-100A-4 (No handle)