

## Various graphs and value windows can be used to monitor measured data and realize high efficiency collection

- The measurement data is monitored in a variegated graph window display and a numeric window
- Common operation not depending on the controlled object measuring instrument.  
The basic operating method does not depend on the controlled measuring instrument, so easy operation will be even if the measuring instrument changes.
- Enables windows display with Y-Time, X-Y, bar chart, circular meter and numeric.
- Enables compatible with Japanese/English
- Enables measurement condition setting, data acquisition and data playback.  
Installation of measurement conditions, data acquisition, data recovery, data acquisition and file conversion can be completed just by using this software.  
DAS-100A is configured for analyzing the acquisition data.
- Large capacity data acquisition by computer's hard disk is available
- Acquisition data can be collected automatically.
- Easy operation can be realized through the toolbar, function keys and operation panel
- When the data playback, KYOWA standard data format (KS2) can be converted to CSV and Excel formats.

DCS-100A is a dynamic data acquisition software developed to make KYOWA measuring instruments even more powerful. The software enables easy interactive setting of various conditions and facilitates efficient acquisition of required data by presenting variables under measurement in varied graph and numeric windows on the display.

## Common specifications

### ■ Operating Environment

OS :	WindowsXP, Vista7
	Japanese/English (compatible with the 32bit version only)
CPU :	Pentium III, 1 GHz or higher (Pentium4 recommended, 2GHz or higher)
Memory :	1GB or more 2GB or more for Vista and Windows 7
Display :	Resolution 1024 * 768 pixel or more
Interface :	100BASE-TX/USB2.0

### ■ 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 :	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 axis 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.
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 number of windows may be restricted by the CPU speed and memory of the PC.

### ■ Setting Channel / Measuring Conditions

Channel / measuring conditions :	Applied recorder is set according to the specifications.
TEDS information:	Used to automatically set the applied recorder according to the conditions read from TEDS.(TEDS compatible recorders only)
Saving / reading of measurement condition file :	Measuring condition setting can be saved and read. Also, the present setting conditions are automatically saved in internal memory and will be recovered at the start of the next operation.

### ■ 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 axis are graphed in free combinations
Numeric window :	Presents numeric 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 windows:	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 the 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, 10MB 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.(Read data only)



### ■Setting Environment

**Setting controlled recorder :** Select the applied recorder and set recorder's specific conditions.

**Destination of saving data :** Measured data is saved in storage medium of the controlled recorder. Also possible is direct saving in the hard disk of PC, while it is limited by the sampling frequency and the number of measuring channels.

**Automatic transfer of data file :** Data file can automatically be transferred to the hard disk of PC upon completion of recording.

**Automatic transfer of CSV files :** CSV data file can automatically be transferred upon completion of recording.

**Optional units :** 3 user-defined units can be registered.

### ■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.

## EDX-100A control specifications

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

**Control interface :** USB2.0 or 100BASE-TX

**Applicable Conditioner Cards :** CDV-40B (-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)

### ■Measurement Conditions for Saving Data in CF Card

**Sampling frequency :** 1Hz to 100kHz

(depends on the number of measuring channels)

**Number of Recordable Measurements :** 2 to 1,000,000,000 (Recordable time depends on the number of measuring channels)/collectable data.

**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 :** Measurement starts/stops based on preset trigger conditions.

**Common trigger conditions**

(1) End of 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 conditions :** Measurement starts/stops based on preset trigger conditions.

(1) Trigger slope : Rise or fall

**Composite trigger conditions**

(1) Trigger source : Selectable from 2 desired channels of stand-alone or master unit and external trigger.

(2) AND/OR : Signals of selected trigger channels and external trigger signal can be ANDed or ORed

(3) Trigger level : Set in a proper engineering unit.

(4) Trigger slope : Rise or fall

### ■Measurement conditions for Saving Data in Hard Disk of PC

**Sampling frequency :** 1Hz to 100kHz

(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 made automatically at present intervals from the preset starting time.

**Trigger measurement :** Measurement starts/stops based on preset trigger conditions.

**Analog trigger conditions :**

(1) End of trigger : Can be set

(2) Delay : Max. 262144 values for both start and end.  
start/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.

### ■Collecting Recorded Data.

Recorded data can automatically be transferred to the PC and can be converted to CSV file upon completion of recording. Data recorded in CF card can also be transferred to the PC online or offline

### ■Erasing Recorded Data

Recorded data file can be erased from CF card by commanding from the PC connected via USB or LAN.

### ■Reading Sensor Information from TEDS

Channel conditions can be set by reading sensor information from TEDS-installed sensors.

### ■Setting Environment/Hardware Configuration

Setting the number of connected units and types of mounted conditioner cards.

The number of slots and types of conditioner cards can be set

Hardware configuration of EDX-100A can be read on the PC connected via USB or LAN.

IP address : Can be set from the PC via USB or LAN, or saved in CF card.

Communication check : By reading the version of the recorder.

### Menu Bar

Each menu option provides a pull-down menu and changes.

### Measuring Conditions

Displays current Measurement Conditions such as Measurement Mode, monitor target device name, sampling frequency, the number of recorded data, and recording time. (Vary with Measurement mode and measurement state)

### Window display bar

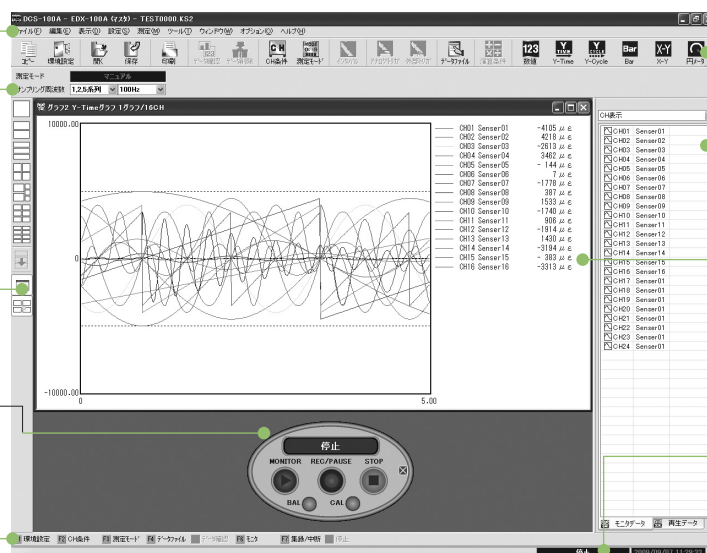
Simultaneously numeric display window and graph windows.

### Measurement operation panel

Conducts measurement operation.  
(Executable real-time monitor, acquisition start/pause, stop, balance, calibration ,etc)

### Function key bar

Free to assign functions, Executable real-time monitor, acquisition start/pause, stop, etc. through by key operation.



Basic Monitor Display

### Toolbar

Icons of various menu bar functions are displayed. Easy to selection.

### Channel list

Easy to be set just by dragging the channels to be displayed in the window.

### Data window

Free to configure and monitor various graph windows such as numeric window, time series graph and X-Y graph.

### Status bar

Display measurement state, recording state, and the current time.



## EDS-400A control specifications

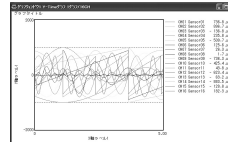
Number of Controllable Units : Max. 8 (To control 2 or more units, all units should be operated in synchronization.)
Control Interface: 100BASE-TX
Setting Channel Conditions : Measuring channel, measuring mode (strain/voltage), range Zero suppress ON/OFF, calibration coefficient, offset, unit, channel name, measuring range, rated output, number of display digits (Display items can freely be selected.)
<b>■ Measurement Conditions for Saving Data in CF Card</b>
Sampling Frequency : 1Hz to 100kHz (depends on the number of measuring channels)
Data File Size : Max. 2GB (Number of measurements depends on the number of measuring channels)
Measuring Modes: Manual, analog trigger, external trigger
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.
Trigger Measurement
Pretrigger delay : Max.2000 measurements (Trigger delay time depends on sampling frequency)
Analog trigger conditions :
(1) Trigger channels : 1 to 4 desired channels
(2) Trigger level : Set in a proper engineering unit.
(3) Trigger slope : Rise, fall or Rise/fall
<b>■ Measurement Conditions for Saving Data in Hard Disk of PC</b>
Sampling frequency : 1Hz to 10kHz
Data File Size : Capacity of hard disk
Measuring Modes : Manual, interval, analog trigger
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.
PAUSE button enables interruption of data recording.
Interval Measurement : Measurement is automatically made at preset intervals from the preset starting time.
Analog Trigger Conditions :
Pre-and post-trigger delay : Max.32000 measurements (Pre-and post-trigger delay time depends on the number of measuring channels and sampling frequency)
(1) End trigger : Can be set
(2) Trigger channel : Desired measuring channel
(3) Trigger level : Set in a proper engineering unit
(4) Trigger slope : Rise, Fall, or Rise/Fall
<b>■ Setting Measuring Conditions</b>
Measuring conditions can be set from the PC connected via LAN port.
<b>■ Monitoring</b>
Data under monitoring can be reviewed on graph and numeric windows.
Execution of zero suppress, test signal output and condition saving in CF card are possible.
<b>■ Erasing Recorded Data</b>
Recorded data file can be erased from CF card by commanding from the PC connected via LAN.
<b>■ Collecting Recorded Data</b>
Data recorded data in CF card can be transferred to the PC online or offline.
<b>■ Setting Environment</b>
IP address setting : Can be set from the PC via LAN, or saved in CF card.
Setting the number of units connected units :
Communication check : By reading the version of the recorder.

## ● Measurement operation panel

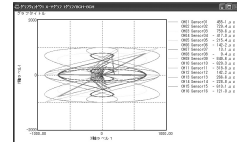
Frequently used functions such as monitor/data acquisition start, stop and balance can be operated easily by a big button. When it is necessary to set channel and measurement conditions, operations from monitor to acquisition can be completed just through this operation



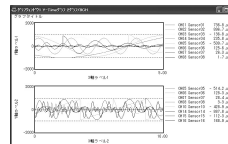
## ● Graph



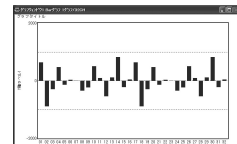
Y-Time graph [1 graph / 16 channels]



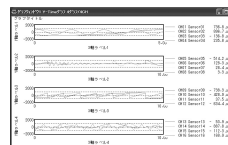
X-Y graph



Y-Time graph [2 graphs - 8 channels]



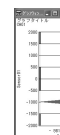
Bar Graph



Y-Time graph [4 graphs - 4 channels]

## ● Circular Meters, Bar Meters

With both bar meter and circular meter, desired portions can be displayed in desired colors for easy discrimination.



Vertical Bar Meter



Horizontal Bar Meter



Normal Display



Semi-circular Display



45°-turn Display



-45°-turn Display

## ● Numeric Windows

Presents numeric data of desired 1 or 16 channels or all channels.

CH01 Sensor01	838.0 $\mu$ c	CH11 Sensor11	838.0 $\mu$ c
CH02 Sensor02	835.6 $\mu$ c	CH18 Sensor18	835.6 $\mu$ c
CH03 Sensor03	551.6 $\mu$ c	CH19 Sensor19	551.6 $\mu$ c
CH04 Sensor04	699.2 $\mu$ c	CH20 Sensor20	699.2 $\mu$ c
CH05 Sensor05	333.2 $\mu$ c	CH21 Sensor21	333.2 $\mu$ c
CH06 Sensor06	5.8 $\mu$ c	CH22 Sensor22	5.8 $\mu$ c
CH07 Sensor07	30.1 $\mu$ c	CH23 Sensor23	30.1 $\mu$ c
CH08 Sensor08	7.4 $\mu$ c	CH24 Sensor24	7.4 $\mu$ c
CH09 Sensor09	689.4 $\mu$ c	CH25 Sensor25	689.4 $\mu$ c
CH10 Sensor10	341.0 $\mu$ c	CH26 Sensor26	341.0 $\mu$ c
CH11 Sensor11	193.8 $\mu$ c	CH27 Sensor27	193.8 $\mu$ c
CH12 Sensor12	360.2 $\mu$ c	CH28 Sensor28	360.2 $\mu$ c
CH13 Sensor13	307.4 $\mu$ c	CH29 Sensor29	307.4 $\mu$ c
CH14 Sensor14	605.2 $\mu$ c	CH30 Sensor30	605.2 $\mu$ c
CH15 Sensor15	27.1 $\mu$ c	CH31 Sensor31	27.1 $\mu$ c
CH16 Sensor16	695.6 $\mu$ c	CH32 Sensor32	695.6 $\mu$ c

All Channel Data

Unit	CH01	CH02	CH03	CH04	CH05	CH06	CH07	CH08	CH09	CH10	CH11	CH12	CH13	CH14	CH15	CH16	CH17	CH18	CH19	CH20	CH21	CH22	CH23	CH24	CH25	CH26	CH27	CH28	CH29	CH30	CH31	CH32
Value	838.0	835.6	551.6	699.2	333.2	5.8	30.1	7.4	689.4	341.0	193.8	360.2	307.4	605.2	27.1	695.6	838.0	835.6	551.6	699.2	333.2	5.8	30.1	7.4	689.4	341.0	193.8	360.2	307.4	605.2	27.1	695.6

Reproduced Data

Control specifications of PCD-300 series see page P.3-47