

# ELECTRONIC MINI-RECORDER



## MODEL ES6 □ □

The ES600 is a compact industrial analog recorder using 60-mm wide chart paper. Even with its compact size of 96×144 mm, it has functions comparable with a large-size recorder including a highly reliable automatic parallel system, easy-to-install fanfold recording chart paper, etc. There are two recording systems, pen type recorders have one-point continuous recording and dot printing type recorders are available which record a maximum of six points. Thermocouples, DC voltages/currents, resistance thermometers and thermistors measuring inputs are available which enable the recording of temperatures, various industrial units, signal voltages and currents.



MODEL ES600

### GENERAL SPECIFICATIONS

<b>Input signal</b>	: mV: More than 10 mV DC span, less than 50 V span Thermocouple: K, T More than 250°C span E, J More than 200°C span R More than 1000°C span Resistance thermometer: (Pt100, JPT100) More than 50°C span Thermistor: More than 50°C span (at room temperature)
<b>Scale width</b>	: 60mm
<b>Indicating accuracy</b>	: ±1.0% of input span
<b>Dead band</b>	: 0.4% of input span
<b>Balancing speed</b>	: Approx. 2.0 sec (50 Hz), 1.6 sec (60 Hz) for full-scale movement
<b>Chart paper</b>	: Fanfold type, effective width 60mm, total width 73 mm, total length 10 m
<b>Recording points</b>	: Pen type; 1 pen Dot printing type; 4 types with 1, 2, 3 and 6 points
<b>Recording system</b>	: Pen type: Cartridge pen continuous recording (color: red) Dot printing type: Ink pad dot printing with each point in a different color Dot printing color: 1 point: red 2 points: 1 red, 2 blue 3 points: 1 red, 2 blue, 3 green 6 points: 1 red, 2 blue, 3 green, 4 violet, 5 purple, 6 brown
<b>Chart speed</b>	: 10, 20 mm/b and fast feed
<b>Dot printing interval</b>	: Approx. 10 sec
<b>Pen lift</b>	: Manual
<b>(Pen-writing type)</b>	
<b>Power supply</b>	: 100, 110, 120, 130, 200, 220, 230, or 240 V AC, 50/60 Hz
<b>Allowable voltage fluctuations</b>	: +10% to -10% of rated value
<b>Ambient temperature</b>	: -10°C to 50°C
<b>Ambient humidity</b>	: 30 to 90% RH
<b>Allowable signal source resistance</b>	: mV input, thermocouple input: 1KΩ or less Resistance thermometer input: less than 10 Ω per wire
<b>input resistance</b>	: Approx. 8 MΩ
<b>Max. common mode voltage</b>	: 200 V AC
<b>Common mode rejection ratio</b>	: 100 dB or more

Series mode rejection : 50dB or more

#### ratio

<b>Insulation resistance</b>	: Between measuring terminals and ground terminal: 500 V DC, 20 MΩ or more Between power terminals and ground terminal: 500 V DC, 20 MΩ or more Between measuring terminals and power terminals: 500 V DC, 20 MΩ or more
<b>Withstand voltage</b>	: Between measuring terminals and ground terminal: 500 V AC for 1 minute Between power terminals and ground terminal: 1000 V AC for 1 minute Between measuring terminals and power terminals: 1000 V AC for 1 minute
<b>Power consumption</b>	: Approx. 7 VA

#### Casing

<b>Color</b>	: Front door: ABS plastic
<b>Mounting</b>	: Flange and rear case: ABS plastic
<b>Weight</b>	: Gray : Panel mounting : Approx. 1.7kg

### MODELS

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<b>Input</b>	1 : Thermocouple 2 : Resistance thermometer 3 : Thermistor 8 : Current or voltage
<b>Alarm</b>	0 : None 1 : High/Low limit 2 : High limit 3 : Low limit*
<b>Number of points</b>	01: 1 pen 1D: 1dot 02: 2dots 03: 3dots 06: 6dots

Functions marked\* are optional.

## STANDARD SCALE

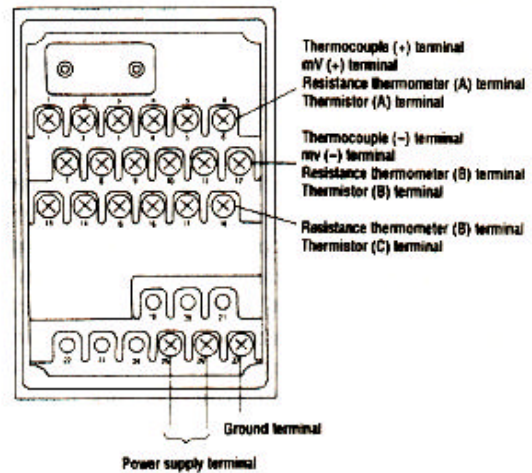
Input	Standard scale		
Thermocouple	R	0 to 1400(50)	0 to 1600(50)
	K	0 to 250(5) 0 to 800(20)	0 to 300 (10) 0 to 1200(20)
	E	0 to 200(5)	0 to 300 (W)
	J	0 to 300(10)	0 to 400(10)
	I	0 to 250(5)	0 to 300(10)
mV		0 to 10 (0.2)	0 to 20(0.5) 0 to 100(2)
		-5 to 5 (0.2)	-10 to 10 (0.5) -50 to 50 (2)
		0 to 1V (0.02V)	-1 to 1 V (0.05V)
mA		4 to 20mA (0.5mA)	
Resistance thermometer		0 to 50(1)	0 to 100(2) 0 to 150(5)
		0 to 200 (5)	0 to 300(10) -20 to 30(1)
		-20 to 80(2)	-30 to 70(2) -50 to 50(2)
Pt100		-50 to 100(5)	-100 to 50(2)
JPt100			
Thermistor		0 to 100(5)	0 to 200(5)

Unit is °C. mV is used only for mV inputs. () shows 1 graduation.

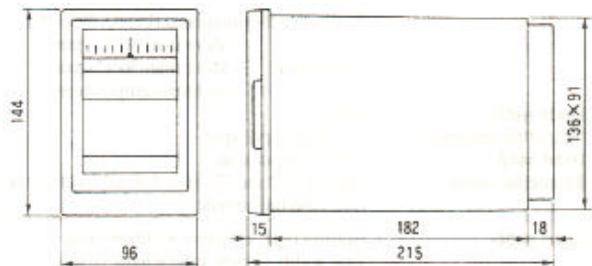
## OPTIONS

Option name	Contents
Chart speed	Variable between 5 mmMi to 400 mm,ft
Dot interval	Approx. 5 sec.
Alarm	Alarm system: High limit (Low limit) type or High/Low limit type Setting accuracy: $\pm 1\%$ of input span Deadband: 0.6% of input span Contact capacity: Resistance load 100V 0.5A, 200V 0.2A Alarm signal: On-off make-contact signal
Double scale	① Manual switching to double scale ② Double scale classified by positions
Burnout	In case input is interrupted, indicated value will be beyond high limit (or low limit)
Portable type	With handle and feet

## TERMINAL BOARD

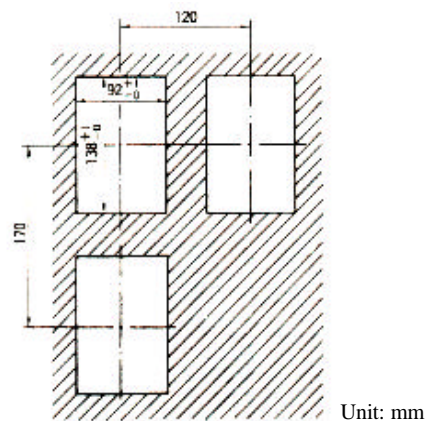
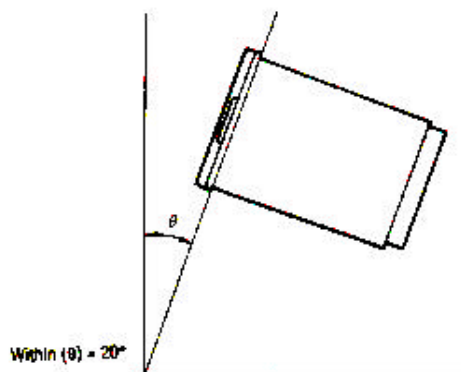


## EXTERNAL DIMENSIONS



Panel cutout and mounting interval

## INCLINED MOUNTING



Unit: mm

Specifications subject to change without notice. Original 2000.12

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