

This instruction manual describes the operation peculiar to the 24-point recorder/recording alarm as an annex to the instruction manual for EH series dotting type recorders/recording alarms (hereinafter referred to as the instruction manual for recorders).

For general operating instructions for the recorder other than described in this instruction manual, refer to the attached instruction manual for recorders.

■ GENERAL

This instrument is a 24-point recorder/recording alarm out of EH series dotting type recorder/recording alarms having a 180 mm chart. Its recording system comprises the dotting/printing system for 24-dot recording of 12 dot colors and 24 digital printing recording, and the 12P repetitive dotting system which divides 24 points into 2 groups, records 24 dots by repeating 12-color dotting, and identifies groups from each other by indicator lamps.

The dotting/printing system is subdivided into the select off type which provides the selective function to skip unnecessary measuring points to record necessary measuring points, and the select on type which does not provide any selective functions. This instrument comprises the following standard models according to the recording systems, alarm systems and kinds of input signals.

Please confirm your instrument model, and read corresponding items in this instruction manual and the instruction manual for recorders.

The instrument model is described on the nameplates mounted at the lower part inside the door and on the right side panel of the chassis.

For 12P-repetitive type instrument, the operations other than the identification of groups by indicator lamps and the mounting layout (connections) of the terminals on the rear panel are the same as in the 12-point instrument.

● INSTRUMENT WITH SELECT-OFF FUNCTION

This instrument can selectively record optional points out of 24 measuring points by the front panel switch operation only, and passes unnecessary measuring point in about 0.5 second. Thus, it can reduce the dotting cycle.

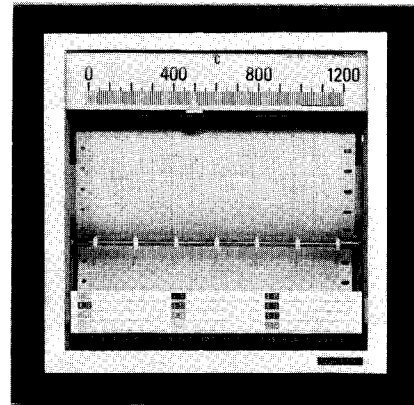
● INSTRUMENT WITHOUT SELECT-OFF FUNCTION

This instrument records 24 dots of 12 dotting colors and 1~24-point digital print data concurrently, and it can easily read recording data. The digital printing intervals can be changed by the simple lever operation.

● INSTRUMENT WITH 12P REPETITIVE FUNCTION

This instrument repeatedly records 24 measuring points by repeating 12 dotting colors.

It identifies 1~12 dots and 13~24 dots from each other by selection indicator lamps.



■ MODELS

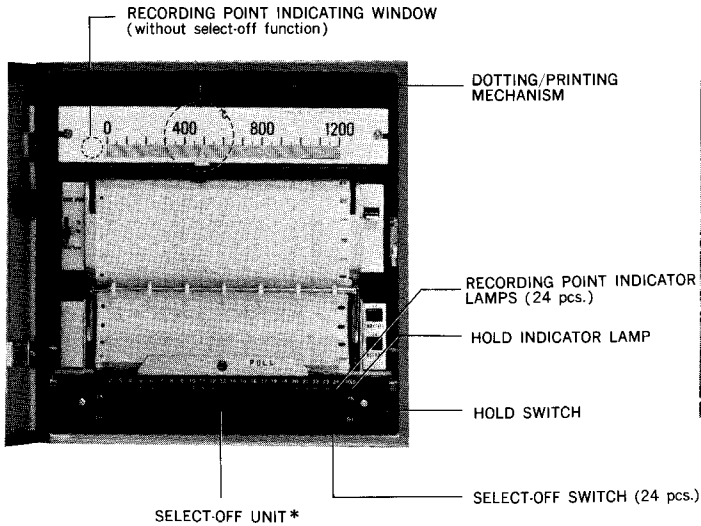
Recording system	Input signal	Alarm system		
		Without alarm	Upper-limit (Lower-limit) alarm	Upper-limit/Lower-limit alarm
Instrument with select-off function	mV	EH800-24S	EH826-24S	EH836-24S
	Thermocouple	EH100-24S	EH126-24S	EH136-24S
	Resistance thermometer	EH200-24S	EH226-24S	EH236-24S
	Thermistor	EH300-24S	EH326-24S	EH336-24S
Instrument without select-off function	mV	EH800-24N	EH826-24N	EH836-24N
	Thermocouple	EH100-24N	EH126-24N	EH136-24N
	Resistance thermometer	EH200-24N	EH226-24N	EH236-24N
	Thermistor	EH300-24N	EH326-24N	EH336-24N
Instrument with 12P repetitive recording function	mV	EH800-24- -	EH826-24- -	EH836-24- -
	Thermocouple	EH100-24- -	EH126-24- -	EH136-24- -
	Resistance thermometer	EH200-24- -	EH226-24- -	EH236-24- -
	Thermistor	EH300-24- -	EH326-24- -	EH336-24- -

↑ Specified as 12P repetition

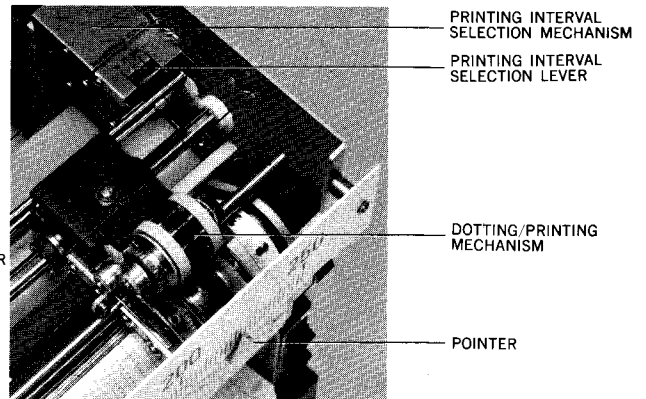
■ STRUCTURE, RECORDING POINT INDICATING METHOD, AND RECORDING EXAMPLES

The indicating mechanism, chart feed mechanism and other basic structure of this instrument are the same as those of the EH series dotting type recorders/recording alarms, except for the dotting/printing mechanism with select-off function or without select-off function and recording point indicating method. In addition, the instrument with the select-off function is provided with a built-in select-off function below the chassis. For names of parts and details of functions, refer to the instruction manual for recorders. The instrument with 12P repetitive function has no printing mechanism, and its dotting mechanism is the same as in the 12-point instrument.

● Names of Major Component Parts



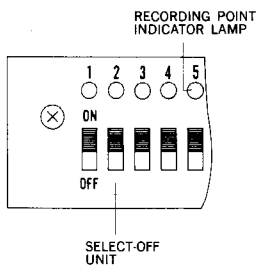
● Dotting/Printing Mechanism



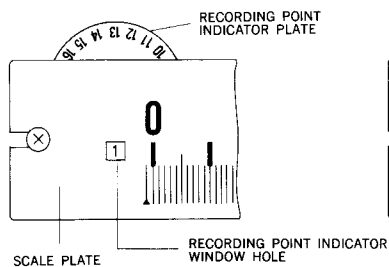
* : Equipment for the instrument with select-off function

● Recording Point Indicating Method

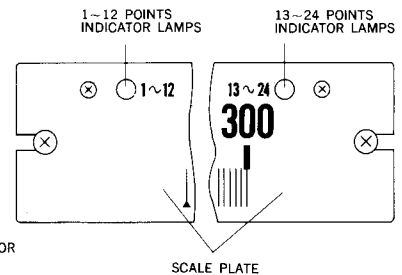
· Instrument with select-off function



· Instrument without select-off function

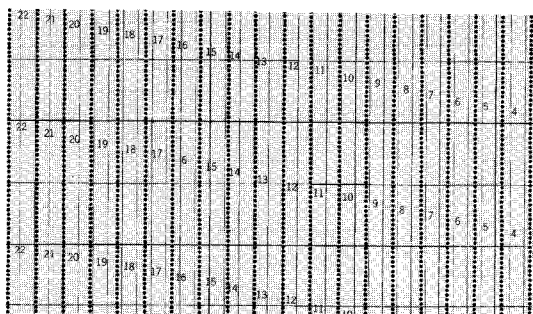


· Instrument with 12P repetitive function

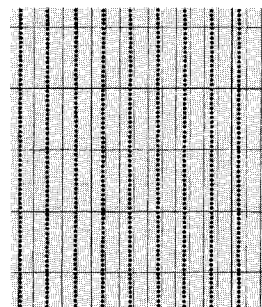


● Recording Example

· Recording with select-off function/without select-off function



· Recording with 12P repetitive function



■ INSTALLATION

The external dimensions, mounting sizes and installation method of this instrument are the same as those in the EH series dotting type recorders/recording alarms, except that the depth of the case is longer by 10mm when the instrument is provided with the select-off function or not provided with the select-off function.

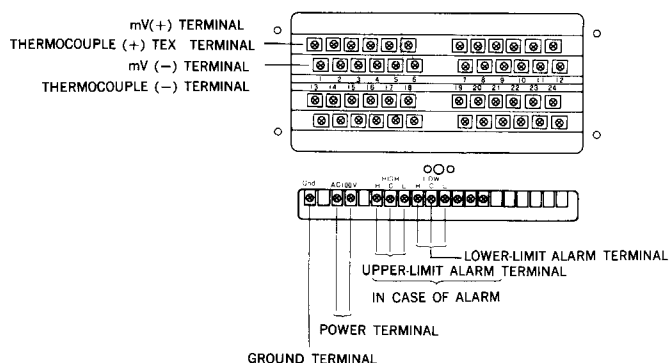
For mounting the instrument on an instrument panel, refer to the "Installation" in the instruction manual for recorders.

■ CONNECTIONS

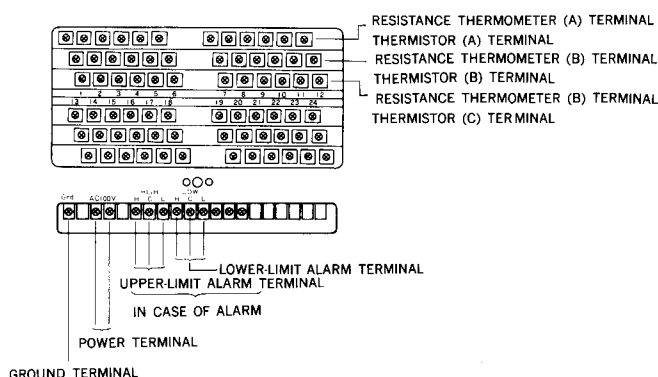
Connect cables to the power terminals, ground terminal and input terminals of this instrument. For recording alarm, the alarm terminals must also be connected. The connection method is the same as in the EH series dotting type recorders/recording alarms, except that the mounting layout of terminals on the rear panel differs. The terminal board for power terminals, ground terminal and alarm terminals is separated from the terminal board for input terminals in this instrument.

Connect cables to corresponding terminals, referring to the "Connections" in the instruction manual for recorders and the following terminal board diagram.

· mV, Thermocouple Input Terminal Board



· Resistance Thermometer/Thermistor Input Terminal Board

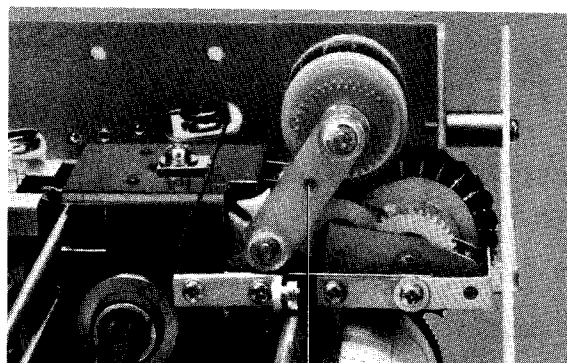


■ INJECTION OF RECORDING INK

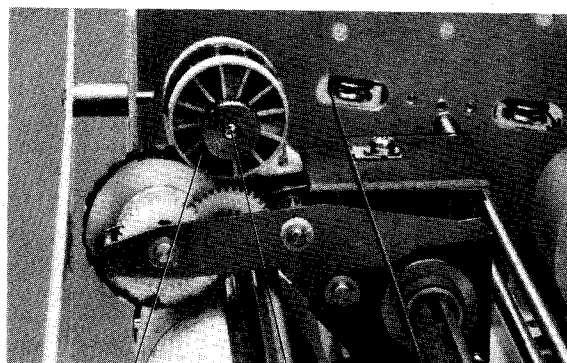
(In case of instrument with select-off function or without select-off function)

- ① Prepare the pad case from the accessory box. The ink pads of the pad case are colored with the following ink, in advance.

1 : red	2 : black	3 : sky blue	4 : green
5 : brown	6 : purple	7 : orange	8 : gray
9 : blue	10 : brownish green	11 : scarlet	
12 : violet			
- ② Draw the case out of the chassis.
- ③ Lift the pad holding lever of the dotting mechanism by fingers, and insert the pad case onto the pad shaft, so that the pin of the dotting mechanism is inserted into the pad case.
- ④ Reset the chassis as before. Now, the ink pad has been mounted.
- ⑤ Replenish attached ink when the ink color has become light after long-time recording. For supplying ink, remove the pad holding lever by holding it with fingers, and inject ink. The recording point number is entered on the side face of the pad case.



PAD HOLDING LEVER



PAD CASE

PAD SHAFT

SELECTION OF PRINTING INTERVALS

(In case of instrument with select-off function/without select-off function)

Four selection grooves marked with 0, 25, 145 and are provided in the printing interval selection mechanism mounted at the rear of the dotting/printing mechanism (upper right part of the chassis), and the printing interval can be selected in four ways by inserting the printing interval selection lever into a desired selection groove by holding it with fingers as follows.

- ① Printing is made every dot when 0 is selected.
- ② Printing is made every 25 dots when 25 is selected.
- ③ Printing is made every 145 dots when 145 is selected.
- ④ Digital printing is not done when — is selected.

SELECT-OFF UNIT (With select-off function only)

SELECTION OF RECORDING POINTS

Twenty four select-off switches and recording point indicator lamps corresponding to recording points are arranged on the front panel of the select-off unit as shown in the right figure.

Turn on the select-off switches at the point where printing is required, and turn off other select switches.

The instrument indicates and records data at the recording points where the select off switches are turned on.

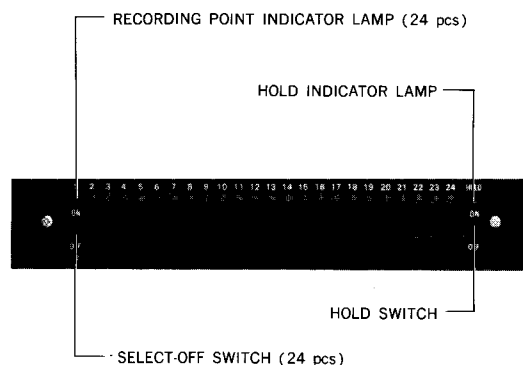
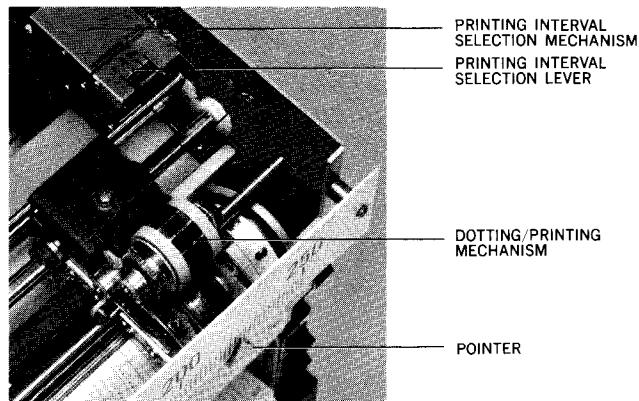
It neither indicates nor records data at recording points where the select-off switches are turned off, and transfers to the next point in about 0.5 sec.

The indicator lamps light at the recording points where the select-off switches are turned on.

HOLD OF MEASURING POINTS

When the hold switch mounted at the right end of the front panel of the select-off unit is turned on the hold indicator lamp lights, and the chart feed and dotting/printing record are stopped to indicate the held measuring point only.

Turn off the hold switch during normal operation.



GENERAL SPECIFICATIONS

INSTRUMENT WITH SELECT-OFF FUNCTION

NO. OF RECORDING POINTS : 24 points

RECORDING POINT INDICATION

: 1~24 red lamps indication

RECORDING SYSTEM

: 24-point 12-color ink pad dot recording and each 24-point digital printing recording

PRINTING INTERVAL

: 4-step selection ; printing every dotting printing every 25 dots, printing ever 145 dots and no printing

POWER CONSUMPTION : About 30VA

WEIGHT : About 16 kg

Note) This instrument is not provided with any fluorescent lamp.

INSTRUMENT WITHOUT SELECT-OFF FUNCTION

NO. OF RECORDING POINTS : 24 points

RECORDING POINT INDICATION

: 1~24 digital display on recording point indicator plate in the window hole on the left side of the scale plate

PRINTING INTERVAL

: 4-step selection ; printing every dotting printing ever 25 dots, printing every 145 dots and no printing

POWER CONSUMPTION : About 30VA

WEIGHT : About 15 kg

Note) This instrument is not provided with any fluorescent lamp.

INSTRUMENT WITH 12P REPETITIVE FUNCTION

NO. OF RECORDING POINTS : 24 points

RECORDING POINT INDICATION

: 1~12-point digital display by dotting mechanism recording point indicator plate and 1~12/13~24 selection indicator lamps on the right and left of the scale plate

RECORDING SYSTEM

: 24-point, 12-color ink pad dot recording

POWER CONSUMPTION : About 30VA

WEIGHT : About 15 kg

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