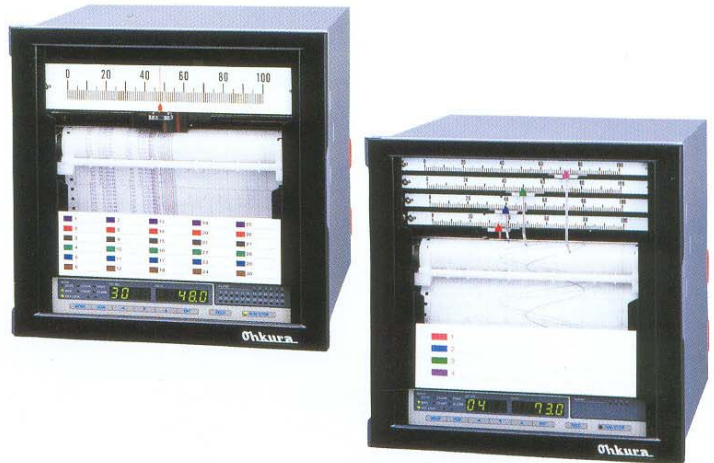


FEATURES

- CONTACT FREE FEEDBACK POTENTIOMETER AND INPUT SELECTOR
- BOTH TREND & DATA LOGGING PRINTOUTS
- UNIVERSAL INPUTS AND RANGES
- INDIVIDUAL SCALE PLATE
- WIDE RANGE OF POWER INPUT VOLTAGE
- OPTIONAL COMMUNICATION INTERFACE RS-232C AND RS-422A
- RECORDING OF UP TO 4 PENS & 30 POINTS



SPECIFICATIONS

- Number of Inputs : 1, 2, 3, 4pen, 6, 12, 24 or 30 point
- type of input ;
 - DC Voltage : 4mVDC min., 20VDC max.
 - Direct thermocouple : K, T, J, E, B, S, R, G, C, N, PR 40 · 20, PLII, U, L, Au-Fe
 - RTD : Pt100Ω, Pt50Ω, JPt100Ω, Cu10Ω(at 0℃) Cu10Ω(at25)
 - Current : 4-20mA
- Recording width : 180mm calibrated
- Recording accuracy : ±0.5%max.
- Open input protection(option) : Up scale with mV or TC Input
- Chart speed : 1-3600mm/h, 1-300mm/min, in pen models; 1-1800mm/h in multipoint models
- Chart paper : Fold chart standard, 23m long, 210mm width
- Pen response : 1.0 sec. max. to 90% of step-wise input
- Recording color : 4 colors of Red, Blue, Green, Purple in pen models 6 colors of Purple, Red, Black, Green, Blue, Brown in multipoint models
- Data print color : Purple(Red on alarm for multipoint models)
- Dot print interval : 5 sec. per channel
- Input sampling : 120 msec. in pen models; 5 sec. per channel in multipoint models
- Print head : Wire dot 1 color ribbon cartridge in pen models; 6 color ribbon cartridge in multipoint models
- Cartridge pen : Disposable felt pen
- Alarm : 4 setpoints per channel(Relay)
- Alarm output(option) : 2 relays drive per setting, Form-A, 250VAC 3A/125VDC 0.5A/30VDC 3A max. Hysteresis : 0.5 ± 0.2% Setting accuracy: ± 0.5%
- Input impedance : 10MΩ min, in mV/TC input, 200kΩ, min. in mV/TC input with open input protection, 1MΩ min in Volt input and 100Ω min, in mA Input
- Source Impedance : 10kΩ max. in mV/TC input, 200Ω MAX. In mV/TC input with open input protection, 1kΩ MAX. In Volt input and 10Ω max. per wire in RTD input
- CMRR : 140dB min. in 50/80 ± 0.5Hz
- NMRR : 60dB min. in 50/60 ± 0.5Hz
- Isolation resistance : Input/ground 500VDC, 20MΩ min Dielectric strength : Power input/ground 1500VAC, 1 minute duration, input/ground 500VAC, 1 minute duration
- Power input : 85 to 264VAC, 45 to 65Hz Allowable instant power failure : 50ms max.
- Power consumption : 30VA max in pen models, 25VA max. in multipoint models
- Vibration resistance : 1m/s² max., 10-60Hz
- Shock resistance : 2m/s² max.
- Operating conditions : 0 to 50℃, 35 to 80%RH
- Clock precision : ± 50ppm
- Weight : 14.0 kgs max.(1 pen model); 15.0 kgs max. (2pen model) : 16.5 kgs max. (3 pen model) : 18.0 kgs max(4 pen model); 15.0 kgs max.(multipoint model)

STANDARD FUNCTIONS

FUNCTION	DESCRIPTION
Analog indication	Process variable is indicated on a scale plate.
Recorder selection	Multipoint models are selective from standard 6 point recorder or trace-like 1 point recorder with sampling time of 0.5 sec. In manual mode
Analog recording	Pen tracing(pen models), Printing by 6 color ribbon cartridge(dot point models)
Engineering unit indication	Engineering unit is indicated on the scale plate
Digital display	Indicates channel no., process variable, date, chart, speed, alarm setpoint on the indicator 1 & 2.
Scaling	Indicates and prints process variable with setpoint.
Logging print	Prints each channels' s process variable, engineering unit on the chart paper in selective printing mode of synchronous logging & recording mode or end mode for analog recording.
Calendar	Prints year and date at a programmed time.
Time print	Prints time at a programmed interval.
List print	Prints type of input, range, engineering unit, alarm setpoint, date, time, chart speed, scaling and logging print status on the chart paper.
Skip	Abandon dot print of inputs as required by dot point models.
Programming	Chart speed, alarm setpoint logging print interval, skip, date and time can be programmed.
Memory backup	Back-up for clock by lithium batteries fir 10 years or 5 years in unused and for program by nonvolatile memory.
Key lock	Enter automatically into data lock after 5 minutes of non key operation.
Alarm	4 setpoints alarm per channel
Time indicator	Indicates year, month, day, hour, minute, Adjust for leap year automatically
Self diagnostics	Indicates " ERROR" and outpnts when faulty.

OPTION

CODE	FUNCTION	DESCRIPTION
A01	Open input protection	Sets indicator at over 100% or 0% per inputs when Input becomes open for TC or $\pm 50\text{mV}$ max. input.
A02	Zone recording	Recording on the chart track ranged per inputs.
A06	Alarm on print	Prints time, Input number setting number, and type in alarming
A07	Alarm recovery on print	Prints recovered time, channels, setting number, type.
A08	Damping	Digital filtering for measured data(process variable)in unsteady process, (Pen models only) Filter constact rangeability: 1.0000-0.0001 Formula is : $k=0.64/T_1$ $K=\text{Filter constact}$ $T_1=99.5\%$ damping
E07	hysteresis width	Hysteresis width can be set.

NOTE : Recording accuracy may change in case optional Zone recording is installed.

DI REMOTE OPTIOSNS

CODE	FUNCTION	DESCRIPTION
B01	Chart stsr/stop	Close:starts Open:stops
B02	Change chart speed	Close:1st Open:2nd
B10	Remote logging print	Close:starts to print

CODE	FUNCTION	DESCRIPTION
CO1	Analog Scale	User's

- ALARM BOARD : 8 relays
- INTERFACE : RS-422A
RS-232C

Dimensions : 288 × 288 × 340mm

Mounting : Panel mount

Allowable backward inclination:30°

Material : Aluminum die cast(Front bezel);

Sheet copper(Case)

Color : Metallic silver(Case) : Black(Door)

MAXIMUM RANGE & ACCURACY

The junction compensation accuracy is not calculated into digital readout accuracy and recording accuracy.

The Junction compensation accuracy is based on operating conditions : 23 ± 2 °C

Temperature : 55 ± 10% RH

Humidity : 85 ~ 264V AC

Power source : 30 minutes min.

Warm up time : no effect of vibration resistance and shock resistance

Limit of compensation error :

± 1 °C at R, S, B, PR40 ~ 20

± 0.5 °C at K, E, J, T, G, C, N

Digital readout accuracy : ± (0.2%+1 digit)

• Note

(*1) : Extension scaling of up 3 times among each ranges : ± (0.3% +1 digit)

(*2) : Ranges under a span of 0 ~ 400 °C :

Accuracy is not ont of guarantee

(*3) : Ranges of 0 ~ 300 °C :2%, 300 ~ 800 °C : ± 1%

(*4) : Ranges of 0 ~ 200 °C :0.3% + 1 digit

(*5) : ± (0.5% + 1 digit)

(*6) : ± (0.8% + 1 digit)

Recording accuracy : ± 0.5

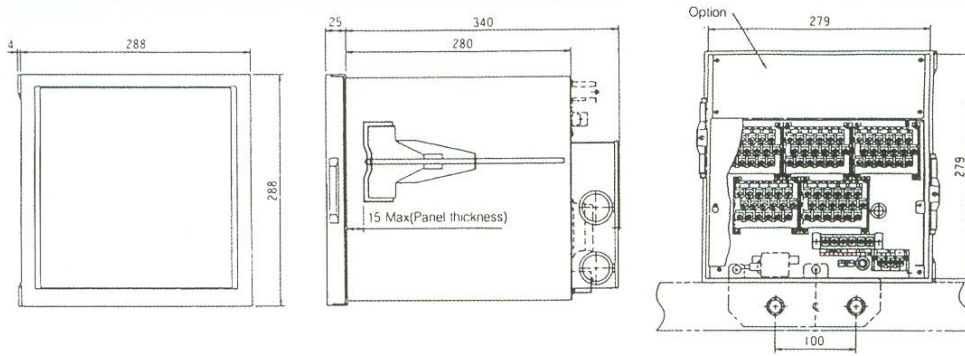
• Note

(*2, *6) : Digital readout accuary ± 0.3%

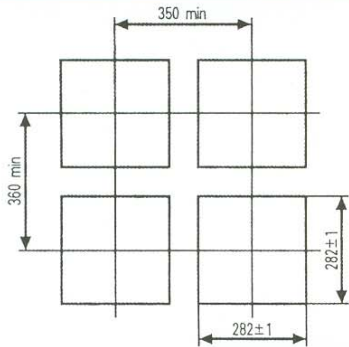
GROUP	INPUTA	MAX. RESOLUTION	RANGE(* 1)	
Volt	mV	10 μ V	-10.0	10.0mV
	mV	10 μ V	-50.0	50.0mV
	mV	100 μ V	-200.0	200.0mV
	V	1mV	-1.0	1.0V
	V	1mV	-5.0	5.0V
	V	10mV	-20.0	20.0V
	V	1mV	0.0	5.0V
V	1mV	1.0	5.0V	
Current	mA	0.01mA	4.0	20.0mA
TC	R	0.1 °C	0.0	1450.0 °C
	P	0.1 °C	0.0	1760.0 °C
	S	0.1 °C	0.0	1760.0 °C
	B	0.1 °C	0.0	1830.0 °C
	K	0.1 °C	0.0	100.0 °C
	K	0.1 °C	0.0	700.0 °C
	K	0.1 °C	0.0	900.0 °C
	K	0.1 °C	-200.0	100.0 °C
	K	0.1 °C	-200.0	400.0 °C
	K	0.1 °C	-200.0	650.0 °C
	K	0.1 °C	-200.0	1370.0 °C
	K	0.1 °C	0.0	1000.0 °C
	E	0.1 °C	0.0	150.0 °C
	E	0.1 °C	0.0	400.0 °C
	E	0.1 °C	-200.0	500.0 °C
	E	0.1 °C	-200.0	600.0 °C
	E	0.1 °C	-200.0	900.0 °C
	E	0.1 °C	-200.0	250.0 °C
	E	0.1 °C	-200.0	400.0 °C
	E	0.1 °C	-200.0	700.0 °C
	J	0.1 °C	0.0	150.0 °C
	J	0.1 °C	0.0	500.0 °C
	J	0.1 °C	-200.0	650.0 °C
	J	0.1 °C	-200.0	300.0 °C
	J	0.1 °C	-200.0	500.0 °C
	J	0.1 °C	-200.0	900.0 °C
	J	0.1 °C	-200.0	750.0 °C
	T	0.1 °C	0.0	150.0 °C
	T	0.1 °C	0.0	400.0 °C
	T	0.1 °C	-200.0	350.0 °C
	T	0.1 °C	-200.0	400.0 °C
	G	0.1 °C	0.0	2320.0 °C
G	0.1 °C	0.0	2320.0 °C	
N	0.1 °C	0.0	900.0 °C	
N	0.1 °C	0.0	1260.0 °C	
PR40-20	0.1 °C	0.0	1880.0 °C (*3)	
U	0.1 °C	-200.0	400.0 °C (*4)	
L	0.1 °C	-200.0	900.0 °C (*4)	
Au-Fe	0.1K	0.0	300.0K (*5)	
RTD	JPt100	0.1 °C	-50.0	100.0 °C
	JPt100	0.1 °C	-200.0	600.0 °C
	Pt100	0.1 °C	-50.0	100.0 °C
	Pt100	0.1 °C	-200.0	600.0 °C
	Pt50	0.1 °C	-50.0	100.0 °C
	Pt50	0.1 °C	-100.0	250.0 °C
	Pt50	0.1 °C	-200.0	550.0 °C
	Cu10at 25 °C	0.1 °C	-50.0	200.0 °C (*6)
Cu10 at0 °C	0.1 °C	-50.0	200.0 (*6)	
TC	PLII	0.1 °C	0.0	1380.0 °C

DESCRIPTION	MODEL	MODELS/NUMBERS					NOTE
		1 PEN MODEL	2 PEN MODEL	3 PEN MODEL	4 PEN MODEL	MULTIPONT MODEL	
Box	H2H07827	1	1	1	1	1	
Lubricating oil	H4A12290	1	1	1	1	1	
Fuse	IPSO565A01	1	1	1	1	1	
Chart paper	HZCAA1025AF001	1	1	1	1	1	100 division
Chart pen NO.1	HPSR001L0001	1	1	1	1		Red
Cartridge pen No.2	HPSR001L0002		1	1	1		Blue
Cartridge Pen NO.3	HPSR001L0003			1	1		Green
Cartridge pen NO.4	HPSR001L0004				1		Purple
Ribbon cartridge	HPSR001H0003	1	1	1	1		Purple
Ribbon cartridge	HPSR001H0005					1	6 color
Lwrench	HPSAA003A001					1	for M3 screw
Mounting bracket	H4A 13299	2	2	2	2	2	
Instruction manual	HXPRM 18mmL0001	1	1	1	1		
	HXPRM 18mmL0002					1	

OUTSIDE DIMENSION



P.ANEL CUTOUT



Door open angle:135°
 Panel : Sheet copper, 3mm thickness min.

MODEL CODE NUMBER

RM18	TYPE	DESCRIPTION	
	01 L	1 pen recorder	
	02 L	2 pen recorder	
	03 L	3 pen recorder	
	04 L	4 pen recorder	
	06 L	6 point recorder	
	12 L	12 point recorder	
	24 L	24 point recorder	
	30 L	30 point recorder	
	COED	COMMUNICATION INTERFACE	
	0	None	
	1	RS-232c	
	2	RS-422A	
	COED	DI/ALARM BOARD	
	0	None	
	1	8 relays	
	2	5 DI	
	3	8 relays + 5 DI	
	COED	OPTION	
	O	None	
	Z	Custom spec' or option code	

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