

Specifications

*Recording and indicating section**Input:* 0.2 ~ 1.0 kg/cm²*Number of record:* 1-pen (red), 2-pen (red and blue)*Scale length:* 101.6 mm*Indicating and recording:* Accuracy; $\pm 0.5\%$ FS
Repeatability; Within 0.2% FS
Dead band; Within 0.2% FS*Pen speed:* 3 ~ 15 sec./FS adjustable*Chart:* Width; 101.6 mm

Type; Strip, roll or fold

Length; Roll type - 15 m (30 days at 19 mm/hr.)

Fold type - 7.5 m (15 days at 19 mm/hr.)

Chart speed: 19 mm/hr.*Chart motor power supply:* AC 100, 110/115, 120, 220/240V
 $\pm 10\%$, 50/60 Hz ± 2 Hz or AC 24 V (Semi-standard option)*Power consumption:* 3 VA*Set-point section**Set-point setting:* Manual (By set-point transmitter)Accuracy; $\pm 0.5\%$ FS

Repeatability; Within 0.2% FS

Set-point scale length: 101.6 mm*Manual control unit**Valve meter:* Scale; 0 ~ 100% (20 even div.)Accuracy; $\pm 3.0\%$ FS

Repeatability; Within 0.5% FS

Auto-Man. transfer: Balanceless-Bumpless*Output air capacity:* 50 Nl/min.*Control unit**Output:* 0.2 ~ 1.0 kg/cm²*Type of control:* P (semi-standard), PI, PI (batch control)
and PID*Controller performance:*

Proportional band(P); 5 ~ 50% or 50 ~ 500% transferable.

Integral (I); 0.02 ~ 50 min.

Derivative (D); 0.02 ~ 50 min.

Output air capacity: 50 Nl/min.*Air supply:* 1.4 \pm 0.14 kg/cm²*Air consumption:* (When 50% output, balanced state.)

Model NUL 1; 14 Nl/min.

Model NUL 2; 15 Nl/min.

Operating conditions: Temperature; 0 ~ 50°C
Humidity; 10 ~ 90% RH*Mounting:* Indoor panel mounting.*Mounting angle:* Up to 60° case rear down from horizontal.*Net weight:* 10.7 kg*Color finish:* Bezel; Dark beige (Munsell 10 YR 4.7/0.5)

Lower mask; Aluminic silver

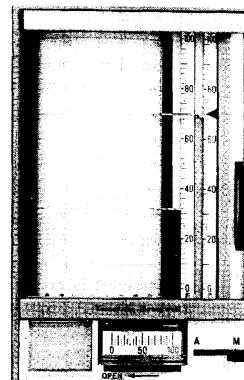
Case; Dark beige (Munsell 10YR 4.7/0.5)

Connections: Air; PT 1/4 (ISO R7 1/4") or NPT 1/4 tap thread

Electric; M 3.5 mm screws

Dimension: 152.3 H x 101.5 W x 600 D (mm)

VUMATIK
RECORDER CONTROLLER
MANUAL SET-POINT (LOCAL)
 MODEL ; NUL



NUL 2

Options

Following options are available.
 Item (1), (2) are the standard options.

(1) Lamp (2-set)

Number of lamp: 4-lamp (Can be divided into two sections.)

Rating: 24 V, 40 mA/lamp

(2) Monitor switch (With a lamp set)

Number of alarm: $\left\{ \begin{array}{l} \text{PV 1 pt. (High or low)} \\ \text{PV 2 pts. (High and low on 1 input)} \\ \text{Deviation 1 pt.} \end{array} \right.$

Setting span: $\left\{ \begin{array}{l} 0 \sim 100\% \text{ FS (PV monitor)} \\ 100 \sim 0 \sim 100\% \text{ FS (Dev. monitor)} \end{array} \right.$
 Remark; Minimum 10% FS clearance is required between the lowest value of Hi limit and the highest value of Lo limit.

Differential gap: Within 0.5% FS

Repeatability: Within 0.5% FS

Output contact rating: AC 250 V, 4A

Item (3) ~ (8) are the semi-standard options.

(3) Chart speed selection (Y 55)

St'd speed x 2; 38 mm/hr. (Y 55A)

St'd speed x 3; 57 mm/hr. (Y 55B)

St'd speed x 4; 76 mm/hr. (Y 55C)

(4) Chart motor power supply of AC 24V (Y 57)

AC 24V 50 Hz (Y57A), AC 24V 60 Hz (Y 57B)

*(5) Front mask semi-standard color (Y 100A, B, C, D)**(6) P-mode controller (Y 109A)*

Proportional band; 5 ~ 50 or 50 ~ 500% transferable.

Manual reset; 0 ~ 100% FS (When SP = PV)

*(7) Chart motor stop switch (Y 114A)**(8) Make-up bottom unit (Y 120C, D)*

With output gage (Y 120C)

Blind (Y 120D)

Yamatake-Honeywell Co. Ltd.
Process Control Division

Sales Headquarters : Nagai International Bldg., 12-19, Shibuya 2 chome, Shibuya-ku, Tokyo, 150 Japan
 Tel : (03) 409-7171 Telex : J22902 Cable : YAMATAKE CO

Model Number Table

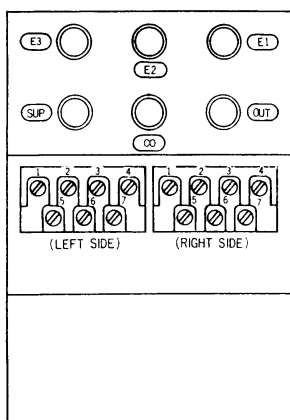
Basic Model No.		I	II	III	Description
Key No.	Control Action	Selection		Option	
NUL 1					1-pen Recorder Controller, Manual Set-point (Local)
NUL 2					2-pen Recorder Controller, Manual Set-point (Local)
	1Y				P (Semi-standard, Y 109)
	2				PI
	3				PID
	5				PI (Batch Control)
		- 1			Chart Motor Power Supply : AC 220/240 V, 50 Hz
		- 2			" : AC 220/240 V, 60 Hz
		- 3			" : AC 100 V, 50 Hz
		- 4			" : AC 100 V, 60 Hz
		- 5			" : AC 110/115 V, 50 Hz
		- 6			" : AC 110/115 V, 60 Hz
		- 7			" : AC 120 V, 50 Hz
		- 8			" : AC 120 V, 60 Hz
		- Y			" : AC 24 V (Semi-standard Y 57A, B)
			R		Type of Chart : Roll
			F		" : Fold
			- X		No Option
			- 1		Lamp (1-set)
			- 5		PV Monitor Switch, 1 point on No. 1 PV (with a lamp set)
			- 6		PV Monitor Switch, 2 points on No. 1 PV (with a lamp set)
			- 7		Deviation Monitor Switch (with a lamp set)

Notes

- When ordering "Y" semi-standard options not specified on Model Number Table, please write as : NUL 12Y-3R-X (Y □). When two or more "Y" options are needed, please refer to us.
- Front mask semi-standard color

Part Y-No.	Bezel	Lower Mask
Y 100A	Dark beige (10YR 4.7/0.5)	
Y 100B	Green (2.5G 5/1.5)	Aluminic silver
Y 100C	Dark gray (N5)	Aluminic silver
Y 100D	Black (N 1.2)	Aluminic silver

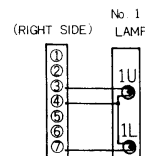
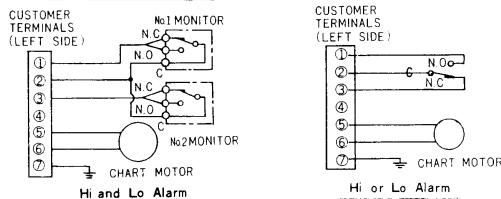
Connections



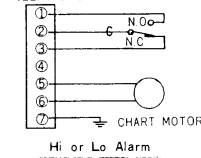
PNEUMATIC CONNECTIONS

	1-PEN REC. CONT.	2-PEN REC. CONT.
SUP	SUPPLY	SUPPLY
OUT	OUT	OUT
E1	PV	No. 1 PV
E2	-	No. 2 PV

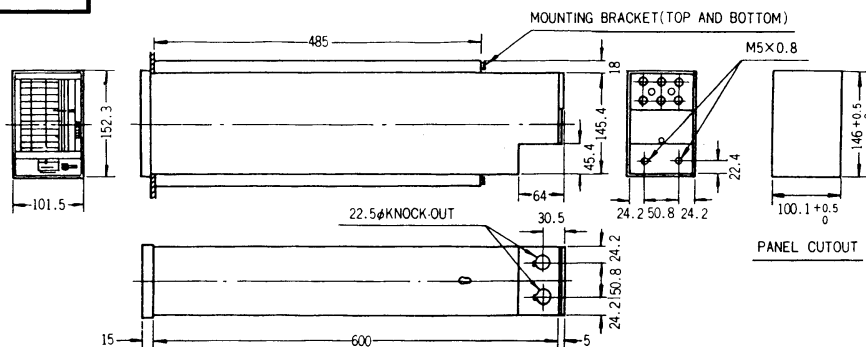
ELECTRIC CONNECTIONS



CUSTOMER TERMINALS (LEFT SIDE)



Dimensions



Ordering Information

When ordering, please specify:

- Model No.
- Scale range
- Options

* Specifications are subject to change without notice.