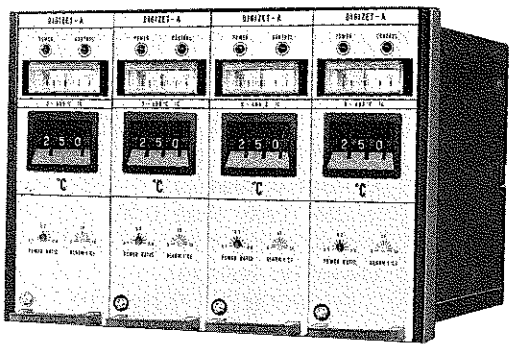
FUJI ELECTRIC

DIGITAL SETTING TEMPERATURE CONTROLLER DIGIZET-A

DATA SHEET PZA

This instrument is used to control temperatures of injection machines and many other machines. It is engineered and manufactured based on our many years of experience and technology to provide easy handling and reliable performance.



FEATURES

1. Digital system assures easy handling and accurate temperature setting.
2. Unique upright design with space-saving panel.
3. Steel housing accommodates a maximum of 6 instruments for the convenience of mounting on a machine.
4. Provision for various input connections and adjustments, permitting selection of input and adjustment according to the type of machine being controlled.
5. Proportional adjustment meter uses a unique power ratio type of offset correcting mechanism for optimum temperature control.
6. Highly reliable solid state design allows direct mounting on a machine.

SPECIFICATIONS

Input signal :
Setting range :
Setting accuracy :

Code No.	Input signal	Setting range	Setting accuracy
1	Pt resistance bulb	0 to 499°C	±2°C over full range
2	J thermocouple	0 to 499°C	±3°C over full range
3	K thermocouple	0 to 999°C	±3°C ; 0 to 599°C ±5°C ; 600 to 999°C
4	E thermocouple	0 to 799°C	±3°C ; 0 to 599°C ±5°C ; 600 to 799°C
5	R thermocouple	0 to 1699°C	±7°C ; 1000 to 1600°C
※6	Pt resistance bulb	−99.9 to +99.9°C	±0.5°C ; 0 to +99.9°C ±0.75°C ; −50 to −0.1°C
※7	K thermocouple	0 to 1199°C	±3°C ; 0 to 599°C ±5°C ; 600 to 1199°C

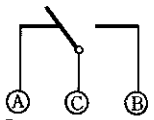
Note : Code No. indicates 5th digit of code. If dial setting exceeds the above limits, set signal is electrically limited and does not exceed the setting range.

Allowable signal source resistance :
Thermocouple input
Less than 100Ω
Allowable wiring resistance :
Resistance bulb input
Less than 10Ω per wire

Deviation indicator :
Scale length 30mm
Scale range

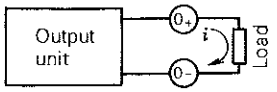
Setting span \ Adjustment	2-position	P	PID
Pt 0 to 499°C	±20°C	±20°C	±20°C
J 0 to 499°C	±20°C	±20°C	±50°C
K 0 to 999°C	±20°C	±20°C	±50°C
E 0 to 799°C	±20°C	±20°C	±50°C
R 0 to 1699°C	±50°C	±50°C	±50°C
Pt −99.9 to +99.9°C	±20°C	±20°C	±20°C
K 0 to 1199°C	±50°C	±50°C	±50°C

Output signal (in the case of contact output) :
Control action code; A, B, C, D, S, R
Output contact; One transfer contact
Contact capacity; AC 200V, 3A
When Fuji Electromagnetic Switch SRC3631-5-1 is used, the service life is
AC 100V circuit
..... 6.5 million operations
AC 200V circuit
..... 9 million operations
Contact action; nonexcitation
When heater temperature exceeds the set value or the power is OFF, the output relay is reset as shown below.

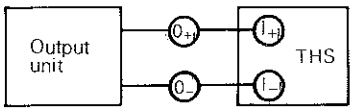


External terminal

Output signal (in the case of current output):
Control action code; N, P
Output current; DC 4 to 20mA
Allowable load resistance; 0 to 650Ω
Output operation;
Reverse or normal operation
Output terminal;



Output signal (in the case of contactless output):
Control action code; L, M, U
Application;
For thyristor switch (THS) connection
Output voltage;
OFF Less than 0.5V
ON 15 to 30V (at 3.6kΩ load)
Dielectric voltage;
DC 500V
(between output terminal and ground)
Output terminal;



Control action: Upper limit 2-position or lower limit 2-position control
Upper limit proportional or lower limit proportional control
Upper limit (reverse operation) or lower limit (normal operation) PID control

	2-position	Proportional	PID		
	Dead band	P-Width	P-Width	Reset time	Rate time
Pt 0 to 499℃	Less than 2℃	Approx. 12℃	0 to 50℃	2.5, 5 and 10 min. 3 steps	0.1 to 2.5 min. fully variable
J 0 to 499℃	Less than 2℃	Approx. 12℃	0 to 100℃		
K 0 to 999℃	Less than 2℃	Approx. 12℃	0 to 100℃		
E 0 to 799℃	Less than 2℃	Approx. 12℃	0 to 100℃		
R 0 to 1699℃	Less than 5℃	Approx. 30℃	0 to 100℃		
Pt −99.9 to +99.9℃	Less than 1℃	Approx. 6℃	0 to 50℃		
K 0 to 1199℃	Less than 5℃	Approx. 30℃	0 to 100℃		

With proportional control;
Proportional cycle
Approx. 40 seconds
(with contact output)
Approx. 1 second
(with contactless output)
(With power ratio type of offset correcting unit)
PID action
With overshoot prevention circuit

Power supply: AC 100/200V ±15% or
AC 110/220V ±15%, 50/60Hz

Power consumption:
Approx. 4VA (per unit)

Ambient temperature:
−10 to +50℃
(storage temperature −30 to +60℃)

Ambient humidity:
Less than 90% RH

Case: Mounted in steel housing
Number of units mounted;
1 to 6 units

Attachment: Reference junction compensator (thermocouple input only)
Burn-out circuit (thermocouple input only)
Alarm device

		Setting range	Dead zone	Accuracy
2-position action and proportional action		0 to 50℃	Less than 3℃	Better than ±5℃
PID action	Thermocouple input	0 to 100℃	Less than 4℃	Better than ±10℃
	Pt input	0 to 50℃	Less than 3℃	Better than ±5℃

Output contact
Nonexcited ON alarm
AC 200V, 3A

External dimensions (H×W×D):
Including housing
147×[48.5×n+12.5]×150mm
n; Number of units
Unit only
144×48×150mm

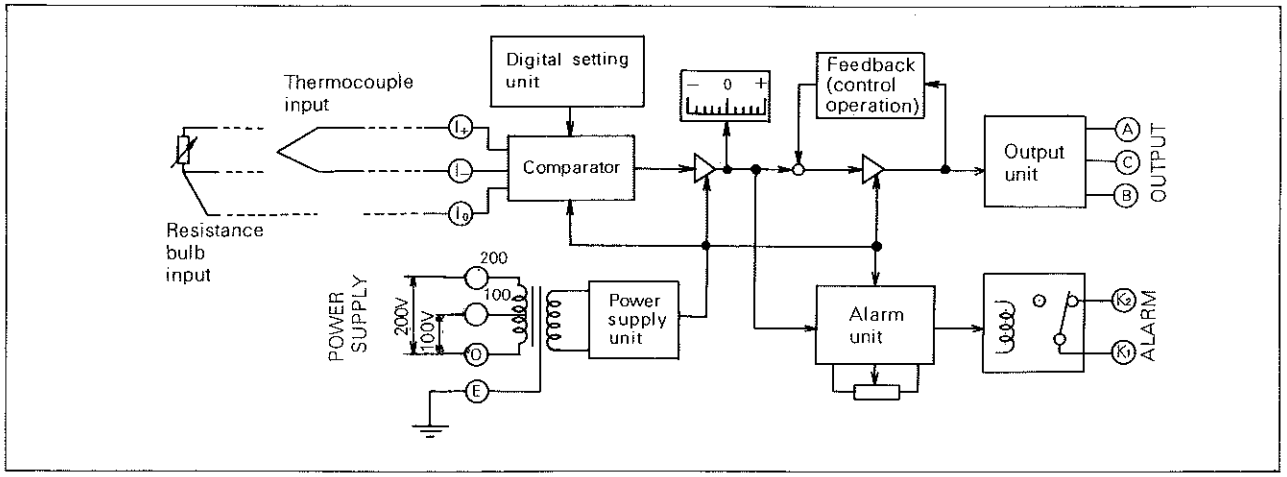
Weight: Approx. 1kg/unit (including housing)
Approx. 0.6kg/unit (unit only)

Finish color: Smoked silver (unit front)
Munsell 7.5BG 3.2/0.8 (housing)

Scope of delivery:
Instrument body (unit and housing) and mounting bracket

Mounting method:
Panel flush mounting

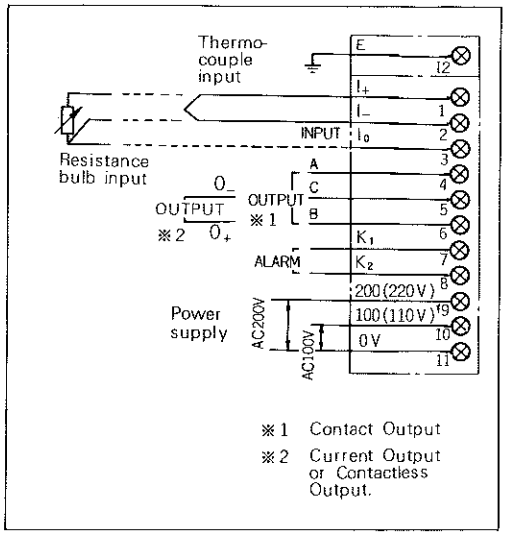
CIRCUIT BLOCK DIAGRAM



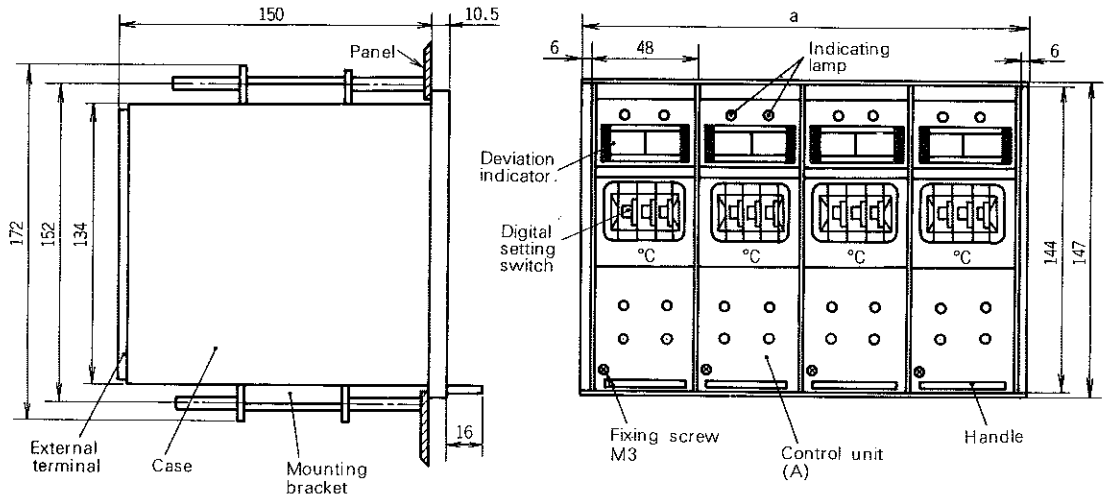
CODE SYMBOLS

P Z A	Description
	Construction
A	Controller ... One
B	Controller ... Two
C	Controller ... Three
D	Controller ... Four
E	Controller ... Five
F	Controller ... Six
Y	Controller unit (without housing)
	Input signal and setting range
1	Pt Resistance bulb 0 to 499℃
2	J Thermocouple 0 to 499℃
3	K Thermocouple 0 to 999℃
4	E Thermocouple 0 to 799℃
5	R Thermocouple 0 to 1699℃
*6	Pt Resistance bulb −99.9 to +99.9℃
*7	K Thermocouple 0 to 1199℃
*Z	Composite input (excluding A, and Y in 4th digit)
	Control action
A	Upper limit 2-position action
B	Lower limit 2-position action
C	Upper limit proportional action
D	Lower limit proportional action
L	Upper limit noncontact output
M	Upper limit noncontact output with P-action
S	Upper limit pulse PID action
R	Lower limit pulse PID action
N	Current PID action (normal action)
P	Current PID action (reverse action)
U	Noncontact output with PID action
*Z	Composite action (excluding A, and Y in 4th digit)
	Power supply
7	AC 100/200V, 50/60Hz
8	AC 110/220V, 50/60Hz
	Application
0	For general use
3	For connection to zener barrier (For connection with zener barrier, specify "3" As a detecting element, a thermocouple or a resistance bulb (Pt 100Ω) of JIS standard must be used.)
	Alarm unit
H	Upper limit alarm
L	Lower limit alarm
Y	No alarm
*Z	Composite alarm (excluding A, M and Y in 4th digit)

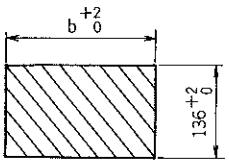
CONNECTION



EXTERNAL VIEW (Unit: mm)

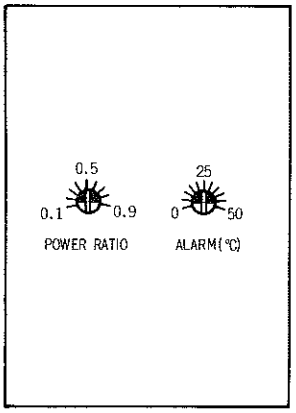


Panel cutout

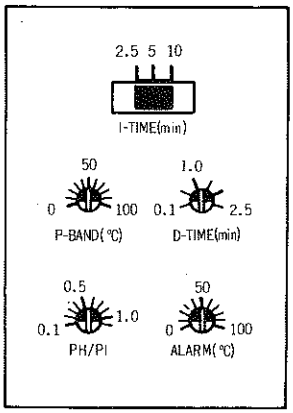


Control unit	a	b
1	61	54.5
2	109.5	103
3	158	151.5
4	206.5	200
5	255	248.5
6	303.5	297

Protortional action
(Fig. A)



PID-action
(Fig.A)



Note) These figures show some exampls of control unit.
Details are designed by request.

Indication lamp is ON

	Green lamp is ON	Red lamp is ON
Contact output	Output B—C ON	Power supply is ON
Current output	—	
Contactless output	—	

Note) · Alterations reserved without notice.
· Contact us for specifications unlisted herein.
· Asterisked (*) items; Non-standard.

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Printed in Japan
1984-2E-10