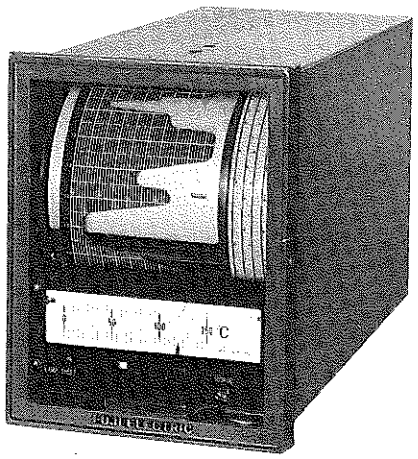
FUJI ELECTRIC

PROZET-Ⅱ PROGRAM CONTROLLER PROGRAMMER

DATA SHEET PZN

PROZET-Ⅱ is a programmer with a set value detecting mechanism, composed of a photoelectric follow-up system program setter and a high reliability non-contact type induction potentiometer. It also functions as a program controller with its built-in 2-position and time proportional ON-OFF action control unit.
Any desired program can be patterned on the programming sheet simply by using a knife.
The adoption of 6-channel time signal contacts and quick-feed mechanism permits sequential control of machines.



FEATURES

1. **Easy programming**
   The programming sheet is an opaque scale sheet adhered to a transparent sheet. Programs can be patterned by tracing with a knife along programming curves and then removing one sheet from the other.
2. **High reliability induction potentiometer**
   Non-contact type induction potentiometer assures accurate setting signals.
3. **Indicating mechanism for easy observation**
   The indicating mechanism is provided with an easy-to-read scale, a setting pointer and a deviation indicator interlocked with the setting pointer for easy reading of set values, actual values and control deviations. Indicating lamps are also provided for easy check of the programming sheet and the controller in operation.
4. **Sequential operation**
   The adoption of 6-channel time signal contacts, sheet position signal contacts and external contacts allows a sequential operation for "run", "stop" and "fast-feed". This is essential in the automatic operation of devices.

SPECIFICATIONS

⊠ Program setter unit

Program follow-up system:
Photoelectric, self-balancing system
Set value detecting system:
Non-contact type induction potentiometer
Scale length: 100mm
Setting accuracy:
±1.0% of full scale
Full-scale travel time:
Approx. 15sec.
Sheet length: Effective length····· 480mm
Total length····· 520mm
Sheet drive system:
Synchronous motor driving system
Sheet feed rate: 0.5, 1, 2, 4, 8, 12, 24, 48, 96, 144H /480mm
or 0.5, 1, 2, 4, 8, 12H/480mm
(Feed rate can be changed over by means of gear shift)
Sheet fast feed rate:
Approx. 1mm/sec.
Sheet drive indicator:
Green neon lamp·
Sheet scale: Setting scale
Pt 0 to 150°C, Pt −50 to +100°C, Pt−50to+150°C, 0to100% linear
Time base
Effective length (480mm) is divided into 48 sections (divided at every 2 sections by a bold line)
Sheet position contact:
REAL (effective program position) and DEAD (ineffective program position)
125V AC, 0.5A, SP.DT-contact

Time signal contact:
1 or 6 channels
200V AC, 1A, "SP.ST" contact. "SP.DT" contact is available on request.
The frequency of time setting per channel and the frequency of ON-OFF can be selected as desired.

Lamp burnout display:
Red light emitting diode

Fixed value setting function:
Available on request.
Fixed value setting is possible regardless of the program being used.

⊠ Input unit

Input signal and input resistance:
Voltage input
10 to 200mV DC span
(more than 30kΩ)
200mV to 30V DC span
(more than 100kΩ)
1 to 5V DC (1MΩ)
Current input
0.1 to 200mA DC span
(less than 100Ω)
4 to 20mA DC (6.25Ω)
Thermocouple input
More than 10mV DC span
(more than 30kΩ)
Reference junction compensator with upper limit burnout circuit (lower limit burnout circuit is available on roquest)
Resistance input
More than Pt(100Ω) 50°C span, 3-wire system (allowable wiring resistance: 10Ω/wire)

Transfer output signal:
Available on request.
For Pt(100Ω) input
0 to 20mV DC/0 to 400°C)
(output resistance: 5.1kΩ)

⊠ Control output (Program controller)

Contact output type:
Control action
Upper or lower limit, 2-position
Hysteresis width 0.5%
Upper or lower proportional action
Proportional band width
Approx. 2%
(Adjustable to 0 to 8%)
Proportional cycle
Approx. 15sec
(Approx. 30sec. available on request)
Contact capacity
200V AC 3A 1c contact

Current output type:
Output signal; 4 to 20mA DC
Allowable load resistance; 0 to 600Ω
Control action; PID
P ; 0 to 20%
I ; 0.5 to 20min.
D ; OFF, 0.5 to 20min
Controller with output indicator using overshoot protection circuit and LED array is also available.

⊠ Setting output (Programmer)

Setting output signal:
1 to 5V DC
(output resistance: 22Ω)
(allowable load resistance more than 20kΩ)

Deviation setting output signal:
±20mV DC/±100% deviation
(output resistance: 33Ω)

⊠ Indicator

Setting indication system:
Self-balancing system

Control deviation indicator:
Moving coil type deviation indicator interlocked with setting pointer
Indication range:
±10% of full scale
Indication allowance:
±1% of full scale

Attachment: Deviation meter scale-out indicator

⊠ Others

Power supply: 100/200V $^{+10\%}_{-15\%}$ AC, 50 or 60Hz

Power consumption:
Approx. 17VA (controller included)

Ambient temperature:
0 to 50°C

Ambient humidity:
Less than 90%RH
(storage temp.: −30 to +60°C)

Enclosure: Steel case

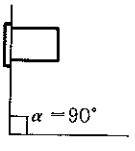
Dimensions (H×W×D):
240×192×370mm

Weight: Approx. 12kg

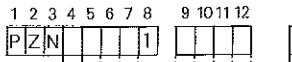
Finish color: Munsell 7.5BG 3.2/0.8 or equivalent

Scope of delivery:
Programmer, mounting brackets, programming sheet ×1, lamp ×2, readout scale (for scales other than Pt 0 to 150°C, Pt −50 to +100°C, Pt −50 to +150°C, and 0 to 100% linear)

Mounting method:
Panel mounting

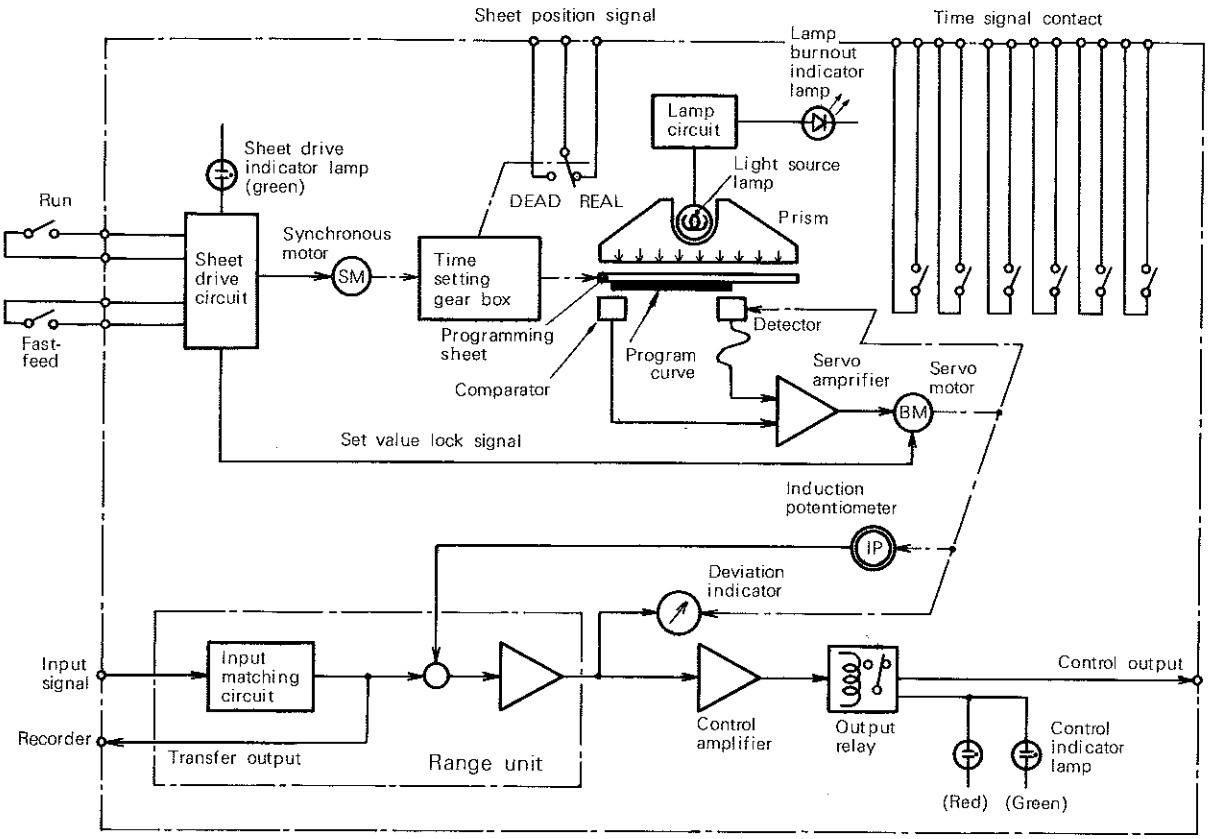


CODE SYMBOLS

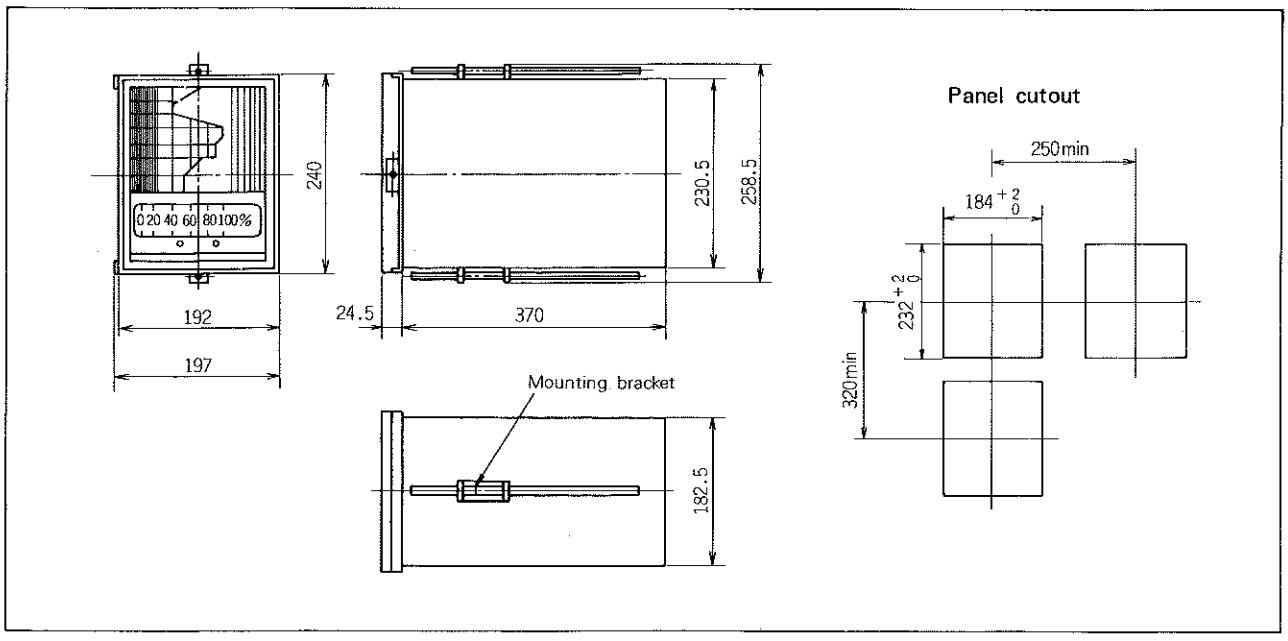


	Description
	Function
1	Program controller
6	Programmer (for deviation output)
8	Programmer
	Program sheet feed
* 1	0.5 to 144H (10-position changeover), with fast-feed
2	0.5 to 12H (6-position changeover), with fast-feed
* 3	0.5 to 144H (10-position changeover), without fast-feed
4	0.5 to 12H (6-position changeover), without fast-feed
	Setter attachments
1	With 1 time signal contact
* 2	With 1 time signal contact + fixed value setting function
3	With 6 time signal contacts
* 4	With 6 time signal contacts + fixed value setting function
* 5	With 6 time signal contacts, "SP.DT" contact
	Power supply
1	100/200V AC, 50Hz
2	100/200V AC, 60Hz
* 3	110/220V AC, 50Hz
* 4	110/220V AC, 60Hz
	Application
0	For general use
3	For zener barrier connection (Specify "3" when connecting to zener barrier (PWZB3.4) using input of thermocouple or resistance bulb)
	Input signal
Y	None (Specify "Y" when 4th digit of code is "8")
A	1 to 5V DC
B	4 to 20mA DC
D	0 to 100μA……200mA DC
E	0 to 10……200mV DC 0 to 200mV……30V DC
R	Thermocouple input (more than 10mV DC span) Reference junction compensator + up scale burnout circuit
* S	Thermocouple input (more than 10mV DC span) Reference junction compensator + down scale burnout circuit
H	More than Pt 100Ω (at 0°C) 50°C span, 3-wire system
	Control action
Y	None (Specify "Y" when 4th digit of code is "6" or "8")
A	Upper limit
B	Lower limit
C	Upper limit with proportional action
D	Lower limit with proportional action
K	PID current output
L	K + overshoot protection
M	L + output indicator
	Attachment
0	None
* 1	With transfer output signal (when 10th digit of code is "H" only)
2	With sheet position signal
3	With deviation meter scale-out indicator (when 4th digit of code is "1" only)
* 4	1 + 2
* 5	1 + 3
6	2 + 3
* 7	1 + 2 + 3

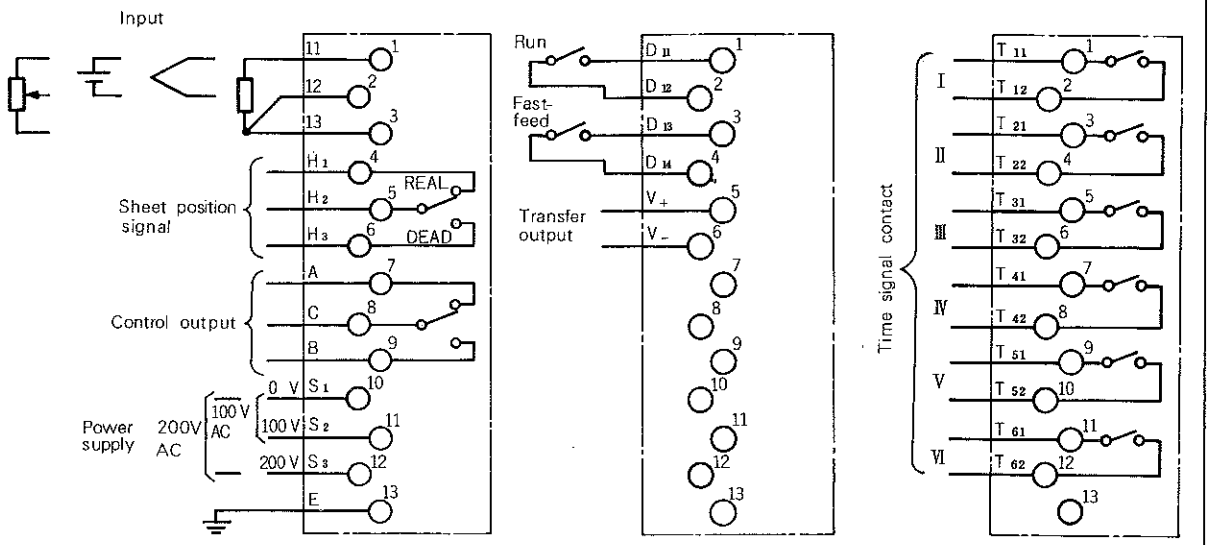
OPERATING PRINCIPLE DIAGRAM



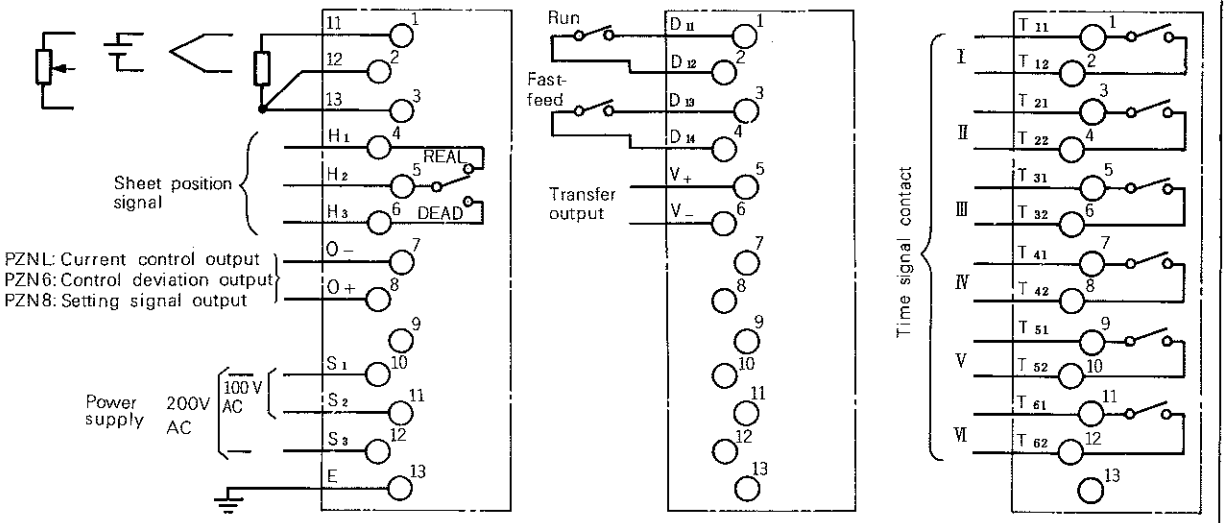
OUTLINE DIAGRAM (Unit: mm)



CONNECTION DIAGRAM



Program controller (contact output type) PZN1



Programmer PZN6, 8
Program controller (current output type) PZN1