

Model Digital indicating limit controller JCS-33A-R/M T6080

Rated range

Input (TC)	Range		Resolution	Input (RTD)	Range		Resolution
K	-200 to 1370.0°C	-320 to 2500.0°F	1°C (°F)	Pt100	-199.9 to 850.0°C	-199.9 to 999.9°F	0.1°C (°F)
	-199.9 to 400.0°C	-199.9 to 750.0°F	0.1°C (°F)		-200 to 850°C	-300 to 1500°F	1°C (°F)
J	-200 to 1000°C	-320 to 1800°F	1°C (°F)	JPt100	-199.9 to 500.0°C	-199.9 to 900.0°F	0.1°C (°F)
R	0 to 1760°C	0 to 3200°F	1°C (°F)		-200 to 500°C	-300 to 900°F	1°C (°F)
S	0 to 1760°C	0 to 3200°F	1°C (°F)	Input (DC)		Range	Resolution
B	0 to 1820°C	0 to 3300°F	1°C (°F)	4 to 20mA	-1999 to 9999 *1*2	1	
E	-200 to 800°C	-320 to 1500°F	1°C (°F)	0 to 20mA	-1999 to 9999 *1*2	1	
T	-199.9 to 400.0°C	-199.9 to 750.0°F	0.1°C (°F)	0 to 1V	-1999 to 9999 *1	1	
N	-200 to 1300°C	-320 to 2300°F	1°C (°F)	0 to 5V	-1999 to 9999 *1	1	
PL-II	0 to 1390°C	0 to 2500°F	1°C (°F)	1 to 5V	-1999 to 9999 *1	1	
C(W/Re5-26)	0 to 2315°C	0 to 4200°F	1°C (°F)	0 to 10V	-1999 to 9999 *1	1	

*1 Decimal point place change and scaling are possible.

*2 For DC (mA) current input, externally connect 50Ω shunt resistor (sold separately).

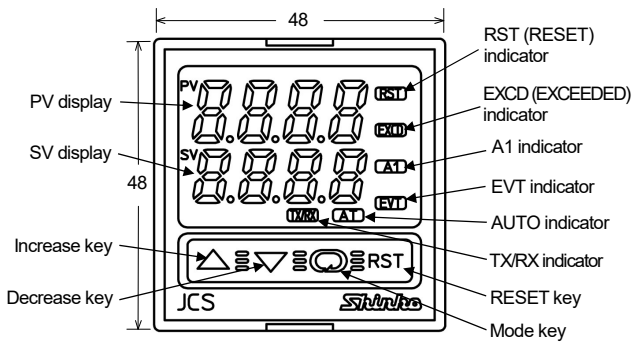
General structure

Case: Flame-resistant resin, Color: Light gray

Panel: Membrane sheet key

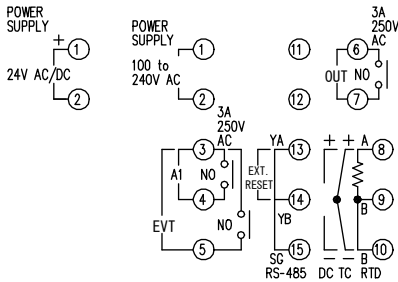
Drip-proof/Dust-proof: IP66 for the front face

Indicating structure:



- Displays** PV display: Indicates PV (Process variable).
7 segments Red LED display 4 digits, 10.2 x 4.9mm (H x W)
SV display: Indicates SV (Desired value).
7 segments Green LED display 4 digits, 8.8 x 4.9mm (H x W)
- Indicators** RST (RESET) indicator: Lights when OUT (Limit control output terminals between 6 and 7) is OFF with a green LED.
EXCD (EXCEEDED) indicator:
High limit action: The yellow LED lights when PV ≥ SV.
Low limit action: The yellow LED lights when PV ≤ SV.
A1 indicator: When Alarm 1 output is ON, the red LED lights.
EVT indicator: When A2 output (A2 option) is ON, a red LED lights.
AUTO indicator: The yellow LED flashes for auto-start of the Limit control action.
TX/RX indicator: The yellow LED lights during Serial communication TX output (sending) (C5 option).

Terminal arrangement



- POWER SUPPLY** : 100 to 240V AC or 24V AC/DC (-R/M 1)
OUT : Limit control output
A1 : Alarm 1 (A1) output
EVT : Event (A2) output (A2 option)
EXT.RESET : External reset input (SM option)
RS-485 : Serial communication (C5 option)
TC : Thermocouple input
RTD : RTD input
DC : DC current, voltage input

Power supply

JCS-33A-R/M T6080

Power supply: 100 to 240V AC 50/60Hz

Allowable fluctuation range: 85 to 264V AC

JCS-33A-R/M 1 T6080, 1

Power supply: 24V AC/DC 50/60Hz

Allowable fluctuation range: 20 to 28V AC/DC

Installation specifications

External dimensions : 48 x 48 x 106.5mm (W x H x D)

Mounting : Flush

Power consumption : Approx. 8VA

Ambient temperature: 0 to 50°C (32 to 122°F)

Ambient humidity : 35 to 85%RH (Non condensing)

Weight : Approx. 200g



■ Standard function

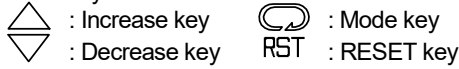
A1 type: No alarm action, High limit alarm, Low limit alarm, High/Low limits alarm, High/Low limit range alarm, Process high alarm, Process low alarm, High limit alarm with standby, Low limit alarm with standby, High/Low limits alarm with standby (A1 action Energized/Deenergized can be selected as well.)

A1 action:

- Setting accuracy is the same as the indication accuracy.
- Action: ON/OFF action
- Output: Relay contact, 1a
Control capacity 3A 250V AC (Resistive load)
Electrical life 100,000 times

■ Setting structure

Function keys:



Setting items:

- Setting by the Mode key
 - (1) PV, SV
 - (2) EXCD duration time
 - (3) Max (Min) value
 - Setting by the Increase and Mode key
 - (1) SV setting
 - (2) A1 value setting
 - (3) A2 value setting (A2 option)
 - Setting by the Decrease and Mode key
 - (1) Set value lock
 - (2) Sensor correction
 - (3) Communication protocol (C5 option)
 - (4) Instrument number (C5 option)
 - (5) Communication speed (C5 option)
 - (6) Parity (C5 option)
 - (7) Stop bit (C5 option)
- Setting by the Increase, Decrease and Mode key
 - (1) Input type
 - (2) Scaling high limit
 - (3) Scaling low limit
 - (4) Decimal point place
 - (5) PV filter time constant
 - (6) A1 type
 - (7) A2 type (A2 option)
 - (8) A1 action Energized/Deenergized
 - (9) A2 action Energized/Deenergized (A2 option)
 - (10) A1 hysteresis
 - (11) A2 hysteresis (A2 option)
 - (12) A1 action delayed timer
 - (13) A2 action delayed timer (A2 option)
 - (14) High/Low limit control
 - (15) OUT (Limit control output) hysteresis
 - (16) Auto/Manual start
 - (17) EXCD indicator lighting duration time unit

■ Control performance

Setting accuracy is the same as the indication accuracy.

Control action

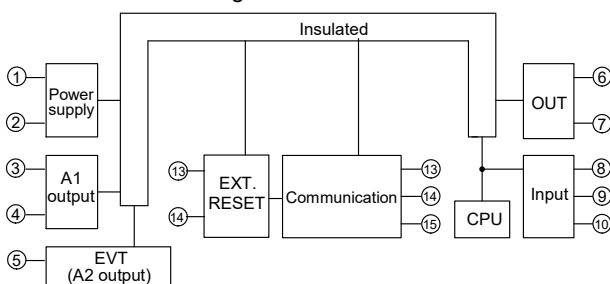
- High limit control action
- Low limit control action
- Auto limit control
- Manual limit control

Control output:

- Relay contact, 1a
- Control capacity 3A 250V AC (Resistive load)
1A 250V AC (Inductive load, $\cos\phi = 0.4$)
- Electrical life: 100,000 times

■ Insulation/Dielectric strength

Circuit Insulation configuration



Insulation resistance: $10M\Omega$ or more, at 500V DC

Dielectric strength

- Input terminal - power terminal : 1.5kV AC for 1 minute
- Output terminal - power terminal : 1.5kV AC for 1 minute

■ Indicating performance

Indication accuracy:

- TC: Within $\pm 0.2\%$ of input span ± 1 digit or within $\pm 2^\circ\text{C}$ (4°F), whichever is greater
- However, R, S input, 0 to 200°C (0 to 400°F): Within $\pm 6^\circ\text{C}$ (12°F)
- B input, 0 to 300°C (0 to 600°F): Accuracy is not guaranteed.
- K, J, E, T, N input, less than 0°C (32°F): Within $\pm 0.4\%$ of input span ± 1 digit

RTD: Within $\pm 0.1\%$ of input span ± 1 digit or within $\pm 1^\circ\text{C}$ (2°F), whichever is greater

DC: Within $\pm 0.2\%$ of input span ± 1 digit

Input sampling period: 250 ms

■ Attached functions

- Sensor correction, Set value lock,
- Automatic cold junction temperature compensation,
- Burnout, Input abnormality indication,
- Self-diagnosis, Power failure countermeasure,
- Warm-up indication,
- EXCEEDED indicator lighting duration time,
- Peak (or Bottom) value hold function

■ Optional specifications

- Alarm 2 (A2 option), Serial communication (C5 option),
- External reset input (SM option), Color: Black (BK option),
- Terminal cover (TC option)