

Data length: 8, 7 bit
 Stop bit: 1, 2 bit
 Parity: Even parity, odd parity, or none
 Communication protocol: PC-link, PC-link with SUM, MODBUS ASCII, MODBUS RTU, or LADDER
 PC-link communication: Communication protocol with a personal computer, graphic panel, or UT link module of FA-M3
 MODBUS communication: Communication protocol with a personal computer (SCADA).
 Ladder communication: Communication protocol with ladder communication module of FA-M3 and programmable controller of other manufacturers.

● Alarm Output

Signal type: Relay contact
 Output signal: N. O. contact output (contact ON at excitation) 2 points, COM common
 Contact capacity: 30 V DC, 1 A
 Alarm operating direction: High limit alarm or low limit alarm
 Relay operating direction setting: Excitation or non-excitation at normal status
 Alarm setting range: 0 to 100 % of input range
 Setting resolution: 0.1 %, 4 significant digits
 Hysteresis: Set the value added to alarm setting point at alarm release.
 Setting range: 0 to 100 % of input range
 Setting resolution: 0.1 %, 4 significant digits
 Alarm on-delay setting: Delay time from alarm condition completion to output
 (Ex. Outputted when alarm status continues for 1 second or more after input value is over alarm point in case of set value "1 second.")
 Setting range: 0 to 999 seconds
 Setting resolution: 1 second (however, add about 0.2 seconds to setting time to prevent wrong operation)
 Alarm off-delay setting: Delay time from alarm normal condition completion to output
 (Ex. Released when normal status continues for 2 seconds or more after input value becomes normal status from alarm status in case of set value "2 seconds.")
 Setting range: 0 to 999 seconds
 Setting resolution: 1 second (however, add about 0.2 seconds to setting time to prevent wrong operation)
 Alarm operation display: Front LED lights at excitation, 2 LEDs

■ Items Available to Be Set

The following items can be set through Handy Terminal:

Square root extraction, lowcut, address number, communication rate, parity, data length, stop bit, protocol, alarm operating direction, relay operating direction, alarm setting, hysteresis, alarm on-delay, alarm off-delay

■ Standard Performance

Accuracy Rating: ± 0.1 % of span

Response Speed: 200 ms, 63 % response (10 to 90 %)
 Alarm output: 350 ms (input change 10 to 90 %, alarm setting point 50 %, time till alarm output, when alarm delay setting and lockup width are min.)

Effect of Power Supply Voltage Fluctuation: ± 0.1 % or less of span for power supply voltage fluctuation of 15 to 30 V DC (± 20 %), 100 to 240 V AC/DC.

Effect of Ambient Temperature Change: ± 0.2 % or less of span for change of 10 °C

■ Safety and EMC Standards

The followings will be acquired.

Safety:

Conforms to IEC1010-1: 1990 and EN61010-11: 1993.
 Certified for CSA1010
 CSA1010 category: CAT II (IEC1010-1)
 Certified for UL508

Non-Incendive Explosion-Proof:

CSA C22.2 No. 213 Class I, Division 2, Groups A, B, C & D
 FM No. 3611 Class I, Division 2, Groups A, B, C & D

The above certified/approved instrument is only for voltage of 15 to 30 V DC.

EMC Standards:

Conforms to the following EMC standards.
 EN55011: 1991 Class A Group1 for EMI (emissions)
 EN50082-2: 1995 for EMS (immunity)
 The above conformed instrument is only for voltage of 15 to 30 V DC.

■ Power Supply and Isolation

Power Supply Rated Voltage:
 100 to 240 V AC/DC \approx 50/60 Hz
 15 to 30 V DC \approx
 Power Supply Input Voltage: 100 to 240 V AC/DC \approx (-15, +10%) 50/60 Hz
 15 to 30 V DC \approx (± 20 %)
 Power Dissipation: 24 V DC 3.6 W, 110 V DC 3.6 W
 100 V AC 6.6 VA, 200 V AC 8.8 VA
 Insulation Resistance: 100 M Ω /500 V DC between input, output-1, output-2, power supply and ground mutually
 Withstand Voltage: 2000 V AC / minute between input, (output-1, output-2), power supply, and ground mutually
 1000 V AC / minute between output-1 and output-2
 1000 V AC / minute between input and output-2 at alarm output

■ Environmental Conditions

Temperature: 0 to 50 °C
 Humidity: 5 to 90 % RH (no condensation)
 Ambient Condition: Avoid installation in such environments as corrosive gas like sulfide hydrogen, dust, sea breeze and direct sunlight
 Installation altitude 2000m or less above sea level.

■ Mounting and Appearance

Construction: Compact plug-in type
 Material: Modified Polyphenylene Oxide (Case body)
 Mounting Method: Wall, DIN rail, or dedicated VJ mounting base mountings
 Connection Method: M3 screw terminal
 External Dimension: 29.5×76×124.5 mm (W×H×D)
 Weight: Approx. 170 g

■ Accessories

Tag Number Label: 1 sheet

■ Instruction Required When Ordering

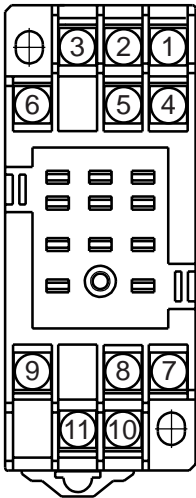
- Model and suffix code
 Shipped after setting the value of square root extraction, lowcut as specified.

■ Factory Setting

Factory settings are as follows:

- Square root extraction: without square root extraction
- Lowcut: 0 %
- **When output-2 is specified as communication output**
 - Address No.: 01
 - Communication rate: 9600 bps
 - Parity: Even
 - Data length: 8 bit
 - Stop bit: 1 bit
 - Protocol: PCLINK
- **When output-2 is specified as alarm output**
 - Alarm operating direction: High limit alarm (alarm-1), low limit alarm (alarm-2)
 - Relay operating direction: Excitation at alarm (alarm-1 / 2)
 - Alarm setting: 100 % (alarm-1), 0 % (alarm-2)
 - Hysteresis: 3 % (alarm-1 / 2)
 - Alarm on-delay: 0 second (alarm-1 / 2)
 - Alarm off- delay: 0 second (alarm-1 / 2)

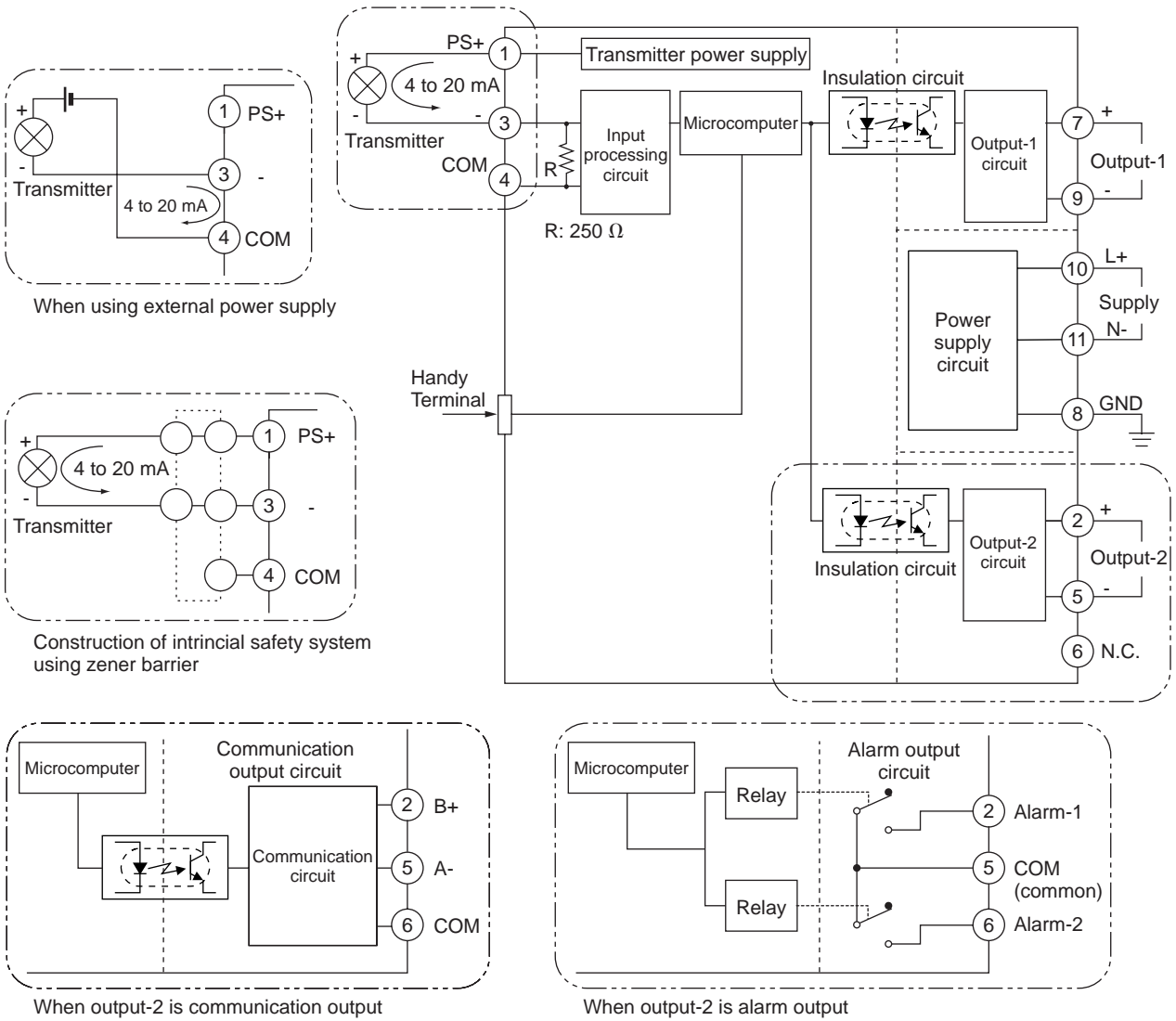
■ Terminal Arrangement & Terminal Connection



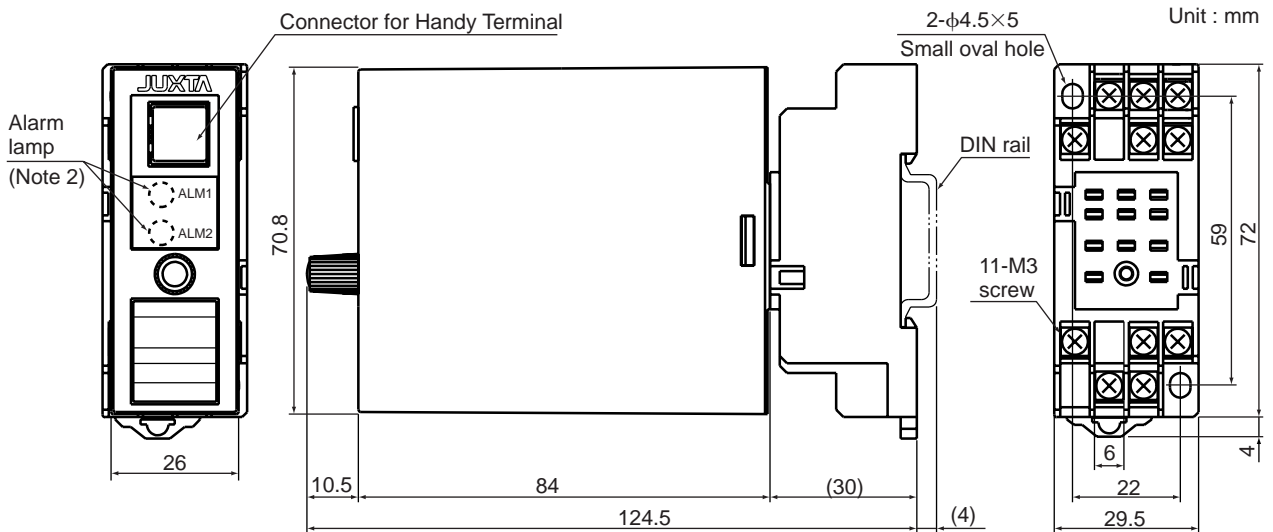
Terminal No.	Signal	Output-2 Analog output	Output-2 Communication output	Output-2 Alarm output
1	Input	(PS+)		
2	Output-2	(+)	B (+)	ALM1
3	Input	(-)		
4	Input	COM		
5	Output-2	(-)	A (-)	COM
6	Output-2	N.C.	COM	ALM2
7	Output-1	(+))		
8	GND	GND		
9	Output-1	(-)		
10	Supply	(L+)		
11	Supply	(N-)		

Note 1: In case of one output type, output-2 is N.C.

Block Diagram



External Dimension



Note 2: Only when output-2 is alarm output