High-density Signal Conditioners 10-RACK

LINEARIZER

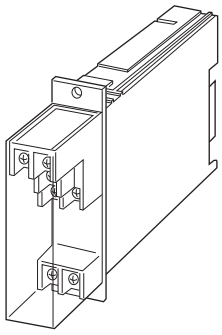
(field-programmable)

Functions & Features

• Accepting non-linear input and providing two linearized outputs, proportional to the process variables
• Micro-processor based
• On-site calibration up to 16 points using a hand-held programmer PU-2x
• Field-programmable input range
• Optional second channel output available at the front terminals and at the Standard Rack connector

Typical Applications

• V-notch weir
• Gas analyzer
• Irregular-shaped tank level input for volume calculation



MODEL: 10JFX-[1][2][3]-R[4]

ORDERING INFORMATION

• Code number: 10JFX-[1][2][3]-R[4]
Specify a code from below for each [1] through [4].
(e.g. 10JFX-6A6-R/Q)
• Special input range (For codes U1, U2, U3)
• Linearization data (max. 16 points)
Use Ordering Information Sheet (No. ESU-1669) to specify linearization data when the I/O signals are nonlinear.
• Specify the specification for option code /Q
(e.g. /C01)

[1] INPUT

Current

A: 4 – 20 mA DC (Input resistance 250 Ω)
H: 10 – 50 mA DC (Input resistance 100 Ω)

Voltage

6: 1 – 5 V DC (Input resistance 1 MΩ min.)
U1: Range ±100 mV;
(Minimum span 3 mV, Input resistance 20 kΩ min.)
U2: Range ±1000 mV;
(Minimum span 30 mV, Input resistance 20 kΩ min.)
U3: Range ±10 V;
(Minimum span 0.3 V,Input resistance 1 MΩ min.)

[2] OUTPUT 1

Current

A: 4 – 20 mA DC (Load resistance 600 Ω max.)

Voltage

6: 1 – 5 V DC (Load resistance 500 Ω min.)

[3] OUTPUT 2

0: None

Voltage

6: 1 – 5 V DC (Load resistance 5000 Ω min.)

POWER INPUT

DC Power

R: 24 V DC
(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

[4] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to M-System's web site.)

/C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

RELATED PRODUCTS

• JX configurator connection kit (model: JXCON)
• Programming Unit (model: PU-2x)

GENERAL SPECIFICATIONS

Construction: Rack-mounted; terminal access via screw terminals at the front and via card-edge connector at the rear; terminal cover provided
Connection
Input: M3.5 screw terminals (torque 0.8 N·m)
Output: Card-edge connector and M3.5 screw terminals (torque 0.8 N·m)
Power input: Supplied from card-edge connector
Screw terminal: Nickel-plated steel
Housing material: Flame-resistant resin (black)
Isolation: Input to output 1 to output 2 to power
Linearization: 16 points max. within the range of -15.00 –

+115.00 % input or output; represented as percentage of full-scale

Adjustments: Programming Unit (model: PU-2x)
(Refer to the users manual of JXCON for the adjustments configurable with JXCON.)

- Linearization data
- Input range
- Zero and span
- Simulating output
- Others

Input range can be changed with Codes U1, U2 or U3 and limited within ranges of each code type.

INPUT SPECIFICATIONS

■ **DC Current**: Input resistor incorporated
■ **DC Voltage**: -10 – +10 V DC
Minimum span: 3 mV
Offset: Max. 3 times span
Default setting will be used if not otherwise specified.
U1: 0 – 100 mV DC
U2: 0 – 1 V DC
U3: 0 – 10 V DC

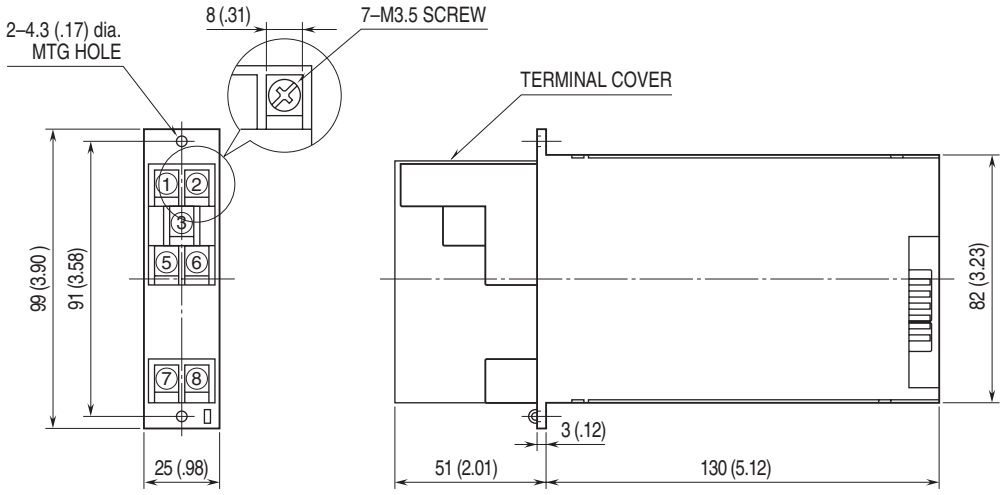
INSTALLATION

Current consumption: Approx. 60 mA with voltage output 1
Approx. 90 mA with current output 1
Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Standard Rack 10BXx
Weight: 220 g (0.49 lb)

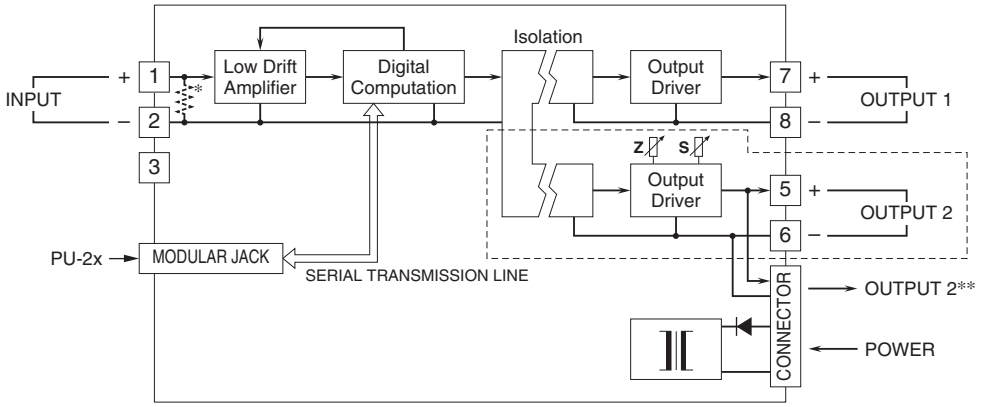
PERFORMANCE in percentage of span

Accuracy: ±0.1 % with segment gain ≤ 1 [±0.1 % × gain] with segment gain ≥ 1
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Response time: ≤ 0.5 sec. (0 – 90 %)
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 500 V AC @ 1 minute
(input to output 1 to output 2 to power)
1500 V AC @ 1 minute (input or output or power to ground)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



* Input shunt resistor incorporated for current input
**1 output type has the output 1 connected to the card-edge connector in parallel.
Remark 1) The section enclosed by broken line is only for 2nd output channel.

⚠ Specifications are subject to change without notice.

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