High-density Signal Conditioners 10-RACK

LINEARIZER

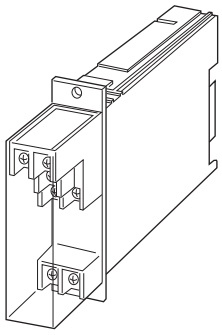
(field-programmable)

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 of [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 our web site.)
/C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

RELATED PRODUCTS

• Programming Unit (model: PU-2x)
• PC configurator software (model: JXCON)
Downloadable at our web site.
A dedicated cable is required to connect the module to the PC. Please refer to the internet software download site or the users manual for the PC configurator for applicable cable types.

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)

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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)

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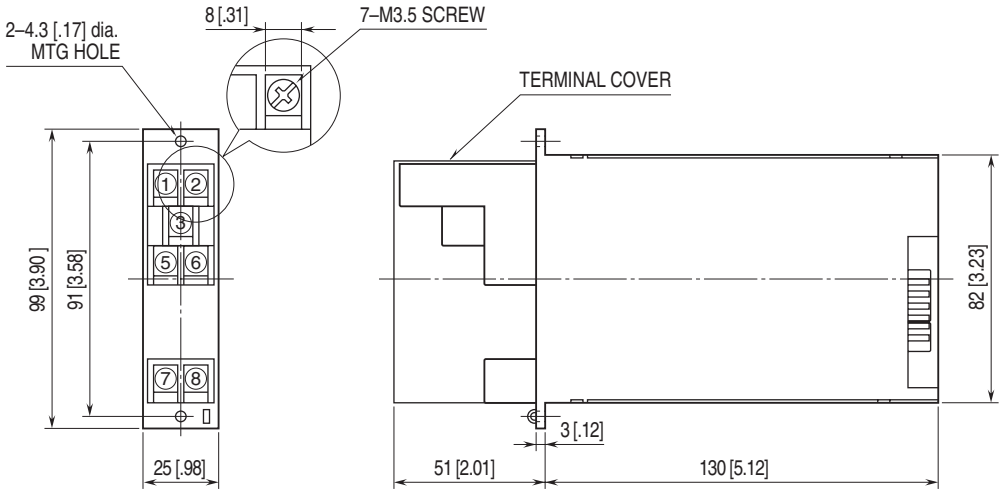
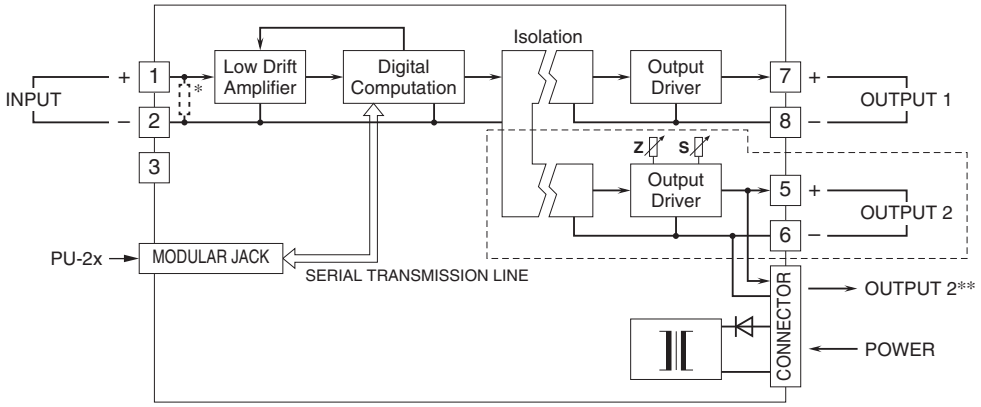
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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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