

Rack-mounted DCS Signal Conditioners 18-RACK

LINEARIZER

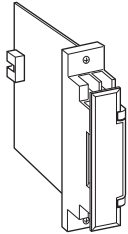
(field-programmable)

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
- 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: 18JFX-[1]66-R

ORDERING INFORMATION

- Code number: 18JFX-[1]66-R

Specify a code from below for [1]
(e.g. 18JFX-666-R)

Use Ordering Information Sheet (No. ESU-1669) to specify linearization data when the I/O signals are non-linear.

- Linearization data (max. 16 points)
- Special input range (For codes U1, U2, U3)

[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.)

OUTPUT 1

Voltage

6: 1 - 5 V DC (Load resistance 2000 Ω min.)

OUTPUT 2

Voltage

6: 1 - 5 V DC (Load resistance 2000 Ω min.)

POWER INPUT

DC Power

R: 24 V DC

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

RELATED PRODUCTS

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

GENERAL SPECIFICATIONS

Construction: Rack-mounted; terminal access via screw terminals on the front and connector on the rear; terminal cover provided

Connection

Input: M3.5 screw terminals (torque 0.8 N·m)

Output 1: Connector

Output 2: M3.5 screw terminals (torque 0.8 N·m) and connector

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

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

Power consumption

•DC: Approx. 60 mA

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Standard Rack 18BXx or 18KBXx

Weight: 150 g (0.33 lbs)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$ with segment gain ≤ 1 [$\pm 0.1\% \times \text{gain}$]
with segment gain ≥ 1

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute

(input to output 1 or output 2 or power)

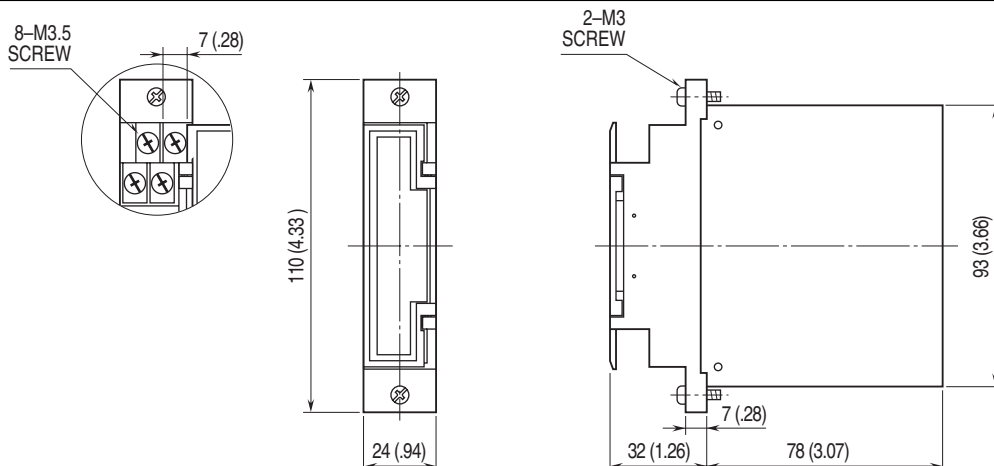
500 V AC @ 1 minute

(output 1 to output 2 to power)

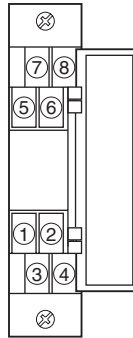
1500 V AC @ 1 minute

(input or output or power to ground)

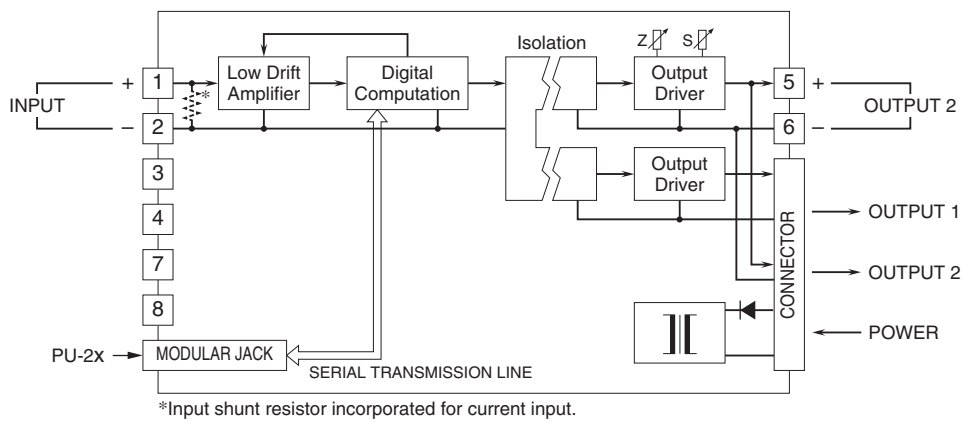
DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.