Javelin

2-wire Isolated Universal Transmitter

This loop powered universal input transmitter accepts a range of input types, and outputs 4–20mA.

It interfaces smoothly with a broad range of industrial systems, and is easy to set up and use.

- **2 wire universal input**
  Voltage, Current, Thermocouple, RTD or Potentiometer input
- **4–20mA output**
- **Super-slim DIN mount case**
- **Input/output isolated to 3750V**
- **High quality, high accuracy, New Zealand made product**
- **Designed to withstand harsh EMC environments**

Simple software enables fast, USB powered setup!

- **Easily select your input/output type and range**
  Using our reusable USB Bridge Key and simple software (defineinstruments.com/tmsetup)
- **No power supply or input signal required during USB programming**
- **Scale your unit without recalibrating**
- **View live data** To confirm that your setup is correct (ideal for commissioning!)
- **Save and load configuration settings**
  For fast programming of multiple units

Javelin Specifications

Z1363

Configuration 2-wire 4~20mA (loop powered)

Power supply 9.5–36V DC

Supply voltage sensitivity < ±0.005%/V FSO

Accurate to <±0.03% FSO typical

Ambient drift <±0.003%/°C FSO typical

Output load resistance 700Ω at 24V DC (50Ω/V above 9.5V DC)

Max output current Limited to <28mA (Emission & immunity)

EMC complicance Emissions (EN 61326). Immunity (EN 61326). Safety (EN 61010-1).

Noise immunity 125dB CMRR avg (2.0kV DC limit)

R.F. immunity <1% effect FSO typical

Isolation test voltages between input/output 3750V AC for 1min

Response time 400msec typical (10–90% 300msec typical)

Operating temperature ⁻20 to 85°C

Storage temperature ⁻20 to 85°C

Operating humidity 5–85%RH max (non-condensing)

Mounting DIN rail

Dimensions 90 x 12.5 x 112mm (H x W x D)

Status LED
On for 2 sec: Startup
Flashing (½ sec on/off): Operating normally
Flashing (3 sec on, 1 sec off): Sensor break
On continuously: Fault
Off: Fault, or no 4~20mA current

Order code: JAV-2DLI

Input type specifications

Voltage input

USB prog zero 0–±99% of span

USB prog span 100mV to ±10V DC (bipolar), 0–60V DC

Input resistance 300kΩ min

Max over-range 60V DC continuous

Linearity and repeatability
<±0.02% FSO typical

Current input

USB prog zero 0–±99% of span

Field prog span 1µA–24mA DC

Input resistance 10Ω

Max over-range 50mA DC continuous

Linearity and repeatability
<±0.02% FSO typical

Thermocouple input

Thermocouple types
B, E, J, K, N, R, S, T

USB prog zero 0–±99% of span

Input impedance 1MΩ min

Thermocouple lead resistance
100Ω max

Field prog span Refer to ordering information for min/max ranges for each type

Cold junction comp. ⁻20 to 90°C

Accuracy E, J, K, N, T: < ±1°C
B, R, S: < ±2°C

Temperature drift
E, J, K, N, T: < ±0.05°C/C
B, R, S: < ±0.2°C/C

Sensor break output drive
Function high upscale/
low downscale

CJC error < ±1°C

RTD input

RTD input Pt100 or Pt1000 DIN 3-wire type (2-wire can be used with offset calibration)

Sensor current 0.15mA nominal

Lead wire resistance
Pt100: 10Ω/wire max
Pt1000: 5Ω/wire max
0.02% FSO offset error per Ω of lead resistance

USB prog zero 0–±99% of span

USB prog span –200 to 850°C

Sensor break output drive
Function high upscale/
low downscale

Linearity (Pt100)
0.02% FSO for span inputs ≤200°C. 0.1% FSO for span inputs >200°C and ≤850°C

Linearity (Pt1000)
0.02% FSO for span inputs ≤200°C. 0.2% FSO for span inputs >200°C and ≤520°C

Other available RTD types
JIS, Pt100/Pt1000, Pt392

Potentiometer input

3-wire potentiometer

Excitation voltage 1.2V DC

Potentiometer resistance
0–2KΩ low pot, 0–1MΩ high pot

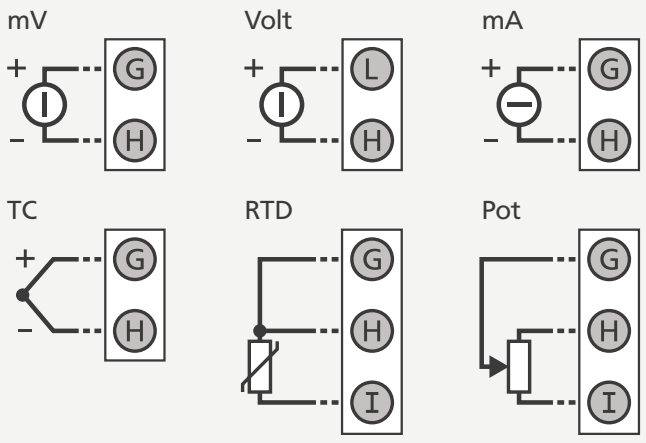
Field prog zero 0–90% of span

Field prog span 0.1–100%

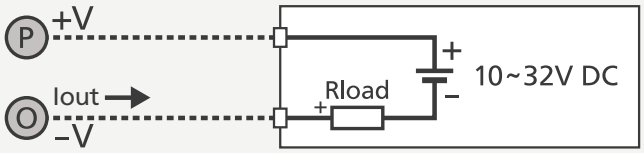
Linearity and repeatability
<±0.02% FSO typical

Wiring

Input Connections



Output / Power Supply Connections



JAV-2DLI-DS-14V01 (0725)
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