



UNIVERSAL INPUT TRANSMITTER Type D16-V (3-wire Voltage output)

- QuickCal rapid calibration from sensor feature
- Simple configuration via USB port
- Universal input: PT100, thermocouple, mV, mA
- Isolated input
- Programmable three wire voltage output
- 10 Year warranty



The D16-V will accept most common process and temperature sensor inputs and provides a three-wire voltage output signal. The unit is very easy to configure using PC software. The input range may also be set by sampling the sensor input. Ranging can be configured for reversing signals e.g. 4-20mA input giving 10-0V output. All temperature ranges are linear to temperature.

Easy configuration

A USB interface is provided for easy and rapid configuration. Simply connecting the D16-V to a PC via a standard USB cable is all that is required – none of the inconvenience of wiring to an external power source.

Using the free configuration software, your PC will download and display the existing configuration data from the unit and guide you through any changes you wish to make.

A 'range' LED indicates out of range during normal operation and stages during configuration. The following parameters are configurable :-

Input type: PT 100; Thermocouple (types K, J, E, N, T, R and S); mV; mA

Low range: input required for zero output

High range: input required for full-scale output

Units: deg F, deg C, mV, mA

Burnout: up scale/ down scale for T/C inputs

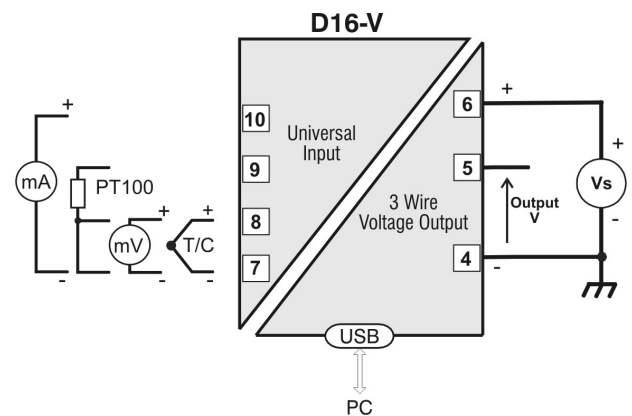
Output range: 0-10V, 2-10V, 0-5V, 1-5V, 0-1V

QuickCal: (Trim) enable or lockout

QuickCal calibration

This feature employs two 'trim' push buttons to calibrate the range of the unit by sampling the input signal. With the input signal at the required full scale value pressing the Span ▲ button configures the D16-V to give fullscale output for that input. With the input at the required lowest value, pressing the Offset ▼ button configures the output to give zero value for that input.

The 'trim' buttons may be locked out using the configuration software.



WARNING: These connection details are provided for pre-sales information only. Installation must be carried out in accordance with the D16-V User Guide.

SPECIFICATION

INPUTS

INPUT	RANGE	ACCURACY (Note 1)	STABILITY	O/C	CJ (Note 3)	Sensor excitation (Note 4)	INPUT IMPEDANCE
TC type K	(-200 to 1370) °C	0.1 % of FSR ±0.5 °C (type T 0.2% FSR. ±0.5 °C)	± 0.01 % of FSR	Yes	Yes	-	1 MΩ (Note 5)
TC type J	(-100 to 1200) °C						
TC type E	(-100 to 1000) °C						
TC type N	(-180 to 1300) °C						
TC type T	(-100 to 400) °C						
TC type R	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR (Note 2)	± 0.005 % of FSR	-	-	-	
TC type S	(-10 to 1760) °C	± 0.5 °C ±0.1 % of FSR (Note 2)					
mV	(-40 to 75) mV	± 0.04 mV					
P	(-200 to 850) °C	± 0.1 °C / ±0.05 % of rdg	± 0.01 % of FSR	-	-	<450 uA	-
mA	(-10 to 25) mA	± 0.008 mA				-	-

Key Rdg = Reading ; FSR = Full Scale Range ; O/C = programmable open circuit sensor detect;
CJ = Cold junction compensation

Notes

1. Accuracy for PT100 and T/C do not include sensor and cold junction errors.
2. Only over the range 800 to 1600 °C
3. Cold junction range -20 to 70 °C, Accuracy ± 0.5 °C , Tracking ± 0.05 °C
4. PT100 input Maximum lead resistance 20 R, Lead effect 0.015 °C / Ω.
5. Impedance – not including 0.2 uA open circuit detect bias current effect.
6. Maximum current over load ± 100 mA.

OUTPUT

Type Three-wire voltage output with programmable ranges: 0-10V, 2-10V, 0-5V, 1-5V, 0-1V
 Supply 15 to 28 Vdc, Current 10mA max.
 Response time < 500 ms to reach 95 % of final value ; Start up time < 3 s
 Calibration accuracy ± 5 mV
 Output drive 2 mA driving 5k ohms @ 10V
 Protection Reverse connection and over-voltage protection. Max over voltage current 100 mA.

GENERAL

Isolation Input to output tested at 500 V dc.
 Ambient Temperature: Operating -20 to 70°C,
Storage -40 to 85°C;
Humidity: 10 to 95% RH non condensing.
 Approvals CE tested to BS EN 61326

DIMENSIONS

90 (H) x 17.5 (W) x 56.4 (D)

MECHANICAL

Weight 55g
 Material Polyimide 6.6, self-extinguishing, grey
 Terminals Screw terminals, capacity 2.5mm max
 Mounting Fits DIN rail to EN50022

ORDERING INFORMATION

Quote type number D16-V

If pre-configuration is required:

1. Input type
2. Input value for zero output
3. Input value for FSD output
4. Units
5. Burnout
6. Output range
7. QuickCal enable/disable

Accessories

USB cable
 Configuration software



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