

Isolation amplifier

2284



- Galvanically separated input, output, and supply
- Bipolar current / voltage input
- Signal conversion
- Current and voltage output
- 24 VDC supply or universally supplied
- Applicable in PELV/SELV circuits



Advanced features

- Programmable input and output ranges using internal DIP-switches.
- Front panel fine adjustment of 0 and 100% values for special ranges.

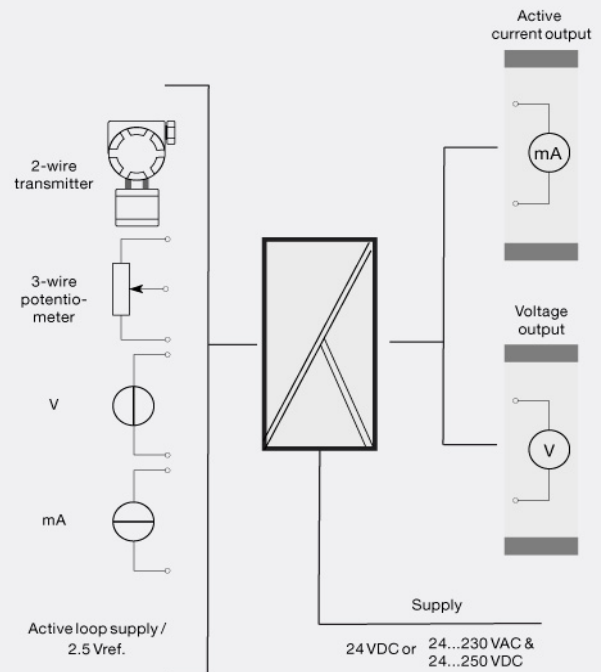
Application

- Galvanic separation of analog signals.
- Measurement of floating signals.

Technical characteristics

- Analog signal conditioning with microprocessor based gain and zero offset with a fast response time of less than 25 ms.
- Signal conversion within the ranges: -250...+250 VDC or -50...+50 mA on the input and 0...10 (20) VDC and 0...20 mA on the output.
- Galvanically separated between input, supply, and output.
- 2-wire transmitter supply and a reference voltage of 2.5 VDC, max. 15 mA for short circuit-protected supply of potentiometers.
- Buffered voltage output 0...20 V, 10 mA.
- The output can be ordered for standard 0/4...20 mA, and 0/1...5mA or special currents and selectable voltages within the signal range 0...1 VDC or and ranges 0...10 VDC.
- Output signal reversal.
- Mounting for a standard 11-pole socket which can be adapted for DIN rail or plate use with PR's 7023 adaptor and 7024 mounting keying.

Connections



Order:

Type	Input	Output	Supply	Output type
2284	0...20 mA : A	Special : 0	24 VDC : D	Standard : 1
	4...20 mA : B	0...20 mA : 1	24...230 VAC : P	Buffered
	0...1 V : C	4...20 mA : 2	& 24...250 VDC	voltage : 2
	0.2...1 V : D	0...5 mA : 3		
	0...10 V : E	0...1 V : 4		
	2...10 V : F	0.2...1 V : 5		
	0...2.5 V : G	0...10 V : 6		
	-10...+10 V : H	2...10 V : 7		
	Special : X	0...2.5 V : 8		

Environmental Conditions

Specifications range..... -20°C to +60°C
 Calibration temperature..... 20...28°C
 Relative humidity..... < 95% RH (non-cond.)
 Protection degree..... IP50

Mechanical specifications

Dimensions (HxWxD)..... 80.5 x 35.5 x 84.5 mm (D is without pins)
 Weight DC / universally supplied..... 125 g / 165 g

Common specifications

Supply

Supply voltage..... 19.2...31.2 VDC
 Supply voltage, universal..... 21.6...253 VAC, 50...60 Hz or 19.2...300 VDC

Isolation voltage

Isolation voltage, test / working..... 3.75 kVAC / 250 VAC

Response time

Response time (0...90%)..... < 25 ms

Max. power consumption..... ≤ 2.4 W (2284--D)
 Max. power consumption..... ≤ 2.5 W (2284--P)
 Signal / noise ratio..... Min. 60 dB
 Effect of supply voltage change..... < 0.005% of span / VDC
 2-wire transmitter supply (pin 7...5)..... 19...28 VDC / 20...0 mA
 Auxiliary voltages: Reference voltage..... 2.5 VDC ±0.5% / 15 mA
 Temperature coefficient..... < ±0.01% of span / °C
 Linearity error..... < 0.1% of span
 EMC immunity influence..... < ±0.5% of span

Input specifications

Common input specifications

Max. offset..... 50% of max. value

Current input

Measurement range..... -50...+50 mADC
 Min. measurement range (span)..... 0.53 mADC
 Input resistance..... Nom. 50 Ω

Voltage input

Measurement range..... -250...+250 VDC
 Min. measurement range (span)..... 27 mVDC
 Input resistance..... >1 MΩ...<10 MΩ

Output specifications

Current output

Signal range..... 0...20 mA
 Min. signal range..... 4 mA
 Load (max.)..... 20 mA/1000 Ω/20 VDC
 Load stability..... ≤0.01% of span / 100 Ω
 Current limit..... 23...28 mA

Voltage output through internal shunt.....

See manual for details

Approvals

EMC..... 2004/108/EC
 LVD..... 2006/95/EC
 PELV/SELV..... IEC 364-4-41 and EN 60742
 EAC..... TR-CU 020/2011