

ANALOG INPUT MODULE FOR PLC

An analog input module helps to digitalize temperature, current (4-20mA) and voltage ($\pm 10V$) for PLC and Micro-controllers. This analog module can be used for Programmable Logic Control (PLC), Programmable Automation Control (PAC) and Discrete Control System (DCS). The module has three terminals input. . This PLC input accepts inputs of $\pm 10 V$ or $\pm 20 mA$. The output is a single-ended voltage of $2.5 V \pm 2.3 V$ (or 200 mV to 4.8 V). Many PLCs typically have this input and output ranges. PR1 Trimmer potentiometer provided to fine trim the gain. Ideally PR1 + R1 value should be 10.5Kohms. Circuit works with dual supply $\pm 15V DC$.

Features

Supply $\pm 15V DC$

4-mA to 20-mA input with less than 20- Ω burden

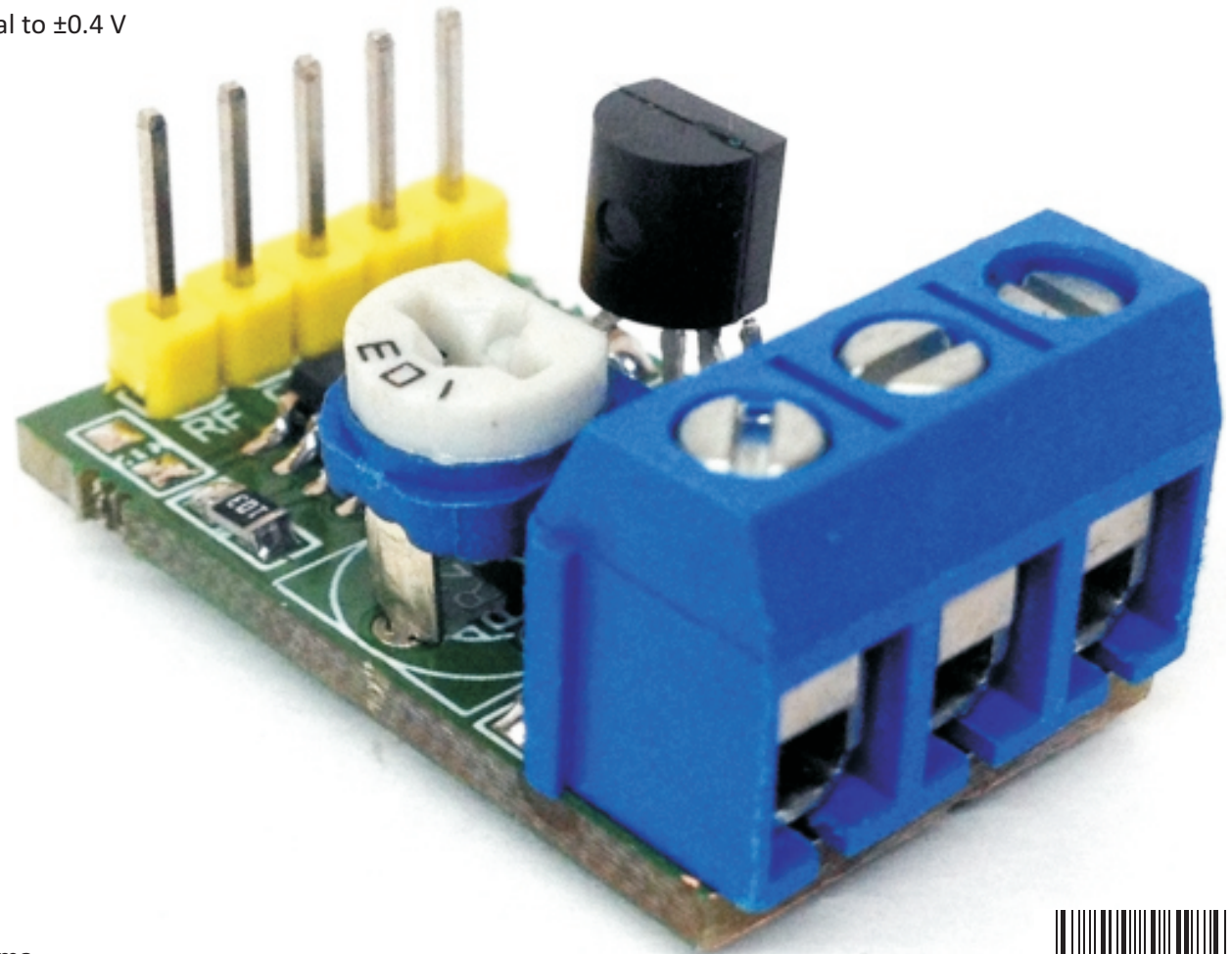
± 20 -mA input with less than 20- Ω burden

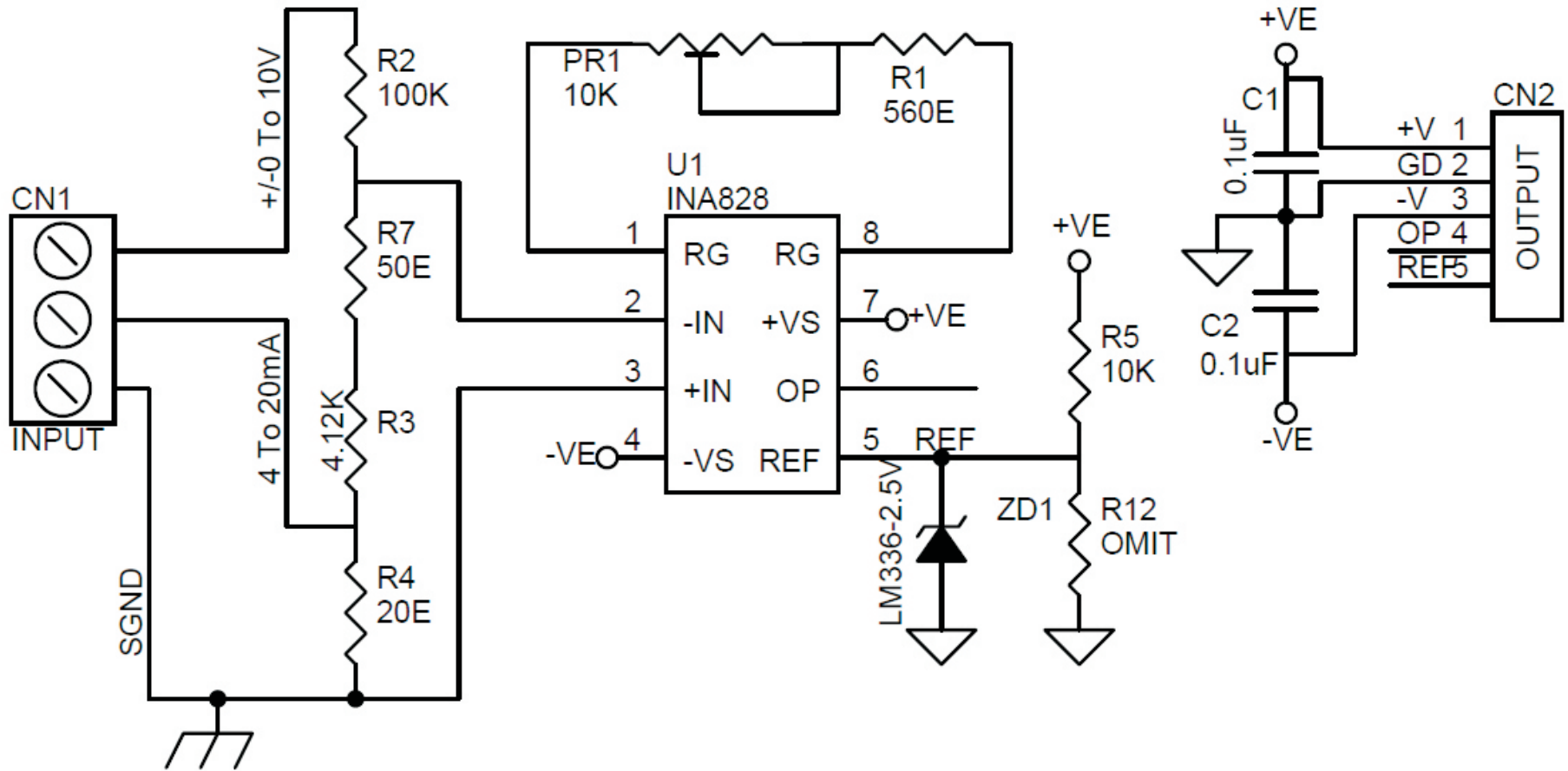
± 10 -V input with impedance of approximately 100 k Ω

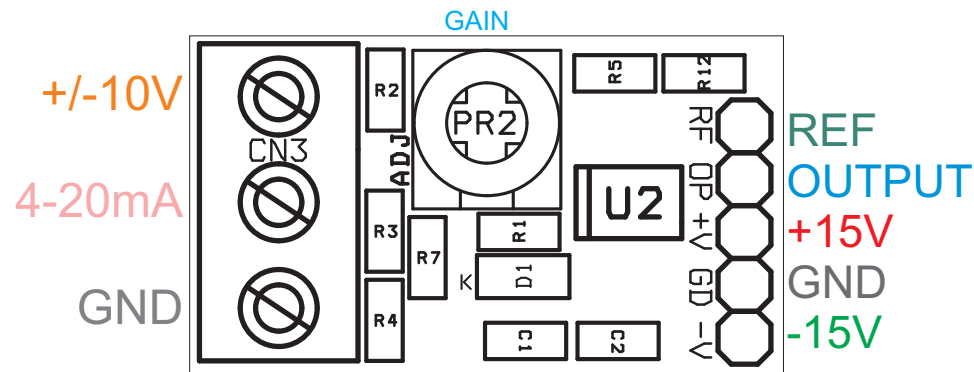
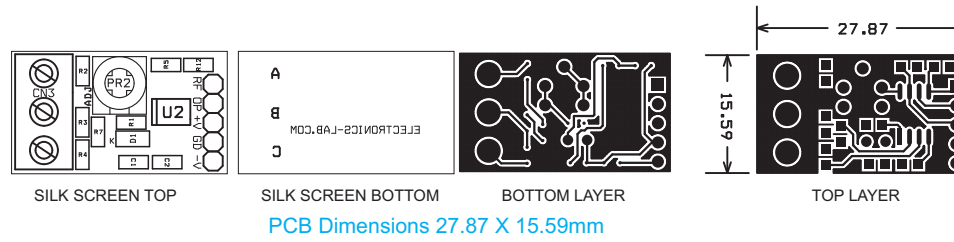
Output range within 0 V to 5 V

Maximum 4-mA to 20-mA or ± 20 -mA burden voltage equal to $\pm 0.4 V$

PCB Dimensions 27.87 MM X 15.59MM







BOM			
SR.	QNTY.	REF.	DESC.
1	1	CN1	3 Pin Screw Terminal
2	1	CN2	5 Pin Male Header
3	2	C1,C2	0.1uF SMD 0805
4	1	PR1	10K
5	1	R5	10K SMD 0805 0.1-1%
6	1	R2	100K SMD 0805 0.1-1%
7	1	R3	4.12K SMD 0805 0.1-1%
8	1	R4	20E SMD 0805 0.1-1%
9	1	R7	50E SMD 0805 0.1-1%
10	1	R12	OMIT
11	1	U1	INA828 SO8
12	1	ZD1	LM336-2.5V TO92
13	1	R1	10K TRIMMER POT