

IUA Amplifier

- Differential or single end input
- 1mV/V to 500mV/V input sensitivity
- 1, 2nd order compensation
- Operating temperature -40°C to 125°C
- OWI programming function
- Miniature size

TECHNICAL DATA

Parameter	Value
*Input types	Resistive Full-bridge, *Half-bridge, Quarter-bridge Resistive divider, Voltage source (bridge resistance 350Ω to 15kΩ)
Sensitivity (Max)	1mV/V
Sensitivity (Min)	500mV/V
Conditioning of bridge non-linearity, filtering	Linear, 1st Order, 2nd Order
Input resolution	24 bit
Temperature compensation input types	On chip, External using bridge, External PT100, External diode
Temperature compensation	Linear, 1st Order, 2nd Order
Output resolution	16 bit
Output types	Voltage: 0-5V, 0-10V, ±10V Current: 4-20mA, 0-25mA (3-wire)
Supply voltage	5V to 30V, ±5V to ±32V
Supply current	25mA
Bandwidth	2.9 kHz
Programming / configuration	OWI (One Wire Interface) through signal wire
Operating temperature	-40°C to 125°C
Storage temperature	-40°C to 150°C
Board dimensions	21mm diameter

OVERVIEW

The I.C.E Universal Amplifier is a 'Next Generation' fully conditioned signal conditioning device for connection to a raw mV signal such as from a wheatstone bridge strain gauge, pressure, force, position or temperature sensor.

The 'Universal' functionality allows input, output settings and parameters to be customized to suit your installation.

A programming module and software connects the board via a One Wire Interface directly into the signal connection, allowing configuration and calibration of your sensor to be carried out at anytime during assembly or even as a return to base re-calibration / maintenance service.

Supplied as a PCB component. A separate bridge completion pcb is available for use with quarter or half bridge strain gauges.

TYPICAL APPLICATIONS

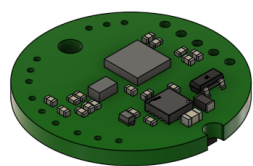
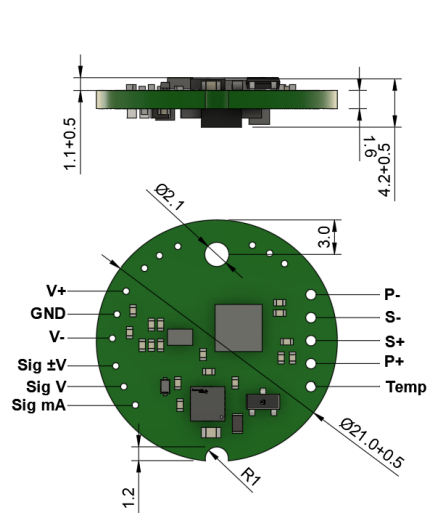
- Pressure, force, torque transducers
- Full, half, quarter bridge signals
- Structural analysis measurements
- Temperature and position sensors

Contact Us

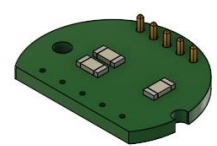
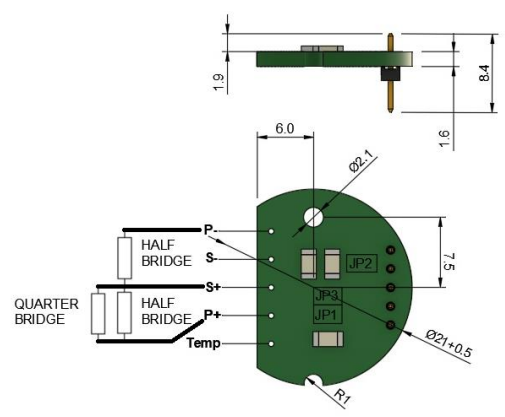
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MECHANICAL



V+	Supply Voltage+
GND	Ground / Common
V-	Supply Voltage -
Sig ±V	Output ±10V bi-polar
Sig V	Output 0-5V & OWI (Program)
Sig mA	Output 4-20mA
P-	Bridge Supply-
S-	Bridge Signal -
P+	Bridge Supply +
S+	Bridge Signal +
Temp	Temperature Input
Connections	



Bridge type	JP1	JP2	JP3
Half bridge	link	open	link
Quarter Bridge	link	link	link
Bridge Completion Board (350ohm standard)			


P-	Bridge Supply -
S-	Bridge Signal -
S+	Bridge Signal +
P+	Bridge Supply +
Temp	Temperature Input
Connections	

ORDERING

IUA Part Number: PN074_AV4
IUA Bridge completion: PN074_CV1
IPM Single Channel Programmer Part Number: AN104_AV1
Software: - ICE Calibration Tools – See website

CE Statement – IUA Product is in conformity with: -

Harmonisation Legislation: -
LVD directive 2014/35/EU
EMC directive 2014/30/EU
RoHS directive 2011/65/EU



Based on the following harmonised standards: -
EN 61326-1:2013 / IEC 61326-1:2012
EN 61326-2-3:2013 / IEC 61326-2-3:2012
EN 61010-1:2010 / IEC 61010-1:2010

OTHER SERVICES

- Sensor signal conditioning
- Acquisition and storage of data from sensors
- Wireless data transmission systems
- Hardware, firmware and software development

CONTACT US

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