

Description

The FE-366-TA is a dual channel bridge transducer amplifier and balance unit complete with filter, for data acquisition and processing applications. The unit is presented as a printed circuit card with amplifier fine gain and balance controls brought to the front edge of the card. Internal jumpers set gain, filter and bridge configuration.

Specification

Bridge section Common bridge supply

Power	Level	5V @40mA or 10V @30mA via internal jumper
	Stability	0.01%/°C.
	Regulation	<±0.1% change in Bridge Volts for ±10% input change.
Balance	Front edge control by screwdriver operated potentiometer develops shunt balance of bridge via selectable resistor.	
Completion	1/4 or 1/2 bridge completion is available for 120Ω and 350Ω bridge circuits and is configured via internal jumpers.	
Calibration	Remote shunt calibration via opto-couplers.	

Amplifier section Two identical amplifiers and filters, each individually configurable

Gain	Selection	Internal jumper links to give gains from 1 to 5000 in 1, 2, 5 steps.
	Vernier	Front card edge control x1 to x2.5.
	Accuracy	Step accuracy ±0.5%. T.C.<50ppm/°C.
	Linearity	Better than 0.01%.
Input	Impedance	>2MΩ excluding shunt balance resistor.
	Offset Voltage	<50μV (gain 1000).
	T.C.	<0.4 μV/°C.
	Bias Current	<600 pA.
	Offset Current	< ±450 pA ±0.4 pA/°C.
Common Mode	Rejection	90dB (gain 1000) dc-100Hz.
	Range	±10V.
	Protection	± 25V.
Noise	Input	<10μV pk-pk dc- 30kHz, <7μV pk-pk dc - 10kHz.
	Output	<1mV rms dc - 30kHz.
Frequency Range	Maximum	dc - 10kHz (x1 - x5000 gain). dc - 30kHz (x1 - x500 gain).
Slewing Rate	1V/μs	Typ.
Output	Voltage	Capability ±10V into 2kΩ, 5000pF max. Offset <±50 mV (at gain 5000)
Filter	Type	3 pole, preset by plug-in resistor network (5Hz - 10kHz)
	Gain	Unity
	Roll Off	18dB/ Octave, 60dB/decade
	Offset	±5mV
	Characteristic	Butterworth standard, Bessel or Tchebychev to order.
Auto Zero	Using external auto zero module will correct an output offset of up to ±5V.	
Environment	Temp. Range	0°C to 50°C operating
Physical	Card size	7" x 2.65". 2u high format (180mm x 67mm).

Iss	Date	Modification
1	8/6/06	New Drawing
2	9/11/06	Note re. unused channels added

