

FE-561-IA Isolation **Amplifier**

The FE-561-IA is a high voltage isolation amplifier for front end use when hazardous inputs must be measured.

The amplifier comprises a low noise, low drift input stage with differential characteristics, a high performance isolation stage and a filter with buffered voltage output.

Voltage isolation is 1500V RMS.

There are 9 input ranges with a maximum of 2500V pk (1800V RMS sinewave).

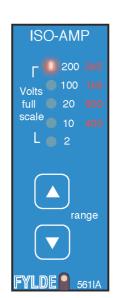
The amplifier is exceptionally easy to use and is fully protected on all ranges to 3kV pk continuous.

Maximum Bandwidth is 50kHz.

Applications include power line monitoring including high side current shunts, ground loop elimination and as a protected front end for data acquisition systems recorders and oscilloscopes.

Two sizes of enclosure are available :-FE-PE8 for up to 8 amplifiers. FE-PE17 for up to 16 amplifiers.

Power source is either 115 or 230V 50/60Hz



Front panel shown actual size

Power Line Monitoring

Ground Loop Elimination

Current Shunt Measurements

Data Acquisition or Oscilloscope front end

ISOLATION Voltage >1500V RMS (tested 5s @2500V).

Capacitance 15pF.

Resistance >50 x 10⁹ ohms.

Mode Rejection >120dB (dc to 60Hz). S/C source. Leakage Current $< 2\mu$ A RMS at 230V RMS 50Hz.

RANGES Switched 2500V,1600V, 800V, 400V, 200V, 100V, 20V,

10V, 2V input for 10V Fullscale (10V) output. Green LED to 200V, Red LED from 400V.

Linearity $\pm 0.02\%$ FS.

Accuracy ±0.25 % of gain setting.

Temp.Coefficient < 0.01% per °C.

Stability < 0.1% change over 12 months. Locking Internal jumper locks range.

FREQUENCY RESPONSE DC - 50kHz (3dB).

Indication

INPUT Voltage Maximum 2.5kV Pk or 2kV DC continuous.

Withstand 3kV pk continuous or 2.5kV DC 2 minutes.

Protection rating CAT III 600V. CAT IV 300V. Offset Voltage / TC $<200\mu$ V / $<10\mu$ V/°C RTI.

Impedance $>2.5M \Omega$.

Noise $< 50\mu\text{V}$ pk-pk dc-50kHz RTI.

FILTER Internal Low Pass filter 3 pole Butterworth (60dB/decade).

Setting 50Hz to 50kHz by plug in Resistor network.

(delivery standard 50kHz).

OUTPUT Voltage Range \pm 10V nominally @ \pm 2mA.

Noise / offset <2mV RMS DC - 50kHz / <±15mV.

Offset Temp Coefficient < 1mV/°C.

TEMPERATURE RANGE 0 - 50°C.

POWER SUPPLY Requirement 200-250V 50Hz standard.

100-125V 50/60Hz to order.

11-14VDC by FE-605-DCC fitment.

CONNECTOR 25 way 0.1" pitch edge connector.

MECHANICAL Dimensions / weight panel 2.75" x 1", overall depth 8.2" / 200gm

HOUSING 8 modules fit FE-PE8. Up to 16 in FE-PE17(RK)

RK= Rack Mount.

PRESENTATION Blue front panel 2.75" x 1".