

FE-530-IE IEPE Amplifier



Front panel shown actual size

- Bandwidth exceeds 100kHz*
- Otional RS232 control with TEDS.
- 3 IEPE current settings.
- 8 pole Low Pass filter.
- IEPE line fault monitoring.

*Gains up to x30. x100 typ. 70kHz.

The FE-530-IE is a high performance IEPE amplifier for conditioning piezo transducers having built-in low impedance buffering, commonly referred to as Integrated Electronic Piezo Electric.

The module provides front panel control for signal gain, IEPE current and Low Pass filter selection. Additionally, a health monitor checks transducer bias and any fault condition is indicated.

Front panel controls can be disabled as this module also provides an option for remote control via RS232. A TEDS (Transducer Electronic Data Sheet) option can be specified.

Switching IEPE current off enables the amplifier to be used as a high bandwidth, low noise differential AC coupled amplifier for other AC signal sources.

Power requirement is 200-250V AC or alternatively 100-120 V AC. 12V D.C. powered modules are also available.

The module is mechanically and electrically compatible with other FYLDE modules and with FYLDE 2U racks and instrument cases.

FE-530-IE IEPE Amplifier Specification Iss.2 19/1/12

Description

The FE-530-IE is a high performance IEPE amplifier for conditioning piezo transducers having built-in low impedance buffering, commonly referred to as Integrated Electronic Piezo Electric.

The module provides front panel control for signal gain, IEPE current and Low Pass filter selection. Additionally, a health monitor checks transducer bias and any fault condition is indicated. The amplifier is fully differential and features a unique ground earth loop rejector for applications in which the transducer is non-isolated.

Front panel controls can be disabled as this module also provides an option for remote control via RS232. A TEDS (Transducer Electronic Data Sheet) option can be specified.

Switching IEPE current off enables the amplifier to be used as a high bandwidth, low noise differential AC coupled amplifier for other AC signal sources.

Power requirement is 200-250V AC or alternatively 100-120 V AC. 12V D.C. powered modules are also available.

The module is compatible with many other FYLDE modules in FYLDE 2U racks and instrument cases.

Specification

| IEPE Supply | Settings | 4mA, 8mA and off. | |
|--------------|--|---|---------------------------|
| Amplifier | Gain Settings Stability Input impedance Input remote return Noise CMR Bandwidth | >60dB on maximum sensitivity. | ited. Note 1 Note 2 |
| Filter | Low Pass High Pass | Butterworth 8 pole (-48db/octave roll-off). Programmable by resistor network in the range 20Hz to 20kHz. Butterworth 2 pole (-12db/octave roll-off). Programmable by resistor network in the range 0.25Hz to 100Hz. | |
| Output | Direct | ±10V @ ±5mA, 1Ω impedance. | Note 3 |
| Control | Indicators | Front panel indication of Gain, IEPE setting, LP filter setting, line health. | IEPE |
| Programming | Option | Remote setting of Gain, IEPE supply, LP filter setting via RS TEDs option. | 3232 |
| Temperature | Storage / Operating | -20°C to 75°C / 0 - 40°C. | |
| Dimensions | Fylde 'blue panel' (2u) | Panel 2.75" x 1" wide (70 x 25mm), depth 7.7". Wt.6oz (150 | gm). |
| Housing | FE-PE2, PE4, PE8 FE-PE17(RK) | 2, 4 or 8 channels maximum respectively. 16 channels maximum. | |
| Power Supply | FE-PE2/4 case FE-PE8/17 case | 100-120V OR 200-250V (50/60Hz) OR 12V DC option. As above, and additionally 100-120V & 200-250V. | |
| Notes | Referred To Input, gain x300 90% occurrences, measurement bandwidth 100 kHz. x1 to x30. x100, x300 70kHz typ. Module only backplane connectors and EMC filter. | | |

Spec correct as of July 2010. May be revised without notice.