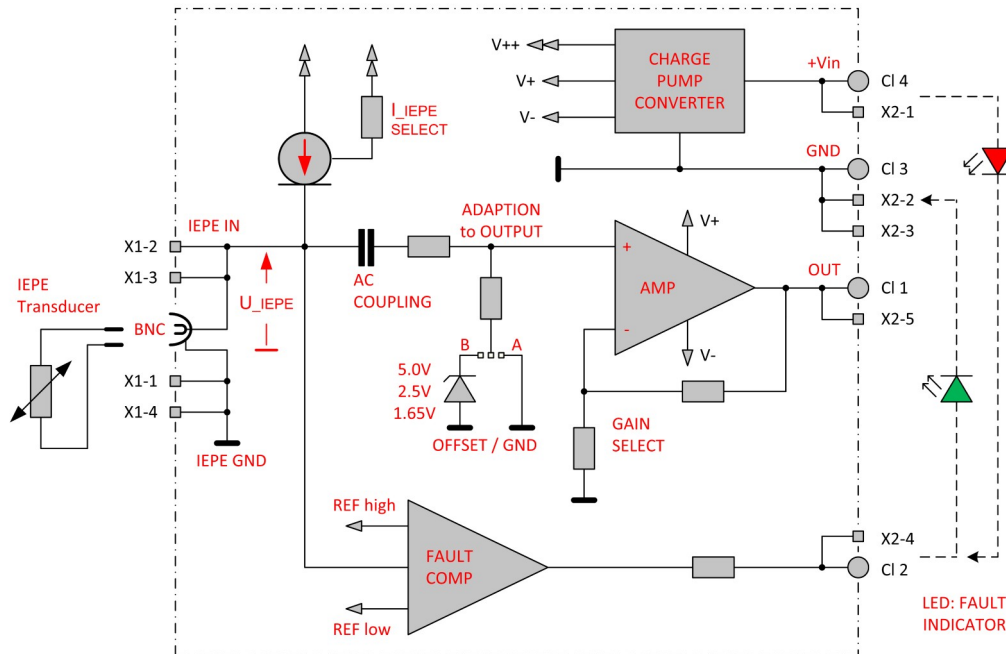


IPE-FM4 - IEPE Signal Conditioning Amplifier

- Special features
- Selectable IEPE current: 2 - 4 - 8 [mA]
 - Signal input: 0 – ±10VAC (max.)
 - Signal output: balanced (around GND) or unbalanced (with DC Offset)
 - Fault LED: Indicating errors in IEPE input or IEPE input OK

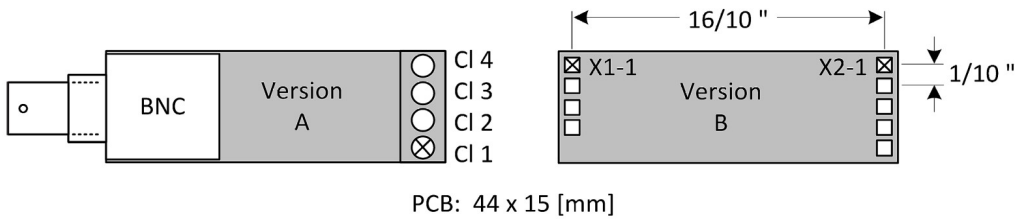


Technical specifications

- Power supply: 12 to 15 VDC (max.), approx. 0,5W
- Signal input: For power supply 12 VDC applies: ±5 VAC (±8 VAC max.)
For power supply 15 VDC applies: ±10 VAC max.
- IEPE current: 2 mA – 4 mA – 8 mA (please specify when ordering)
- Bandwidth: 0.5 Hz to 25 kHz (-3dB)
- Gain: $G = 1 - 2 - 5$ V/V, inaccuracy in the gain ($G = 2, 5$) $< 0.3 \%$
Please note:
The following applies to the "unbalanced" output variant: input signal \geq output signal
- THD + N: See diagrams "THD + N"
- Signal output balanced: 0 to ±5 VAC / ±10 VAC (referring to GND)
- Signal output unbalanced: 0 to +10 VAC with offset +5 VDC or 0 to +5 VAC with offset +2,5VDC or 0 to +3,3 VAC with offset +1,65 VDC
- Fault indication: Output for external LED (approx. 3 mA), for the indication of
- Input in the normal range (green LED recommended)
 - Shorted input or input open without IEPE sensor (red LED recommended)
- Versions:
- Version A with BNC and terminals for front panel mounting
Depth behind the front panel approx. 50 mm, height incl. BNC 20 mm, width 15 mm
 - Version B with edge connectors for PCB mounting, height (PCB to PCB) 10.5 mm

IPE-FM4 - IEPE Signal Conditioning Amplifier

Connectors / Terminals



X1: IEPE input

X1 - 1	- IEPE (GND)
X1 - 2	+ IEPE
X1 - 3	+ IEPE
X1 - 4	- IEPE (GND)

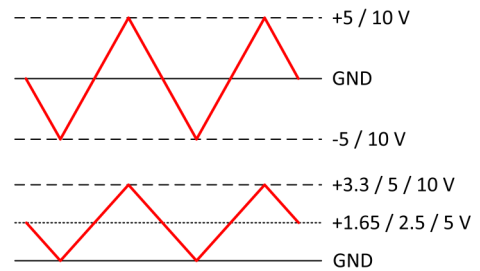
X2: Power supply, Fault LED, Signal output

X2 - 1	CI 4	Power 12 to 15 VDC
X2 - 2	CI 3	GND
X2 - 3		GND
X2 - 4	CI 2	Fault LED
X2 - 5	CI 1	Signal output

Output signal balanced vs unbalanced

Signal balanced to GND
for balanced standard ADCs

Input signal adapted to -
desired input range to desired output range
and output signal shifted by + 5 / +2.5 / 1.65 V for unbalanced
ADCs (e.g. integrated in microControllers)

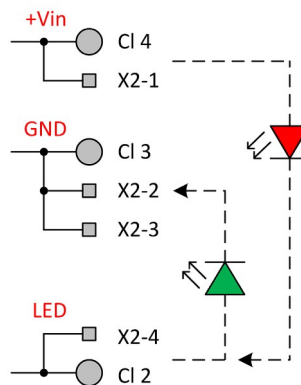


Connection Fault LED

(red) LED against +Vin *

(green) LED against GND *

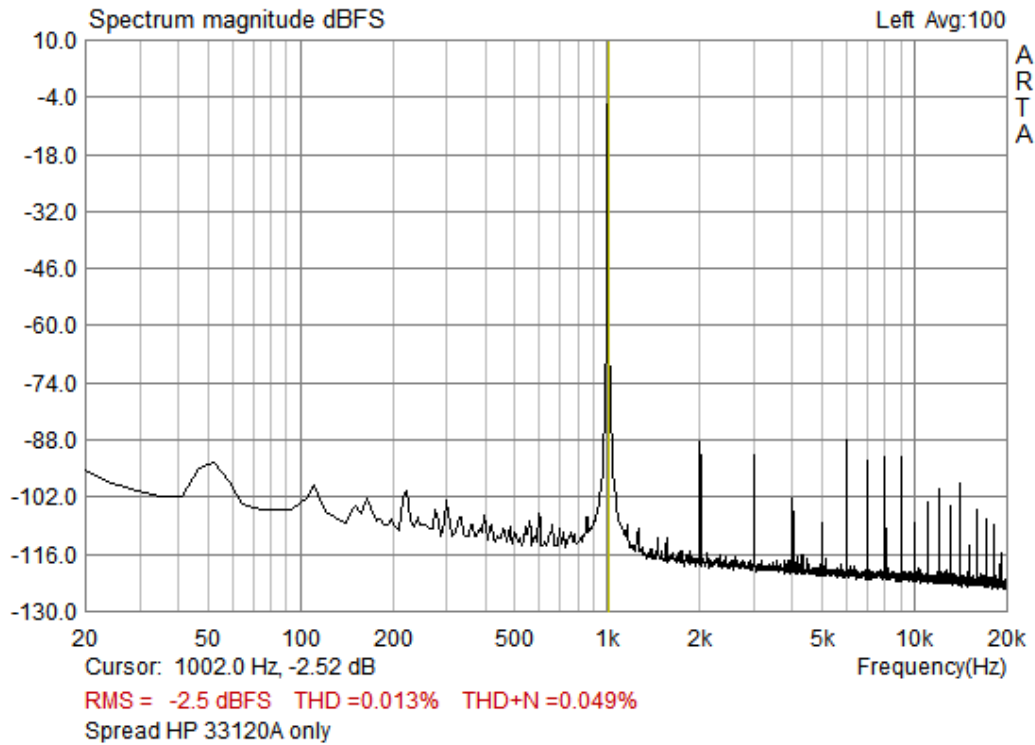
* internal series resistor for I_{LED} approx. 3 mA



IPE-FM4 - IEPE Signal Conditioning Amplifier

THD + N

Measured with level adjustment 4 kΩ / 1 kΩ: function generator directly



Measured with level adjustment 4 kΩ / 1 kΩ: Function generator + IEPE EMULATOR I + ICP-FM4 G=1

