

HSE-Harvard Carrier Frequency Bridge Amplifier Module (CFBA)

- Universal carrier frequency preamplifier for pressure, force, displacement transducers
- Bar graph display for visualizing dynamic signals (LVP, blood pressure, contraction of beating organs, airflow, etc.)
- Specially adapted for Validyne Differential Pressure Transducers

The HSE-Harvard* Carrier Frequency Bridge Amplifier (CFBA) (5 kHz) is a plug-in module for the PLUGSYS system. Together with a suitable transducer it is designed for the electrical measurement of mechanical variables such as force, pressure, displacement, acceleration, etc. In multiple transducer applications, it is important that the carrier oscillators of the CFBA can be synchronized to eliminate interference. The CFBA is specially designed for transducers with AC excitation voltage like differential pressure transducers from Validyne. It can also be used with standard techniques like strain gauge or field plates.



Specifications

Bridge Supply Voltage	AC excitation voltage (5 kHz sine wave) internal adjustable from 3 to 5 V
Synchronization	Switch selectable master or slave (internal)
Input Voltage Range	140 mVrms (internal gain setting x10) 14 mVrms (internal gain setting x100)
Gain:	0 to 100, 0 to 1000 or 0 to 10,000, depending on various internal and external gain settings
Internal	Switch selectable x10 / x100
External	Switch selectable x1 / x10 and continuously adjustable through 10 turn trimmer from 0 to 100%
Band Width	0 to 1 kHz
Output Low-Pass Filter	11 positions 0.01 Hz to 1 kHz selected by rotary switch
Signal Input	6-pin socket with screw lock (binder, Amphenol-Tuchel)
Signal Output	1. On front panel through BNC socket ± 10 V (filtered output signal) 2. Through bus connector to PLUGSYS measuring system (jumper selectable) both filtered and unfiltered output signal in range of ± 10 V
Analog Indication	Through LED bar graph + 20 LED's / - 9 LED's for visual check on the measurement; sensitivity can be selected between 500 mV / LED and 50 mV / LED
Electrical Calibration 1	CAL 1 adjustable through 10-turn trimmer, negative and positive calibration voltage; calibration signal is superimposed on measurement signal by pressing CAL 1 key
Electrical Calibration 2	CAL 2 selected internally through link plugs 1. Positive calibration voltage 2. Negative calibration voltage 3. External calibration voltage from PLUGSYS measuring system Amplitude of calibration voltage is adjustable with 10-turn trimmer; calibration voltage is applied on pressing CAL 2 key; during this time measuring signal is switched off
Suppression SUP	Adjustable with 10 turn trimmer, negative and positive values; suppression can be switched on and off with switch
Signal Output MUX	After pressing MUX (MULTIPLEX) key filtered signal output of amplifier is switched for example to input of digital voltage meter module for accurate zero adjustment and calibration setting; function is self-maintained and module previously selected is switched off
Power Supply	+5 V, 1.1 A through main connector from PLUGSYS bus system
Dimensions, H x W x D	128.7 x 40.4 x 220 mm (5.1 x 1.6 x 8.7 in)
PLUGSYS Width*	2 slot units
Connector	DIN 41612, 96-pin VG
Weight	0.4 kg (0.9 lbs)

Catalog No.

CGS 8400.71

Product

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