

CV1 - DIN Rail Mounted Charge/Voltage Source Amplifier



The CV1 DIN rail mounted module is the perfect partner for use in industrial applications where signal conditioning is required. Providing all or a combination of Charge amplification, IEPE 4mA constant current supply and Fixed or Variable frequency filtering.

The modules utilise standard DIN rail mounts for fast fitting and set up, ideal for use alongside industrial cabinets or other wiring installations.

Modules available:

CV1-C: Charge amplifier

CV1-V: 4mA constant current supply for use with IEPE accelerometers and sensors

CV1-CF: Charge amplifier with fixed frequency filter (filter value must be specified when ordering)

CV1-VF: 4mA constant current IEPE supply with fixed frequency filter (filter value must be specified when ordering)

CV1-CVF: Charge amplifier with variable frequency filter

CV1-VVF: 4mA constant current IEPE supply with variable frequency filter

Frequency Options:

Fixed frequency version must be specified when purchased, available from 0.1Hz to 500 kHz

Variable frequency version - 255 filter steps, set by DIP switch, range covering 0.2 Hz to 127 500 Hz

Base Frequency	Frequency Range	Steps
0.2	0.2 – 51 Hz	0.2 Hz
1	1 – 255 Hz	1 Hz
2	2 – 510 Hz	2 Hz
5	5 – 1 275 Hz	5 Hz
10	10 – 2 550 Hz	10 Hz
20	20 – 5 100 Hz	20 Hz
50	50 – 12 750 Hz	50 Hz
100	100 – 25 500 Hz	100 Hz
200	200 – 51 000 Hz	200 Hz
500	500 – 127 500 Hz	500 Hz

- Dimensions – 27 x 83 x 114mm excluding connectors
- Weight – 180gms
- Standard 35mm and 15mm DIN rails
- Power on indication
- Low pass / Highpass
- Screw terminal connections
- Independent signal and power earth
- 9 – 30 V DC power input – ideal for +24 V DC
- AC/DC, Single ended / differential / 4-20mA / IEPE inputs

Specification

Power Input	10 – 30 Volts DC, 2.5 Watt. Polarity protected, isolated from signal path.
Connections	9 screw terminals
Indicators	External LED indicator shows correct power to unit
Operating Temp.	10 to 45 °C, non-condensing.
Input Coupling	DC / AC (with dual line AC coupling for differential input)
Input Mode	Single ended / Differential / IEPE (24V, 1 - 10 mA, set by single resistor)
Input Impedance	1 MΩ
Input Gain	x1,x2,x5,x10,x20,x50,x100,x200,x500,x1000. Set by on board jumpers.
Bandwidth	0 dB gain, > 500 kHz
Signal Level	+/- 10 Volt pk-pk
Noise and THD	< 0.003% typical (depending on filter type, signal amplitude and frequency)
Output Impedance	47Ω
Outputs	2 Buffered voltage outputs
Trim Adjustments	Offset and Gain. Multi-turn pots
Frequency Setting	CV1-CF & CV1-VF factory set at order CV1-CVF & CV1-VVF by DIP switch, 255 filter steps