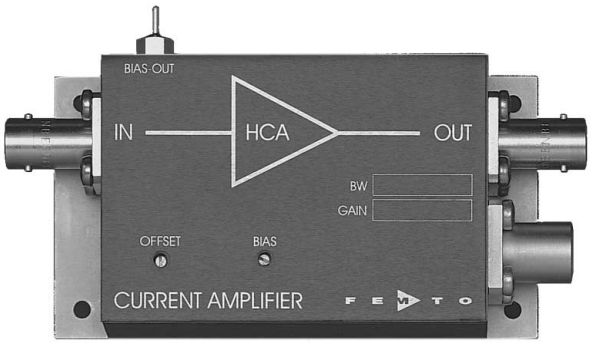
Datasheet HCA-100M-50K-C

High-Speed Current Amplifier

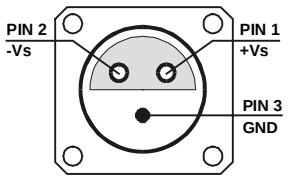


Features	• **Bandwidth and Frequency Response independent of Detector-Capacitance (up to 20 pF)** • **Low Noise, 4.0 pA/√Hz equivalent Input Noise Current** • **Bandwidth DC ... 100 MHz** • **Transimpedance (Gain) 5 x 10^4 V/A**
Applications	• **Photodiode- and Photomultiplier-Amplifier** • **Spectroscopy** • **Charge-Amplifier** • **Ionisation Detectors** • **Preamplifier for Lock-Ins, A/D-Converters, etc.**

Specifications	*Test Conditions*	*Vs = ± 15 V, Ta = 25°C*
Gain	Transimpedance	5 x 10^4 V/A (50 Ω Load)
	Gain Accuracy	± 1 %
Frequency Response	Lower Cut-Off Frequency	DC
	Upper Cut-Off Frequency	100 MHz (- 3 dB)
	Rise- / Fall-Time	3.5 ns (10% - 90%)
	Gain Flatness	- 0.3 / + 0.5 dB
Input	Equ. Input Noise Current	4.0 pA/√Hz (@ 1 MHz)
	Equ. Input Noise Voltage	2.3 nV/√Hz (@ 1 MHz)
	Input Bias Current	2 µA typ.
	Input Bias Current Drift	0.7 nA / K
	Offset Current Compensation	± 40 µA, adjustable by Offset-Trimpot
	Max. Input Current	± 30 µA (linear Amplification)
	Input Offset Voltage	< 5 mV
	DC Input Impedance	62 Ω (virtual) // 5 pF
Output	Output Voltage	± 1.5 V (50 Ω Load)
	Output Impedance	50 Ω
Bias Output	Bias Output Voltage Range	± 12 V, adjustable by Bias-Trimpot
	Bias Output Impedance	10 kΩ // 1 µF
Power Supply	Supply Voltage	± 15 V
	Supply Current	± 70 mA typ.
Case	Weight	210 gr. (0.5 lbs)
	Material	AlMg4.5Mn, nickel-plated

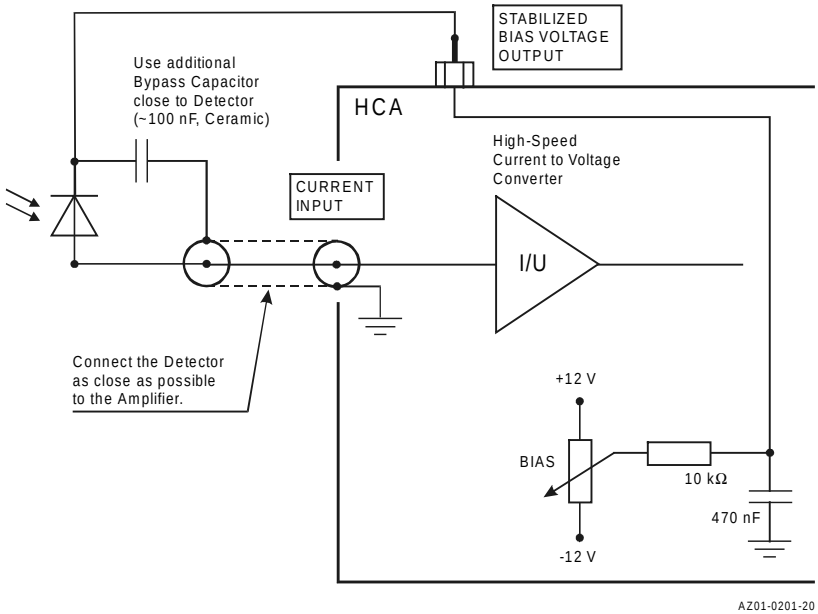
High-Speed Current Amplifier

Specifications (continued)		
Temperature Range	Storage Temperature Operating Temperature	-40 ... +100 °C 0 ... +60 °C
Absolute Maximum Ratings	Input Voltage Input Voltage Transient Power Supply Voltage	± 5 V optional only ± 22 V
Connectors	Input Output Power Supply	BNC BNC LEMO Series 1S, 3-pin fixed Socket Pin 1: + 15V Pin 2: - 15V Pin 3: GND



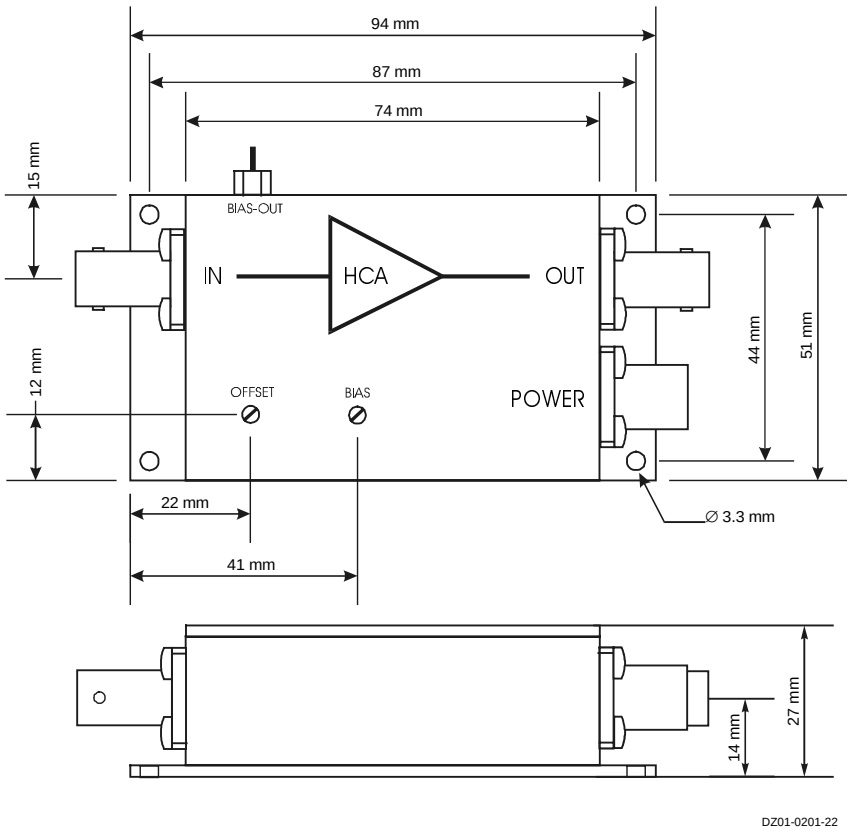
Application Diagrams

Photo Detector Biasing in Photoconductive Mode:
Best Choice for High-Speed Applications and
optimum Signal To Noise Performance.



High-Speed Current Amplifier

Dimensions



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