

2.33 MIP series

MIP is a series of medium-size transimpedance, DC or AC coupled preamplifiers, intended to operate with either biased or non-biased VIGO detectors. MIP is equipped with a fan and does not require any additional external heatsink. It is one of the most user-friendly preamplifiers which surely facilitate work.

Features

- Frequency bandwidth up to 250 MHz
- Integrated fan
- Compatible with optical accessories



Specification (T_a = 20°C)

Parameter	Typical value	Conditions, remarks
Low cut-off frequency f _{lo} , Hz	DC, 10, 100, 1k, 10k	
High cut-off frequency f _{hi} , Hz	100k, 1M, 10M, 100M, 250M	
Transimpedance K _v , V/A	up to 200k	fixed
Output impedance R _{out} , Ω	50	
Output voltage swing V _{out} , V	±10 ±2 ±1	f _{hi} ≤ 1 MHz, R _{Load} = 1 MΩ 1 MHz < f _{hi} ≤ 10 MHz, R _{Load} = 1 MΩ 10 MHz < f _{hi} ≤ 250 MHz, R _{Load} = 50 Ω
Output voltage offset V _{off} , mV	max ±20 ^{*)}	
Power supply voltage V _{sup} , V	±15 ±9	f _{hi} ≤ 1 MHz f _{hi} > 1 MHz
Power supply current I _{sup} , mA	max ±50	
Ambient operating temperature T _a , °C	10 to 30	
Signal output socket	SMA	
Power supply and TEC control socket	LEMO (female)	ECG.0B.309.CLN
Mounting hole	M4	
Fan	yes	

^{*)} Measured with an equivalent resistor at the input instead of the detector, it is to avoid the environmental thermal radiation impact.

Types of VIGO detectors that can be integrated with MIP preamplifier

- Photoconductive: PC-2TE, PC-3TE, PC-4TE
- Photoconductive optically immersed: PCI-2TE, PCI-3TE, PCI-4TE
- Photovoltaic: PV-2TE, PVA-2TE, PV-3TE, PV-4TE
- Photovoltaic optically immersed: PVI-2TE, PVIA-2TE, PVI-3TE, PVI-4TE
- Photovoltaic multiple junction: PVM-2TE
- Photovoltaic multiple junction optically immersed: PVMI-2TE, PVMI-3TE, PVMI-4TE

Code description

Type	f _{lo} , Hz	f _{hi} , Hz
MIP	DC	100k
	10	1M
	100	10M
	1k	100M
	10k	250M
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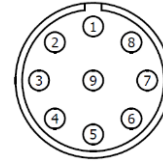
Included accessories

- SMA-BNC, LEMO-DB9 cables

Dedicated accessories

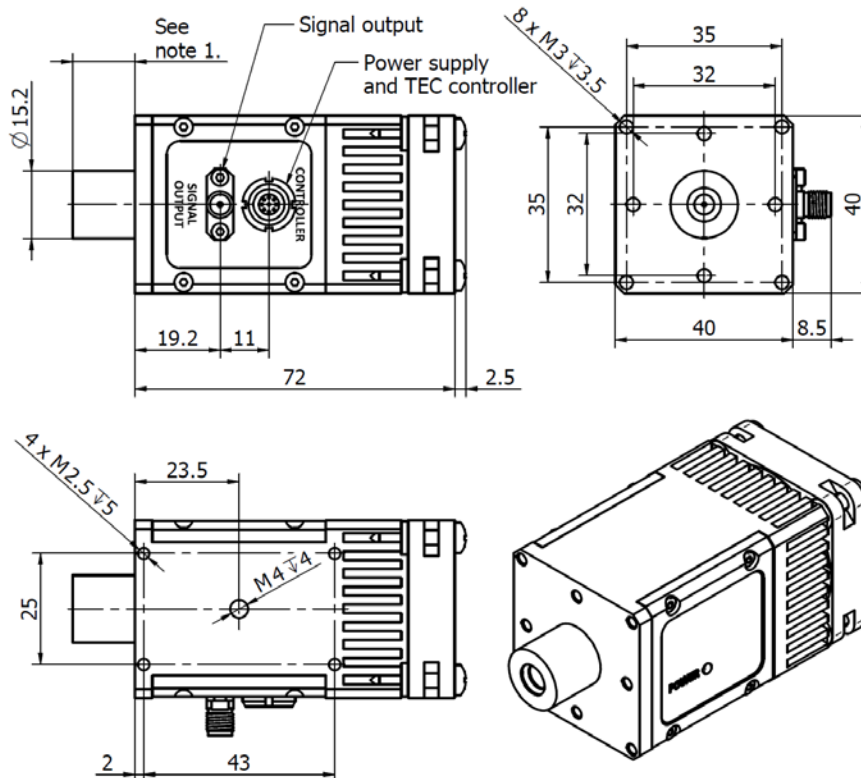
- PTCC-01-BAS TEC controller + USB:
TypeA-MicroB cable + AC adaptor
- PTCC-01-ADV TEC controller + USB:
TypeA-MicroB cable + AC adaptor
- PTCC-01-OEM TEC controller + USB:
TypeA-MicroB
- KK2-POWER cables
- OTA optical threaded adapter
- DRB-2 base mounting system

**Power supply and TEC control socket LEMO (female)
ECG.0B.309.CLN**



Function	Symbol	Pin number
Fan (+)	FAN+	1
Thermistor output (2)	TH2	2
TEC supply input (-)	TEC-	3
Power supply input (-)	-V _{sup}	4
Ground	GND	5
Power supply input (+)	+V _{sup}	6
TEC supply input (+)	TEC+	7
Thermistor output (1)	TH1	8
Data pin	DATA	9

Mechanical layout, mm



Notes:
1. TO8 detector dimensions in the "TO8 technical drawing".