



Evaluation kit Preliminary

For Micro-Hybrid IR-detectors and sources



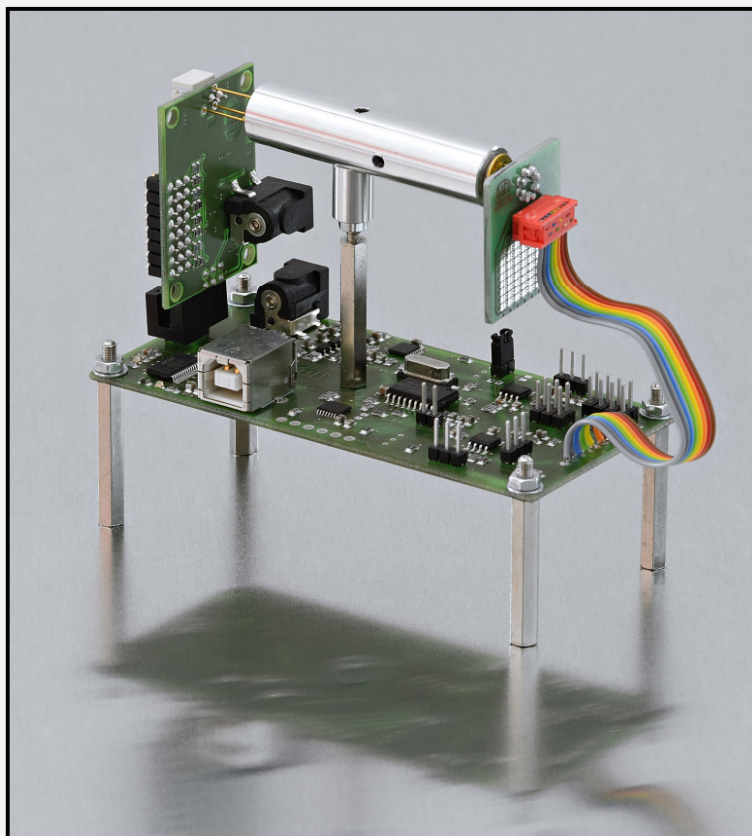
General Description

The kit is designed for Micro-Hybrid's thermopile/pyroelectric detectors and IR-sources. It provides an easy way to evaluate these parts and get started in NDIR gas analysis without developing an electrical circuit and software.

The system is flexible. It optimizes the operating parameters for each specific usage. Flexibility includes easy control of the IR-source and reading / monitoring of the output data from the detectors. Evaluation of all components made easy: a fast and simple process.

Applications (for example):

- gas analysis
- contactless temperature measurement
- laboratory and test set-ups



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Available versions

The Evaluation kit is available in different versions. The emitter board and the detector board can operate either together as a kit or in stand-alone mode. In all versions of detector board, it's possible to monitor two detector channels and thermistor signal (for thermopiles) simultaneously. For a four channel detector, you monitor the additional channels by setting jumper (J1).

The emitter board drives the IR-source in constant power mode, reducing electrical stress and eliminates aging effects of the source.

Version	Comment
Emitter – Evaluation – Board	<ul style="list-style-type: none"> – power consumption selected only by jumper – 3,3V chopper signal is necessary
Detector – Evaluation – Board	<ul style="list-style-type: none"> – USB interface with driver and software – digital and analogue outputs
Evaluation kit (Detector+Emitter-Board)	<ul style="list-style-type: none"> – USB interface with driver and software – source power adjustable by software
Full Evaluation kit*	<ul style="list-style-type: none"> – like the Evaluation kit plus a source, a detector and a adaptable measure chamber for NDIR gasanalysis

*Price depends on the source and detector selected.

Emitter board specifications

Parameter	Min.	Typ.	Max.	Unit	Comment
Supply voltage	12	12	16	V	
Current consumption		5		mA	without IR source
Reference voltage	3.3			V	
Power consumption	0.3 – 1.7			W	adjustable defined by jumper(FB) or potentiometer
Emitter resistance	10	50	70	Ohm	
Operating temperature	0		40	°C	
Frequency range*	0.1		50	Hz	
Output power accuracy**		±5%			

*duty cycle discrepancy >5% at higher frequencies ** depends on used emitter resistance and power

Detector board specifications

Parameter	Min.	Typ.	Max.	Unit	Comment
Supply voltage	12	12	16	V	
Current consumption		60		mA	
Amplification	2 155	- -	55 4150		pyrodetector thermopile
Reference voltage	1.65			V	
Detector supply	±1.65 / +5			V	
Operating temperature	0		40	°C	
Band Width (-3 dB)	1 – 60 0 – 20			Hz	thermopile pyrodetector
Signal acquisition	12Bit / 500Hz				