

Analog galvanic isolator, DC to 1 MHz

Features

- Wide frequency range from DC up to 1 MHz
- Excellent out of the box accuracy, perfectly flat frequency characteristics
- Compatible with the most oscilloscope probes, multimeters and other measurement systems
- Input side completely galvanic isolated with isolation barrier of 4200V / > 10 G Ohm
- Downloadable compensation data



Product description

EMCgear Analog isolator ANA-1 is versatile measuring equipment based on high-accuracy optical isolator in combination with isolated DC-DC converter. Input side is isolated from output as well as power supply jack and doesn't require separate power supply.

Using isolator with oscilloscope and probe, makes probe differential and eliminate galvanic connection between probe and earth reference of the oscilloscope. This allows to make measurements between any two points of scoped circuit without shorting them with probe GND clip (e.g. high-side measurements in SMPS, measurement between floating points,..)

Thanks to the excellent accuracy **can be also used for any type of measurements in DC / AC** with basic accuracy better than 1%.

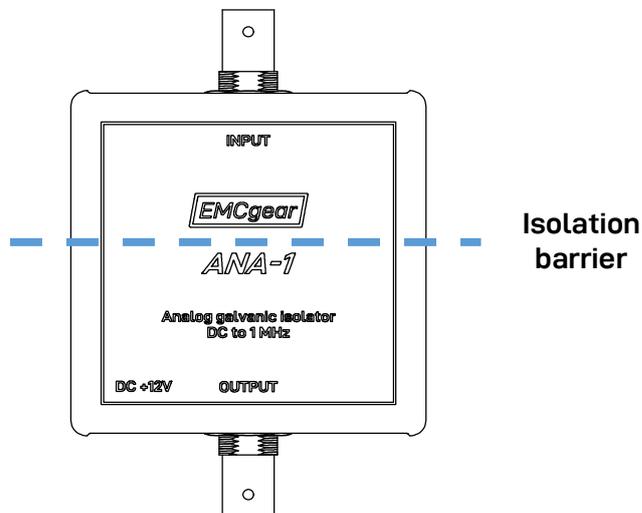
Technical parameters

Input / output terminal	BNC female
Input impedance	1 M Ohm
Input parasitic capacitance	< 10 pF
Input voltage range	± 25 V DC/AC
Output impedance	100 Ohm *)
Output voltage range	± 2,5 V DC/AC
Output noise	< 2 mV AC RMS
Output zero offset	< 10 mV
Operating frequency (operating range)	DC to 1 MHz
Operating frequency (cutoff frequency)	1 MHz
Input/output ratio (lin. / log.)	10:1 / -20 dB
Input/output ratio error (lin. / log.)	< 1 % / < 0,5 dB
Isolation barrier	4200 V
Isolation resistance	> 10 G Ohm
Power supply voltage	12 ± 2 V DC
Power supply terminal	Jack 5.5/2.mm
Current consumption	Max. 100 mA
Operating temperature	23 ± 5 °C

*) To maintain specified accuracy, do not apply external load < 1 M Ohm to device output.

Usage hints

- Never use analog isolator on high power systems!
- Product is intended to be used by trained personnel only.
- Input terminal is protected by means of transient voltage suppressor with a rating of 30 V. Do not apply higher voltages to this terminal.
- Output terminal is protected by means of transient voltage suppressor with a rating of 7.5 V. Do not apply higher voltages to this terminal.
- Always use supplied power adapter or isolated voltage source to supply analog isolator (DC +12V jack). Both input and output terminals are using floating GND potential and for proper function there shouldn't be galvanic connection between them and GND pole of DC +12V jack.
- To maintain isolation barrier, never interconnect shield between input and output BNC connector.



Scope of delivery

Analog galvanic isolator, DC to 1 MHz	ANA-1
Power adapter 110-230V AC to 12 V / 1 A (international socket as per customer needs)	-

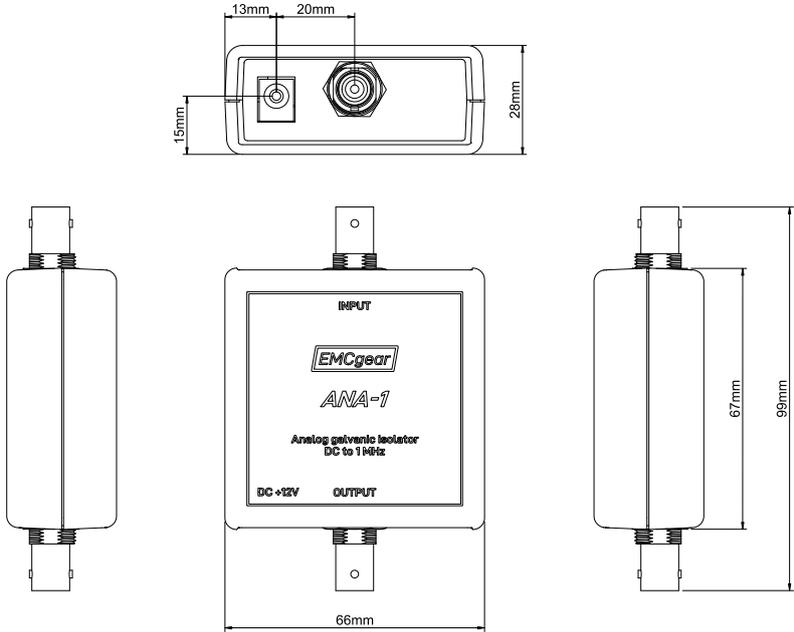
Warranty

2-year manufacturer warranty

Legal

- Product is sold to research and development purposes only.
- Buyer is solely responsible to fulfill any local legislation if product is intended to be used in final application.

Mechanical dimensions



Optional accessories

Description	Order code
RF adapter BNC male to banana plug	RFAD-BCMBA
BNC to BNC cable, RG58, 1m	C-BCBC10R58



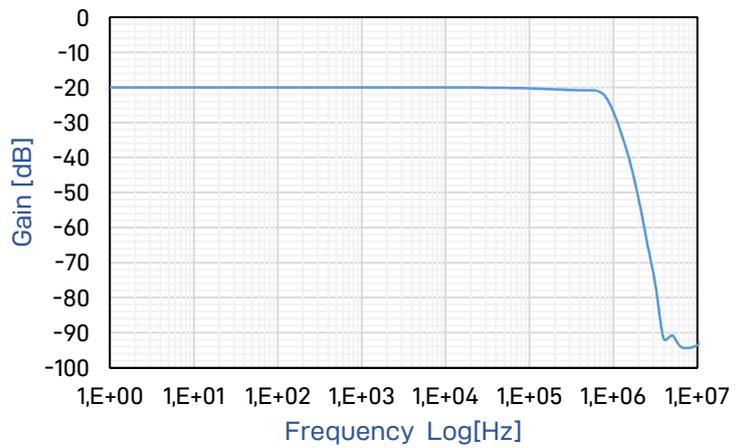
RF adapter BNC male to banana plug
RFAD-BCMBA



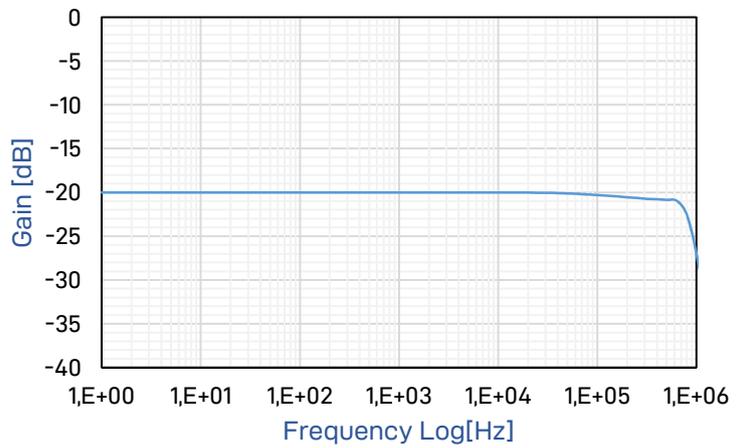
BNC to BNC cable, RG58, 1m
C-BCBC10R58

Frequency characteristics

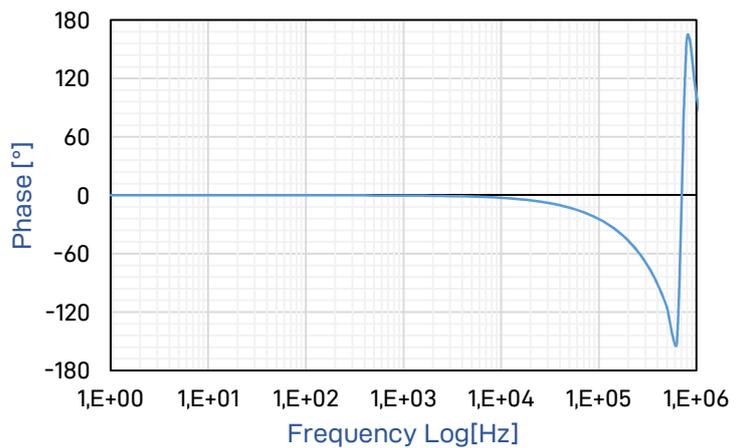
Bode plot – gain
(1 Hz to 10 MHz)



Bode plot - gain
(1 Hz to 1 MHz)



Bode plot – phase
(1 Hz to 10 MHz)



*) Gain of -20 dB corresponds to 10:1 transfer ratio.