

ACOUSTIC SIGNATURE ANALYZER

Continuous vibration watching of industrial machines.

TBV5-A

Type

The transmitter **TBV5-A** is specifically designed to be associated with the acoustic signature sensor **MECASON** in order to provide the watching of vibrations of industrial machines.

This allows to ensure the preventive maintenance of the machines, to lengthen their life time, to safen the production and to improve the staff safety.

Applications

Watching of the bearings on rotating machine, hydraulic turbine, compressor, fan, crusher, lift, centrifugal pump,...

Watching of the flow in a piping.

Easy programming accessible on front face with the included tactile μ console or by PC via the software SlimSET.

CE Marking



II 3 G Ex nA IIC T4 Gc

FUNCTIONS

Acquisition of the data from the MECASON sensor

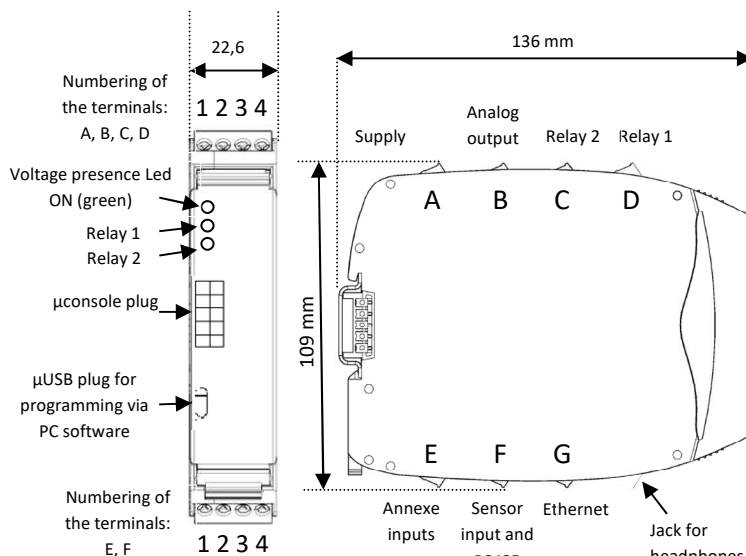
- Manual or automatic calibration at the moment of setup.
- Listening of the acoustic signature via a headphone socket.
- Programming of the alarms: 2 alarm and pre-alarm relay outputs (optional)
- Recopying of the signal on the current or voltage analog output.
- Universal power supply

Options

- 2 relay outputs (alarm and pre-alarm)
- Ethernet Modbus/TCP output
- RS485 Modbus output
- Profinet output
- Storage of the data on μ SD card + software for reading and configuration
- Driver for automatic lubricator
- Servoing of the acoustic signature in case of variable speed via a frequency or mA input



Dimensions



Features

Universal power supply: 20 to 250 VAC / 21.5 to 250 VDC

Power draw: 7.6 VA max. in AC, 4 W max. in DC

Galvanic isolation : 3kV-50Hz-1mn between supply, inputs, analog, digital and relay outputs, RJ45 and the earth.

Environment:

Operating temperature: -20°C to +60°C.

Storage temperature: -20°C to +70°C.

Housing: 22.6 x 109 x 136 mm (with terminals)
Of self-extinguishing UL94 V0 black PA66

Protection: housing/terminals IP20

Connectors: removable terminal blocks for screwed connectings (2,5mm² max, flexible or rigid)

Mounting: in cabinet, latching on symmetrical DIN rail

Max. weighth: 290 g (with packaging)



Technical features

► Inputs

• MECASON sensor

Analog measurement of the true RMS value of the sensor signal

Thermal drift < 220 ppm/°C

Analog filtering 4 programmable pass-band filters

Digital filtering programmable coefficient in case of unsteady signal

• Annexe inputs for servoing (option V)

Frequency

Type Namur, contact, logic, NPN, PNP

Measurable frequency 0 to 1000 Hz

Accuracy 0.1 % of the measure

Digital filtering programmable coefficient in case of unsteady signal

Current input

Caliber 0-20 mA or 4-20 mA.

Accuracy 0.2 %

Sensor supply 18V ±10% / 20mA

Digital filtering programmable coefficient in case of unsteady signal

► Outputs

• Analog output

Current output

Caliber 0-20 mA or 4-20 mA

Admissible load up to 600 Ω (20 mA)

Voltage output

Caliber 0-10 V

Admissible load 5kΩ min.

Accuracy 0.1% of the measure range

Ripple 0.2% (peak to peak) of the measure range

• Relay outputs (option R)

Function: alarm, lubricator control (**option G**) or diagnosis output

Mode setpoint or window

Contact type on potential free contact 1 NO-NC

Rated load 5 A – 250 VAC or 30 VDC

Setting of the setpoints and hysteresis 0 to 100% of the measure range

Time delay: 0 to 999.9 s (programmable)

• RS485 output (option N)

Type 2 wire with galvanic isolation

Baud rate 4800 / 9600 / 19200 bauds

Protocole Modbus / Jbus RTU 8 bits parity programmable

Format of the data 16 bits integer (table of the units) or 32 bits points and units fixed

• Ethernet output (option E)

Modbus/TCP link

RJ485 female footing

• Profinet output (option PN)

RJ45 female footing

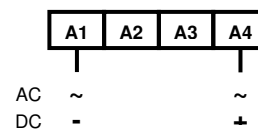
• Audio output

3.5 mm jack type female footing

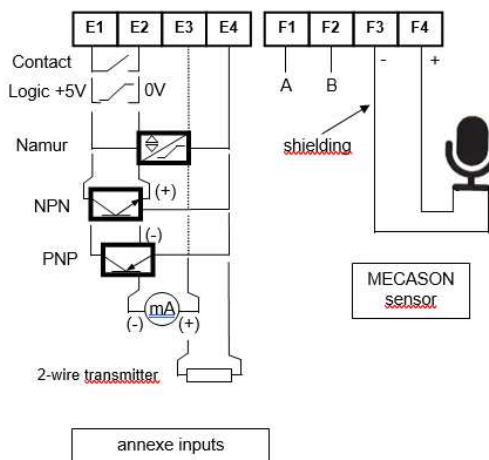
1Veff / 5 mW max.

Connectings

► Supply

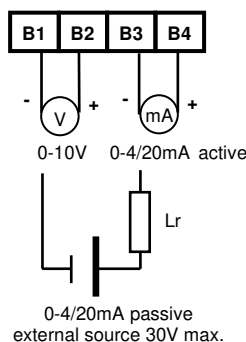


► Inputs



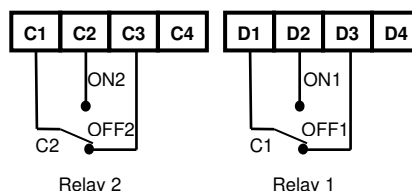
► Outputs

ANALOG OUTPUT

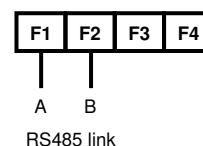


The voltage or current outputs are not independent. One type of output only, to be activated by programming (V or mA).

RELAY OUTPUT (OPTION R)



RS485 OUTPUT (OPTION N)



Coding

Type: TBV5-A

Options

R	2 relay outputs	E	Ethernet output
N	RS485 output	PN	Profinet output
D	Storage of the data	G	Lubricator management
V	Inputs for servoing		

Order example:

For a TBV5-A with 2 relay outputs and option automatic lubricator ask the reference: **TBV5-ARG**

For a TBV5-A with Ethernet output, 2 relay outputs and option inputs for servoing request the reference: **TBV5-AREV**

This appliance is dedicated to industrial applications. It has to be installed in an electrical cabinet, or equivalent.

Your representative



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