AMOD MV 2-2

Description

The analogue module AMOD MV 2-2 is a multifunctional signal condition unit for machine monitoring.

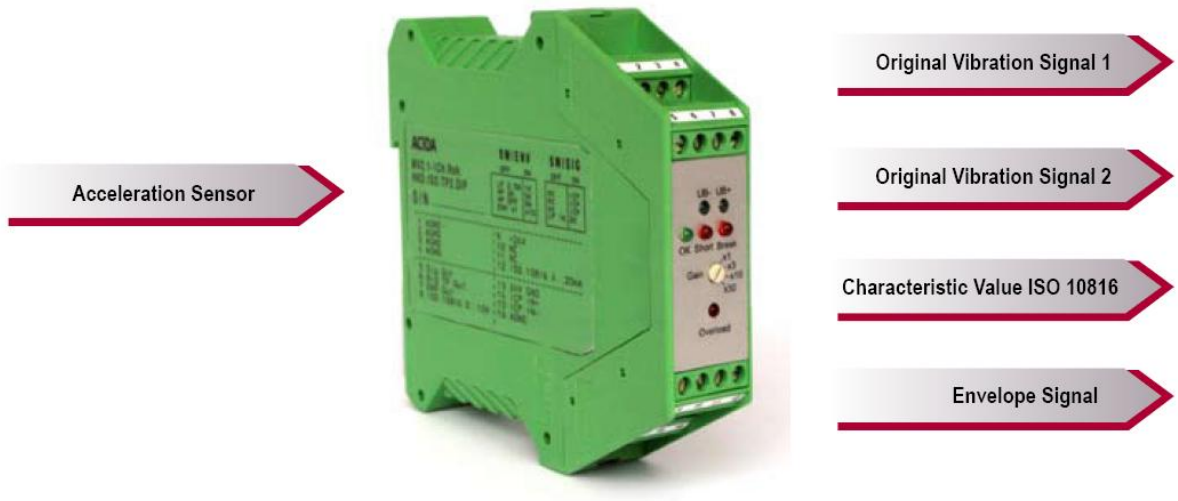
The device was specially developed for vibration monitoring of industrial machinery, for example monitoring of:

- Unbalance
- Alignment errors
- Defects of roller bearings and gearboxes
- Cavitation at pumps
- Machine resonances
- Monitoring of general vibration at machines, engines or fluid-couplings

A standard acceleration sensor is connected to the ground free differential input of the module.
Four analogue outputs provide the original acceleration signal in a frequency range of up to 20kHz, the filtered acceleration signal in a frequency range of up to 1kHz or 2kHz, the characteristic value RMS of vibration velocity acoording to DIN ISO 10816 and the envelope signal in a frequency range of up to 500Hz or 1kHz.

The electronic module is delivered in a 22.5mm wide housing for DIN RAIL (35mm, according to the European standard EN 50022) mounting.

AMOD 2-2 is supplied with +/-15V DC by the linear power supply NG 2x15V/400mA. It comes also in a DIN rail mountable housing and is able to drive up to 4 AMOD 2-2 with a typical current consumption of 40mA.



pic. 1 function principle of AMOD 2-2

Technical Specifications

Input (Acceleration Sensor)

Signal level.....+/- 10 V
Impedance.....1MΩ
AC-Coupling (high pass cut-off frequency.....0.33Hz
Input-type.....ICP or voltage
Surge protection.....+/- 15V / max. 60mA

Output (to Monitoring System)

Impedance.....75Ω
Max. load.....10kΩ
Surge protection.....+/- 15V / max. 60mA

Acceleration Signal Filter 1 (Sig Out)

Signal level..... ±10V
Signal bandwidth (low pass filter, 4th order).....0.33 – 20kHz

Acceleration Signal Filter 2 (Sig TP Out)

Signal level..... ±10V
Signal bandwidth (low pass filter, 6th order, cut-off frequency
Adjustable via DIP-swith..... .....0.33 – 1kHz or 0.33 – 2kHz

Envelope Signal (Env Out)

Signal level.....0 – 10V
Enveloper.....analogue
High Pass Filter cut-off frequency (4th order, adjustable via DIP-switch)
on-/off-position.....2kHz or 5kHz
Post amplification factor adjustable.....x1 or x10
Low Pass Filter cut-off frequency (6th order, adjustable via DIP-switch)
on-/off-position .....500Hz or 1kHz

Characteristic Value ISO 10816

Characteristic Value according to.....ISO 10816
Signal level (selected by used terminals).....0 – 10V
.....and 4 – 20mA
Used bandwidth.....2 – 1000Hz
Measuring range with Sensor 10mV/g.....0 – 200mm/s
Measuring range with Sensor 100mV/g.....0 – 20mm/s
Measuring range with Sensor 500mV/g.....0 – 4mm/s

Example: Using a standard sensor with a sensitivity of 100mV/g leads to a measuring range of 0 – 20mm/s.

Amplification of input signal

Input amplification factor.....x1, x3, x10or x30
Adjustable with turn-switch at the front of the housing.

Sensor monitoring / Display

OK..... sensor OK
Short.....sensor-shortcut
Break.....broken sensor cable
U+.....pos. supply voltage OK
U-.....neg. supply voltage OK
Overload.....sensor signal out of range

Power Supply

AMD 2-2..... ..+/-15VDC / 40mA typ.

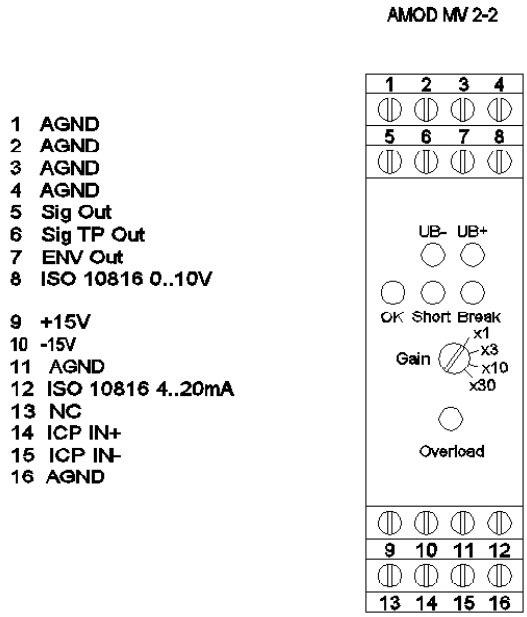
Housing

Design.....Phoenix ME 22.5/UTG/FEGN
.....for DIN rail mounting
Weight.....ca. 150g
Dimensions (HxWxD).....ca. 100 x 22.5 x 110mm
Operating temperature..... .....0…50°C (32…122°F)

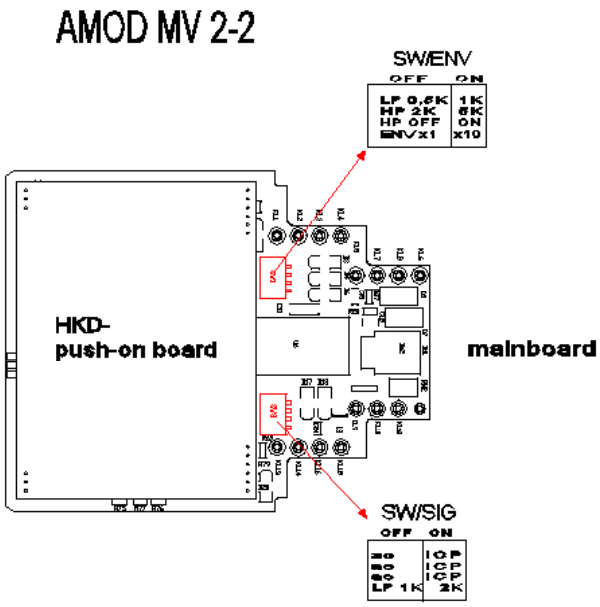
General Terms and Conditions of Sale for Industrial Engineering are available at: www.acida.net

More information available at: info@acida.net

Technical data and illustrations may be subject to change.



pic. 2 front view of AMOD 2-2



pic. 3 position of DIP-switches at internal board