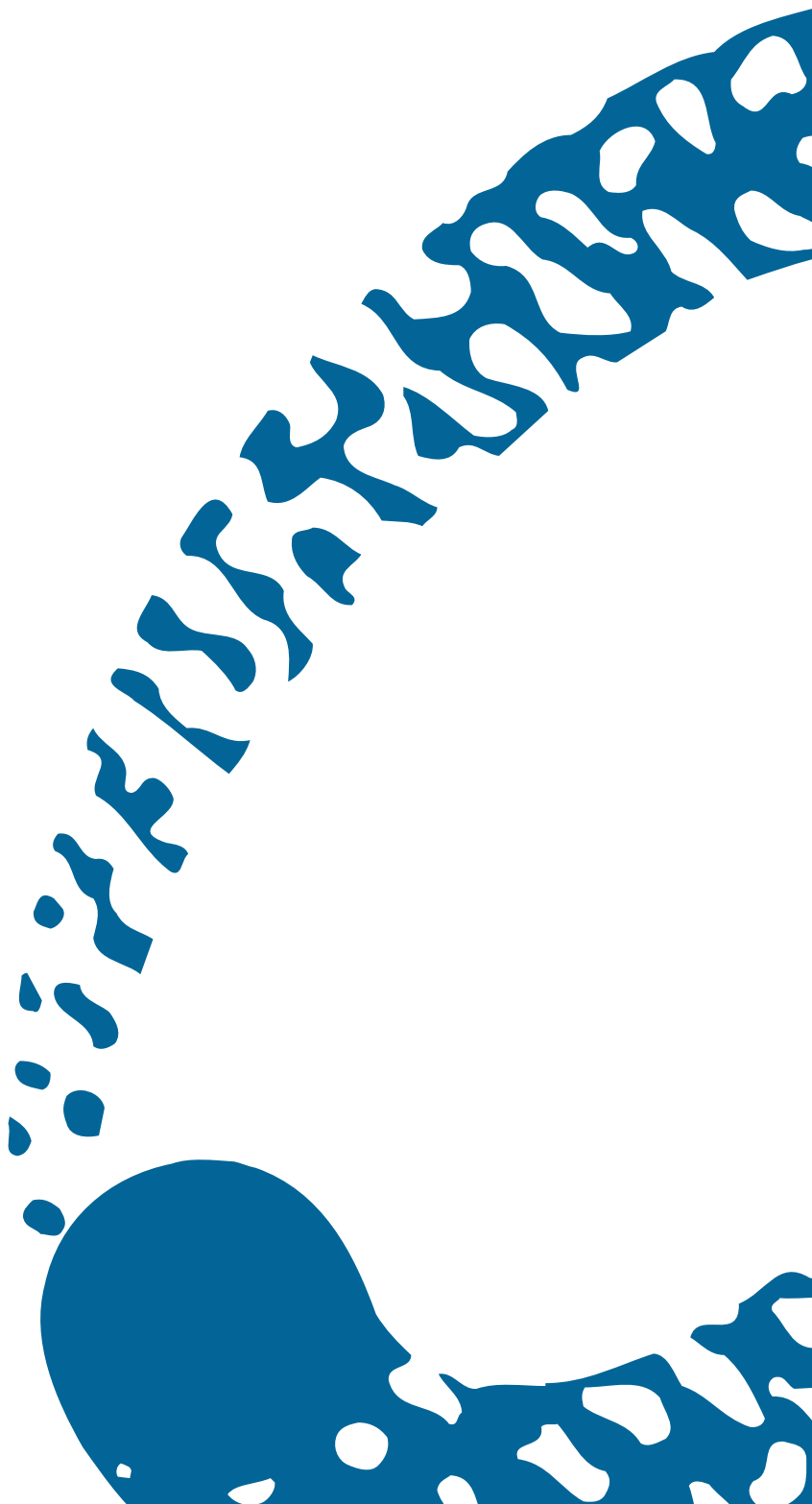


OrbiVib2

Datasheet

Version 1.1



Key Features

- Profibus DP Interface
- USB Interface
- 8 independent configurable frequency bands
- External Dual axis Accelerometer
- 2 Digital Inputs with Encoder function
- 2 Relay Outputs
- Real Time Clock
- Internal non-volatile error buffer
- Internal non-volatile vibration trace data buffer
- DIN-rail snap-on mounting
- Programmable configuration
- Stand Alone security loop functionality



OrbiVib2

The OrbiVib2 is designed for vibration measurements in the frequency range 0.1–100 Hz. Up to 8 independent configurable frequency bands can be used to monitor and supervise accelerations in the frequency range of interest. The band-pass filter parameters, the vibration excess values and the reaction times can be configured individually for each frequency band.

The OrbiVib2 module provides 2 digital RPM inputs, which also can be used as an encoder input.

Two relay outputs are individually programmable for activation of RPM or/and vibration excess. An integrated 100 samples deep data/trace logger will capture all relevant information in case of an excess and will save it together with a time stamp in a non-volatile memory. Via the USB port these data can be exported and FFT evaluated by using third party programs like Matlab® or Octave®.

Either the Profibus DP or the USB interface can be used for configuration, monitoring and controlling of the OrbiVib2 system. In addition, a stand-alone operation after configuration is possible.

A GSD[E] file provides the master with all needed information about the module and the data protocol.

Specifications

Standards

Area	Standard	Title
	DS/EN 50081-2:1994	Electromagnetic compatibility - Generic emission standard - Part 2: Industrial environment
	DS/EN 50082-2:1994	Electromagnetic compatibility - Generic immunity standard - Part 2: Industrial environment

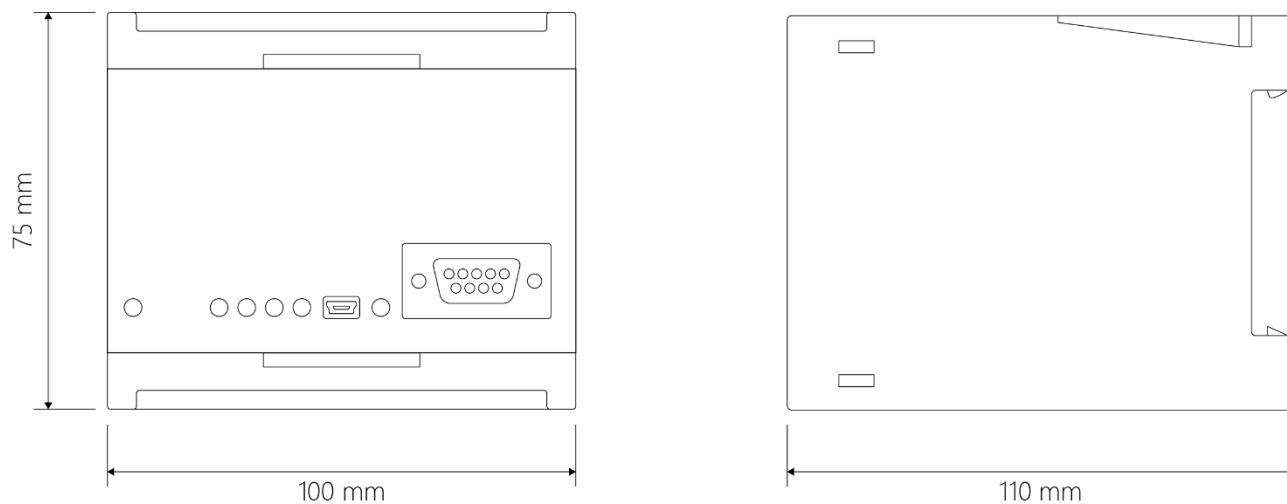
Technical

Area	Value	Variable
Power Supply	Supply Voltage	24 VDC (min. 19.0 – max. 30.0)
	Power Consumption	3 W (max.)
Relay output	Switching voltage	250 VAC / 30 VDC (max.)
	Switching current	0,01 AAC / ADC (min.) – 5/5 AAC / ADC (max.)
	Scan cycle	100 msec
Digital / Counter inputs	Input impedance	4400 Ohm
	Low input level	0 VDC (min.) – 8 VDC (max.)
	High input level	24 VDC (min. 16.0 – max. 40.0)
	Input frequency	1 Hz (min.) – 300 Hz (max.)
Profibus	Baud rate	9600 Baud (min.) – 12M Baud (max.)
Accelerometer	Cable length	10 m (max. 20)
	Acceleration range	+/- 14 m/s ²
	Frequency range	0,1 Hz (min.) – 100 Hz (max.)
	Filter bandwidth	0,1 Hz (min.) – 10 Hz (max.)

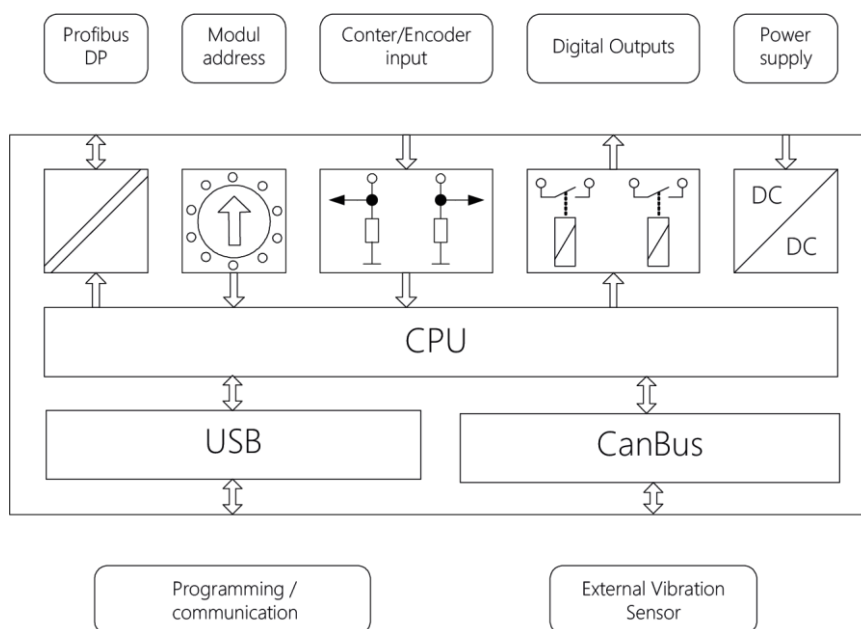
Environment

Area	Value	Variable
Storage and operation area	Operating temperature	-40... 50°C
	Storage temperature	-40... 85°C
	Humidity	0-95% RHD non condensing
	Environment module	IP20
	Environment sensor	IP65

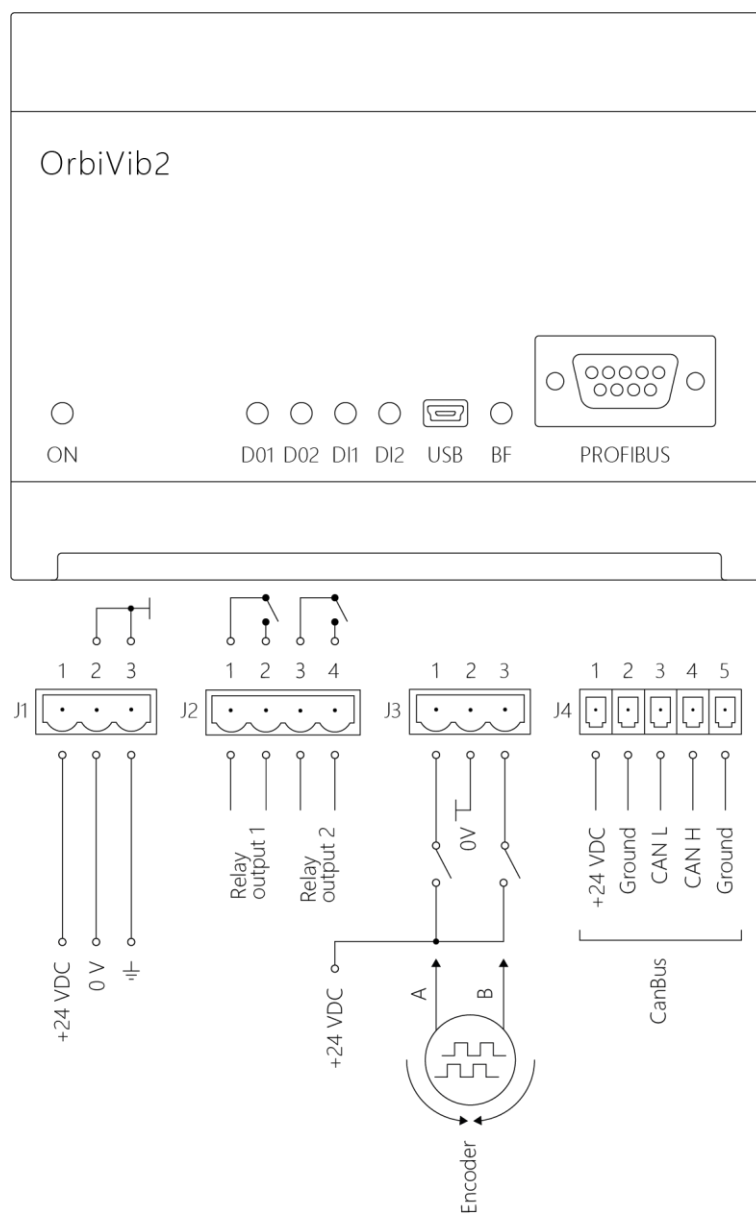
Measurements



System block diagram



System I/O overview



Connector assignment

Connector no.	Pin no.	Pin name	Description	Function
J1	1	+24V	Power	+24 VDC
	2	0	Power	GND
	3	E	Power	Earth
J2	1	D01	Relay output	Output 1
	2	D01		
	3	D02	Relay output	Output 2
	4	D02		
J3	1	DI1	Digital Input / RPM / Encoder A	Digital Input 1
	2	Gnd	Ground	Common ground
	3	DI2	Digital Input / RPM / Encoder B	Digital Input 2
J4	1	+24V	Power	Supply to Sensor
	2	Gnd	Ground	GND
	3	CAN L	Can Bus	Communication line
	4	Can H	Can Bus	Communication line
	5	Gnd	Ground	GND
J5	1	n.c.	Not connected	
	2	n.c.	Not connected	
	3	A	I/O	Profibus A
	4	RTS	Output	
	5	Gnd	Power	Ground
	6	+5Vdc	Power	*5V output (max. 20 mA)
	7	n.c.	Not connected	
	8	B	I/O	Profibus B
	9	n.c.	Not connected	

Changelog

Date	Revision	Author	Change
16/03-18	1.1	MKM	Layout update