

Analoger Beschleunigungssensor

Dieser Beschleunigungssensor ist zum Anschluss an das Sensormodul des ELM Systems geeignet. Er dient zur Erkennung von Vandalismus, Zerstörung und Diebstahl. Der Sensor misst die Beschleunigung entlang einer Achse.

- 3000-U38-00 Kabel-Ende mit offenen Kontakten
- 3000-U38-01 mit Stecker für ELM 19"-Einschübe oder ELM Box-Module

Technische Änderungen vorbehalten.

Analogue Acceleration / Tilt Sensor

This accelerations sensor can be connected to a sensor module of the ELM system. It is used to detect vibration, vandalism, destruction and theft. It measures acceleration along one axis.

- 3000-U38-00 cable end with open contacts
- 3000-U38-01 with connector plug for ELM 19"-racks or ELM box modules

Subject to technical changes.



Plug front side view	Pin number of plug	Signal	Wire color
	1	+7.5...15 V DC	red
	2	Sensor	green
	3	Ground	blue
	4	(not used)	-

Fig. 1: 3000-U38-01

Characteristics

- Measuring range: -5 ... +5 g (by Z-axis), protected up to ±1500 g
- Output voltage at 0 g 2.5±0.25 V
- Output sensitiveness 0.4±0.02 V/g
- Operating voltage +7.5...15 V, consumption approx. 2 mA
- Operating conditions -40...+70°C
- Protection level IP 65
- Standards RFI and ESD acc. to EN 50082-1 and EN 50082-2
- Dimensions 65 x 31 x 32 mm
- Cable length 2 m

Using with ELM sensor module 3000-U13

When connecting the sensor to the 3000-U13 it is possible to assign set points for switching relays and/or initiating alarms. Usually an alarm line should be assigned to both set points. Because the sensor generates pulses during acceleration only the alarm latch mode should be used for the alarm.

The acceleration dependent on the voltage is calculated according to the below formula:

$$\text{Acceleration[g]} = (\text{voltage[mV]} * 0.0025) - \text{offset}$$

Note that the offset depends on the mounting position as well as on the tolerance of output voltage. The offset is **6.25** if the output value in resting position is 2.5 V.

Parameters for ELMcontrol:

<i>lower end of scale</i>	<i>lower limit</i>	<i>upper end of scale</i>	<i>upper limit</i>	<i>fitting scale</i>	<i>fitting offset</i>	<i>lower set point</i>	<i>upper set pint</i>
-5 g	500 mV	+5 g	4500 mV	0.0025	-6.25	-0.2	+0.2