GEM**VM**

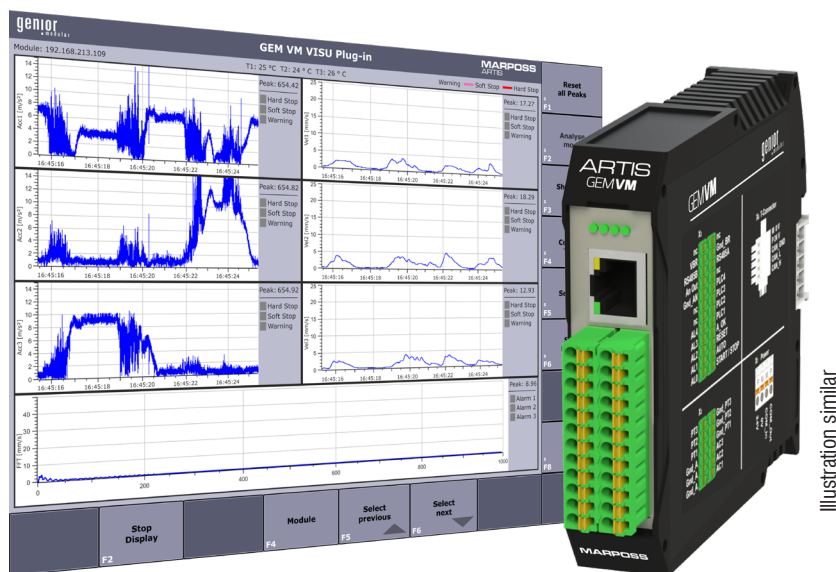## *MONITORING AND ANALYSIS OF MACHINES AND COMPONENTS*

Illustration similar

Properties

- 3 independent accelerometer inputs (IEPE standard)
- 3 limits defineable for each graphic window
- 3 independent temperature sensor inputs (PT100 standard)
- 1 limit definable for each temperature sensor
- 10 Hz ... 8 kHz frequency range
- X, Y, Z gravity values (only with dedicated sensor)
- Analysis tool VisuScope for evaluation in real time or subsequent evaluation based on stored measuring data
- 16 kHz sampling rate
- 16 bit resolution
- MultiView capable
  (parallel operation of several modules at one visualization)

If GEM**VM** is connected to the GENIOR MODULAR system, the following additional signals are available for tool and process monitoring:

- 3 x vibration velocity (mm/s)
- 3 x acceleration (m/s^2)

## *GEMVM in stand-alone mode*

Additional features in stand-alone mode

- Physical I/O interfaces (7 inputs – 6 outputs)
- 8 different scenarios
- 21 different static alarms for each scenario
- Fast alarm messages (< 1ms)
- Alarm event data recording
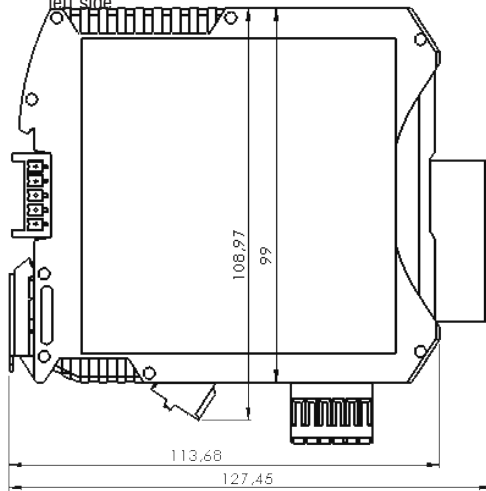- 1 analog output* (see page 2)
- Signal values stored in a .CSV log file

Available signals

- 3 x vibration velocity (mm/sec)
- 3 x acceleration (m/s^2)
- 1 x FFT (512 points)
- 3 x temperature
- 3 x gravity (only with dedicated sensor)
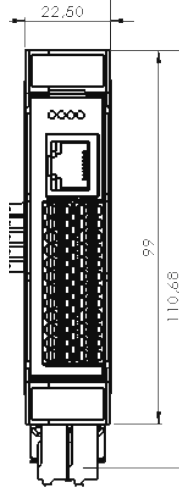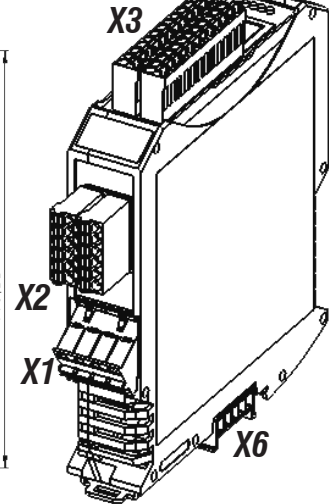- Resolution 1 ms
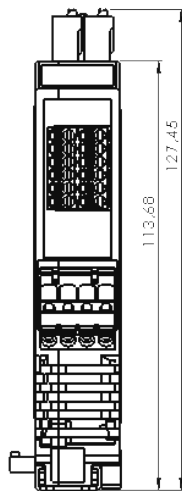
Front view ... View from the left side ... Top view ... Perspective view

GENERAL DATA	
ARTICLE NUMBER	
GEM**VM**	O830ZA00101
GEM**VM**+*	O830ZA00102

STANDARD IP ADDRESS	192.168.214.83
DIMENSIONS	see drawing
WEIGHT	0.196 kg
MATERIAL	Polyamide PA 6.6
STORAGE TEMPERATURE	-20 °C...+60 °C
OPERATING TEMPERATURE	+5 °C...+50 °C
UL-CLASSIFICATION	VO (UL94)
DEGREE OF PROTECTION	IP30
ATMOSPH. REL. HUMIDITY	Storage < 95
	Operation < 85 % +... 85 % ≤ RH < 95 %
INSTALLATION	DIN EN 60715 standard mounting rail
CONTACTING	Spring terminal
	in-rail bus connector

MEASURING	
MEASURING INPUTS	3 x IEPE 3 x PT100 suitable sensors (order separately): all acceleration sensors with IEPE-interface and PT100 temperature sensors
ACCURACY	< 0.5 %
FREQUENCY RANGE	10 Hz ... 10 kHz (sensor dependent)
SAMPLING RATE	16 kHz
RESOLUTION	16 bit
CONFORMITY	CE, UKCA

SOFTWARE REQUIREMENTS VISUALIZATION	
OPERATING SYSTEM	• Microsoft Windows® as of WIN XP SP3 • Siemens 840D as of V 04.05. (PCU/TCU)
MINIMUM RAM	512 MB
MIN. CLOCK FREQUENCY	600 MHz
MOUSE/TOUCHSCREEN	recommended

COLLISION MONITORING WITH GEMVM	
INTERFACE	RS485 for dedicated sensor
ETHERNET	10/100 MBit/s
CONNECTION X1	24 V DC ±20 %, max. 5 % ripple (or via in-rail bus connector)
NOM. CURRENT CONSUMPTION	max. 250 mA
CONNECTION X2	3 x IEPE, 3 x PT100
CONNECTION X3 IN-/OUTPUT SIGNALS	7 input signals, 6 output signals

INPUTS
  1-SIGNAL SOURCE
  0-SIGNAL SOURCE
  1-SIGNAL SINK
  0-SIGNAL SINK
	
	8 V ... 36 V / 5 mA
	0 V ... 7 V / 5 mA
	0 V ... 19 V / 5 mA
	20 V ... 36 V /5mA

OUTPUTS
  1-SIGNAL SOURCE
  0-SIGNAL SOURCE
  1-SIGNAL SINK
  0-SIGNAL SINK
	
	24 V typical, max. 100 mA
	open
	0 V ... 1 V
	open

ANALOG OUTPUT* FOR GEM**VM**+ ONLY	0 ...10 V
CONNECTION X6	CAN bus, 24 V DC

OPERATION WITH GENIOR MODULAR	
Interface	CAN bus