MARPOSS
ARTIS

Overview

GEMTPEL

ENTRY LEVEL
TRUE POWER MODULE FOR
TOOL AND PROCESS MONITORING

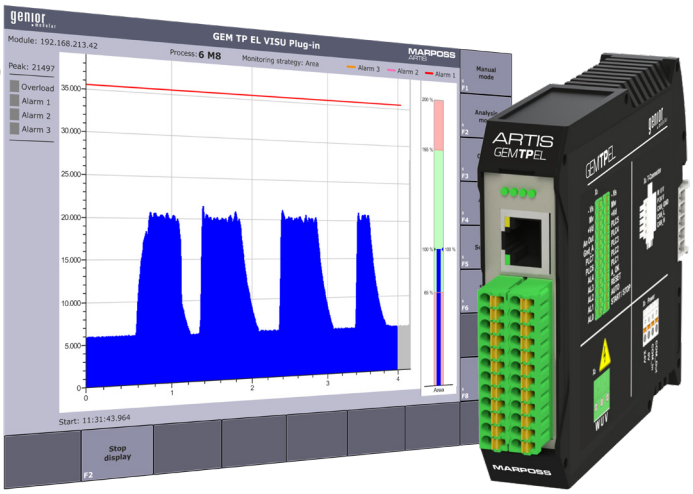
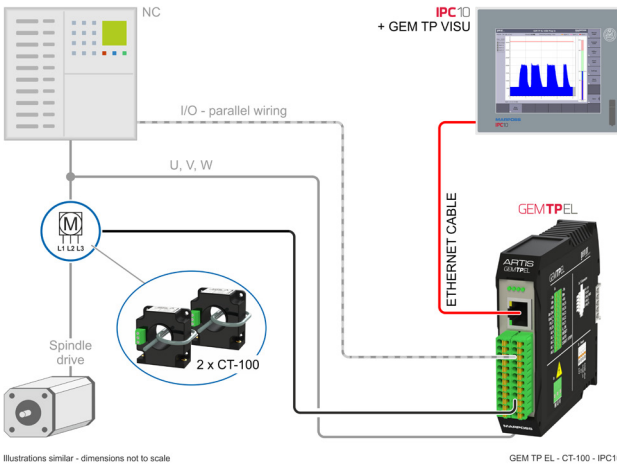


Illustration similar

Application example

Stand-alone operation

As a stand-alone module, GEM**TP**EL is an ideal solution for detecting process anomalies during metal cutting in machine tools. The application example below shows a GEM**TP**EL module with GEM TP VISU software (here via IPC10) and two CT-100 Hall sensors (order separately).



For all technical details, please refer to the data sheets of the different components.

Integrated application

As part of the GENIOR MODULAR product family, GEM**TP**EL can also be connected to the GEM**CPU** and thus becomes part of the high-end GENIOR MODULAR system. In this case, the GEM**CPU** uses the measurement signal of GEM**TP**EL additionally for automatic monitoring strategies.

Properties

- Single channel system for drive monitoring
- Tool condition monitoring (breakage, missing, wear)
- Available for 31 different cycles
- Connection via I/O signals to all machine controls possible
- Simple installation in the control cabinet
- MultiView capable
  (parallel operation of several modules at one visualization)

Benefits

- Avoidance of damage to workpieces, e.g. due to problems in the machining process
- Adapatable to different cutting processes thanks to different monitoring strategies (Static, Dynamic, Area)
- Comparing process curves for analysis purposes
- Event data recording (blackbox)
- External data processing thanks to manual or automatic data export in csv-format for Industry 4.0 applications

Article number

- GEM**TP**EL+ Monitoring Module * (see page 2) O830Z910305
- GEM**TP**EL Monitoring Module O830ZA00303
- order separately:
  GEM TP VISU software for Windows PCs
  IPC for visualization
  Compatible Hallsensors:
  – CT-100, LA205S, LA305S

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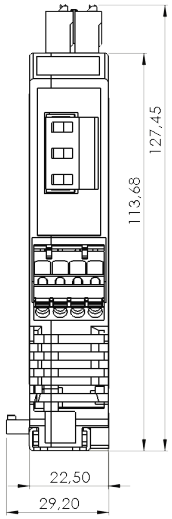
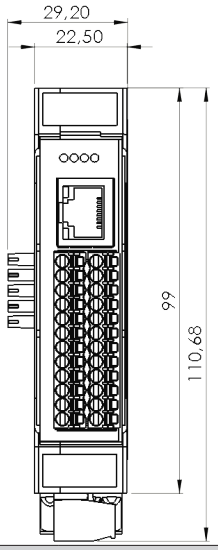
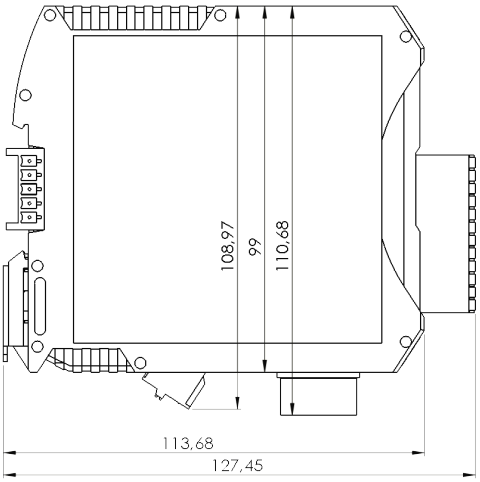
Front view



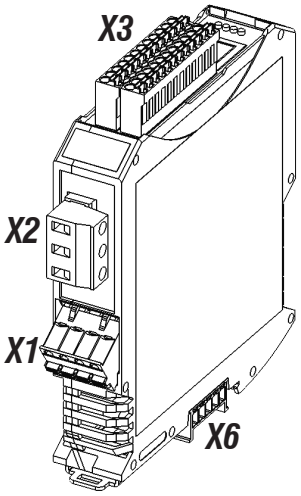
Top view



View from the left side



Perspective view



GENERAL DATA	
DIMENSIONS	see drawing
WEIGHT	0.138 kg
MATERIAL	Polyamide PA 6.6
STORAGE TEMPERATURE	0 °C...+70 °C
OPERATING TEMPERATURE	+5 °C...+50 °C
UL-CALSSIFICATION	VO (UL94)
DEGREE OF PROTECTION	IP30
ATMOSPHERIC RELATIVE HUMIDITY	max. 2 months, no condensation
STORAGE	< 95 %
OPERATION	< 85 % and 85 % ≤ RH < 95 %
INSTALLATION	DIN EN 60715 standard mounting rail
CONTACTING	Spring terminals, Screw terminals

MEASURING	
SAMPLING RATE	20 kHz
RESOLUTION	16 Bit
VIBRATION LOAD	
TRANSPORT	ISTA2
OP. TEST	(10...55) / 0.15 / (10...55) / 0.35
FC (2G MAX.)	25 kHz

REQUIREMENTS FOR VISUALIZATION	
	Microsoft Windows® as of WIN XP SP3
	Siemens 840D as of V 04.05 (PCU/TCU)

MIN. RAM	512 MB
MIN. CLOCK FREQUNCY	600 MHz
MOUSE-/TOUCHSCREEN	recommended

CONNECTIONS	
CONNECTION X1	24 V DC ±20 %, 300 mA SELV type acc. to EN 60950-1
	Cable cross section 0.2 ... 2,5 mm²
CONNECTION X2	Cable cross section 0.25 ... 3 mm²
INPUT/DRIVE POWER	
MAXIMUM VOLTAGE	500 V AC phase-phase CAT II
CONNECTION X3	Cable cross section 0.2 ... 1.5 mm²
SENSOR CONNECTION	Measurement connection
ANALOG OUTPUT * (GEM**TP**EL+ ONLY)	0 ... 10 V
INPUT-/OUTPUT SIGNALS	8 input signals, 6 output signals
INPUTS	Sink-/source operation selectable
1-SIGNAL SOURCE	8 V ... 24 V / 5 mA
0-SIGNAL SOURCE	0 V ... 7 V / 5 mA
1-SIGNAL SINK	0 V ... 19 V / 5 mA
0-SIGNAL SINK	20 V ... 24 V /5mA
OUTPUTS	
1-SIGNAL SOURCE	24 V typical, max. 100 mA
0-SIGNAL SOURCE	open
1-SIGNAL SINK	0 V ... 1 V
0-SIGNAL SINK	open
ETHERNET PORT	10/100 MBit
CONNECTION X6	CAN bus and 24 V DC
CONFORMITY	CE, UKCA

For a full list of address locations, please consult the Marposs official website

ODN6438EN11 – *Edition 01/2025 - Specifications are subject to modifications*

Marposs has an integrated system for Company quality, environmental and safety management, with ISO 9001, ISO 14001 and OHSAS 18001 certification.

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