Montronix®

MONITORING SOLUTIONS

Integrated process monitoring

PulseNG

"Airbag" against collision + data recorder

Comes with an "Automatic Machine Self Diagnosis Solution" for metal cutting, robots & industrial kinematics

Salient Features

Basic Functions:

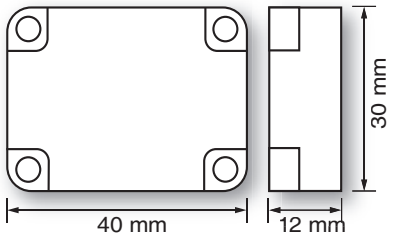
- On-Board graphical event-recorder for capturing snapshots of the past 64 events
- Built in text log for more than 4000 events
- Generates output in ≥ 1 millisecond upon a Collision!
- Reaction time for vibration-overload is ≥ 1 millisecond
- Reduces the risk of premature failure of spindles and dynamic machine components

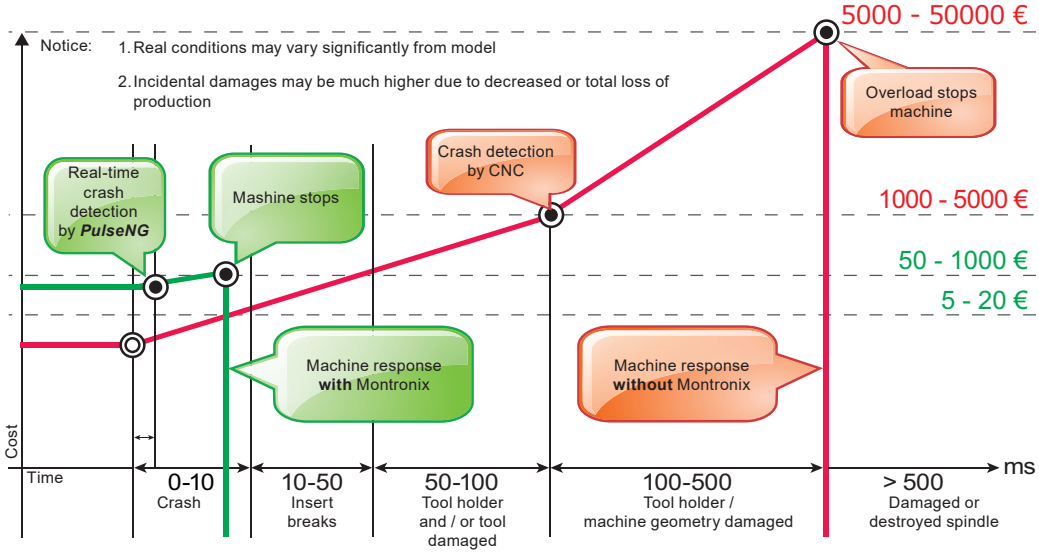
Advanced functions:

- Automated Machine self diagnostics
- Simple Process Monitoring
- Optimization of machining & process parameters

Description

- Simple, but complete Realtime Tool & Process monitoring system consisting of sensor & electronics
- MEM's based tri-axial accelerometer (X, Y and Z)
- Quick & easy installation on spindle / machine member & in electrical cabinet
- Teach function for easier system-setup
- Economically Priced





Your Advantage:

- **Abnormal events such as collisions & overloads are stored to integrated "Black Box".**
- **Collision detection in realtime & immediately forcing machine hard-stop (≥ 1 millisecond!) minimizes damage to spindles, tools, workpieces and other parts of the machine.**
- **For a marginal cost you receive very high saving potential & a guaranteed timely return on your investment in equi pment.**
- **Enhanced up-time allows for higher thru-put and possible reduction in requirement of to tal number of machines.**
- **Machine & process validation & minimizing limiting operating condition.**

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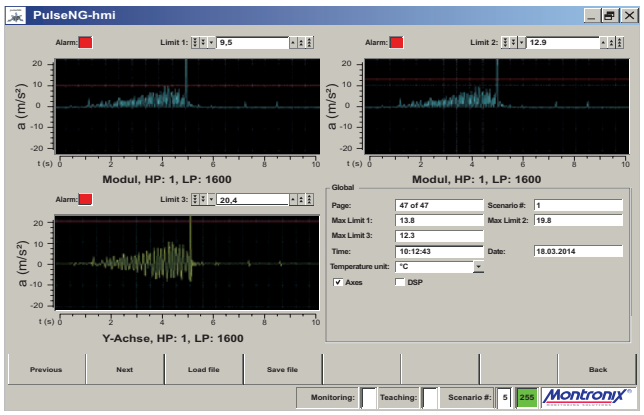

Abb. Graphical Event Recorder (real-time snapshots)

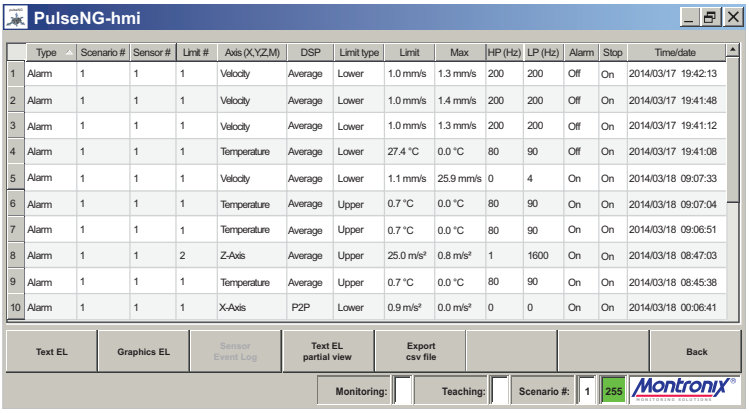

Abb. Date & Time stamped “Black Box“ events

Additional Specifications

- **New generation DSP - technology**
- **Highly accurate**
- **Text - Event - Memory up to 4000 entries**
- **Allows for real-time FFT up to 1350 Hz**
- **Compact sensor dimensions** (H x W x D 30 x 40 x 12 mm)
- **Built-in temperature sensor** (measuring range of 0 to 70 °C)
- **Network / PC connection via Ethernet (IBU-NG)**
- **HMI-software for Windows and Linux** (Android and iOS in preparation)
- **Fast & easy installation**
  (installation using four M4 standard screws or via four magnets)
- **Simple interface to machine control via I/0.**
- **IBU-NG mounts on DIN rail in the electrical cabinet**
- **Compatible with all CNC controls**
  (No PLC interface is necessary for basic functionality)
- **Enhanced event-log: In addition to “alarm-details”, “Power on/off”, “monitoring deactivated” & many more**

Abb. IBU-NG

Application

- **Turning Machines**
- **Machining Centers**
- **Grinding Machines**
- **Special Purpose Machines**
- **Transfer Lines**
- **Part loading systems**
- **Robots**
- **Other industrial material handling systems**

Cut Costs!

- **Reduce Tooling costs**
- **Increase production output**
- **Increase machine operating time (uptime)**
- **Minimize machine downtime**
- **Minimize collisions and associated costs**
- **Advance planning for critical maintenance**

Collision

Three discrete limits generate independent outputs to induce different machine reactions namely: For example

- **Warning limit**
- **Feed rate reduction**
- **Feed stop**

Additional outputs

- **Emergency machine stop**
- **System OK / Ready:**

Recorder

Graphical Event Recorder stores up to 64 events (5 seconds before and after any event)

Stored values:

- **Date & time**
- **Max. value of the event**
- **Other relevant data for production process**

“Recent-in” & “oldest-out” ensures events of interest cannot be deleted or tampered. Graphical & text event-log can be accessed via IBU-NG to a local pc or over Ethernet network.

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