Your processes in safe hands

Spectra ONE

▸ Process monitoring
▸ Process optimisation
▸ Machine protection
▸ Machine diagnostics
▸ Predictive maintenance

For up to 4 stations

Per station up to 9999 tools per workpiece (up to 9999 workpieces)

Communication with the controller via discrete I/O (expandable with Hub DIO), Profibus or Profinet

Analog and digital sensors, expandable with SensorHub AD and SensorHub NX

Better be safe. Safely be better.

Applications, areas of application and functionality

■ Process monitoring

- Tool monitoring (tool breakage, tool wear, tool missing)
- Collision detection
- Measuring of vibration, acoustic emission, force, power, and frequency to detect process irregularities
- Tools, also less than 3 mm in diameter
- Detection of micro-breakouts on cutting inserts
- Thread quality
- Strong fluctuations allowance
- Material differences (micro-cavities, inclusions, ...)

■ Process optimisation

- Detect unwanted deviations from the planned machining process
- Optimize processing and cycle times
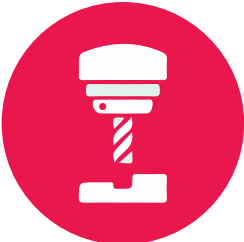- Effectively generate and read analytical data

■ Machine protection

- Collision monitoring
- Vibration overload detection
- Reduce costs by avoiding machine shut downs

■ Machine diagnostics

- Increase processing quality
- Process and cutting data optimization
- Detect wear of machine components
- Detect tool or spindle imbalance
- Predictive maintenance

■ Area of application

Drilling / Milling	Turning	Grinding	Handling

Extensions

■ SensorHub AD

Analog sensors
To expand the monitoring options with analog Montronix or third-party sensors
CNC-I/O module Discrete I/O wiring possible
AMP module / IFA module connection to amplifiers and sensors
➡ Torque- and force sensor AT100
➡ Broadband vibration sensor BV100
➡ Force sensor RetroBolt-Mxx-ICA
➡ Force sensor RetroBolt-Mxx
➡ Strain measuring sensor StrainLink250DA
➡ Power sensor PS200-NG
➡ Analog third-party sensors max. +/- 10 V

■ SensorHub NX

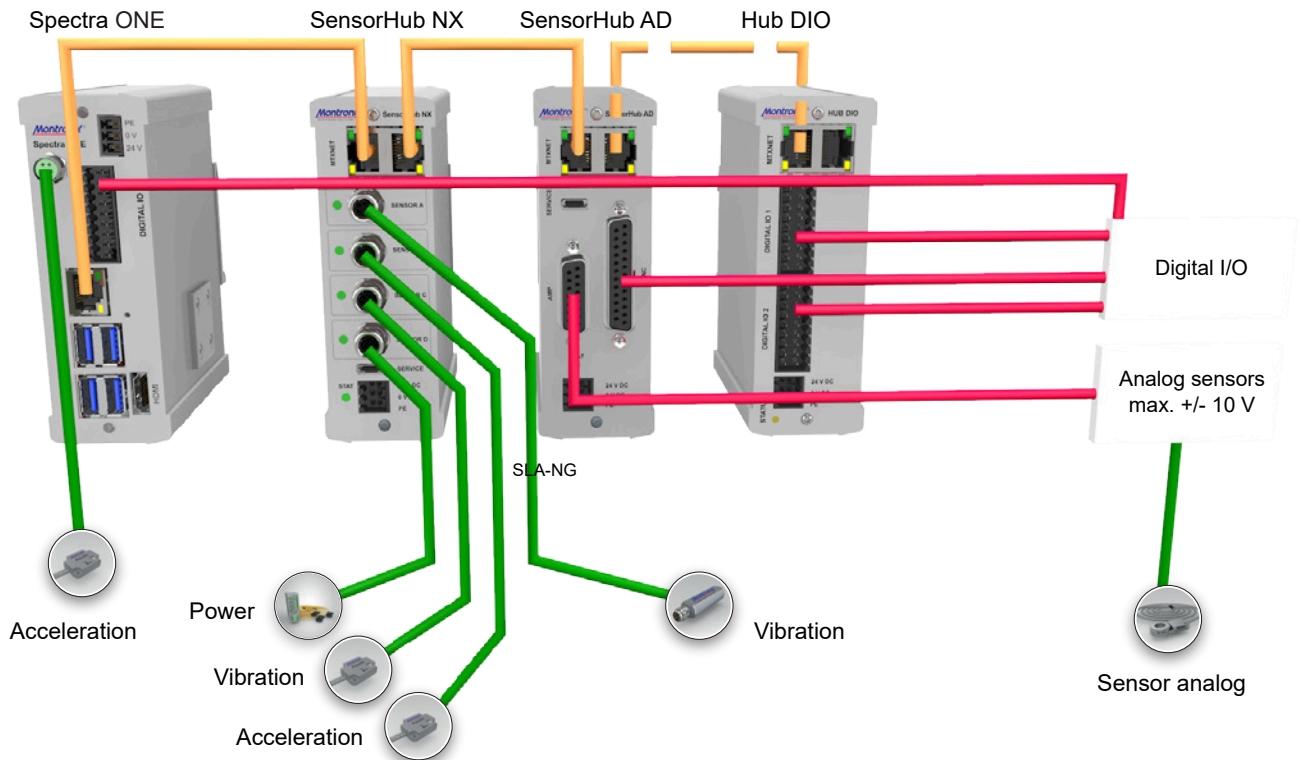| Digital sensors |
|---|
| To expand the monitoring options with digital Montronix sensors |
| 4 x RS485 connection for digital sensors |
| ➡ *PulseNG* 3-axis accelerometer |
| ➡ *PulseNG* M12 3-axis accelerometer |
| ➡ StrainLink250DA Strain measuring sensor |
| ➡ PS200-NG Power sensor |

■ Hub DIO

Diskrete I/O
To expand communication with the controller via discrete I/O
2 x 12 inputs and 4 outputs each

System overview

Spectra ONE   SensorHub NX   SensorHub AD   Hub DIO

Digital I/O

Analog sensors
max. +/- 10 V

Acceleration

Power

Vibration

Acceleration

SLA-NG

Vibration

Sensor analog

* Example configuration

■ Represented throughout the world

Advice from a single source!
From the first idea to the finished system

- Conception
- Installation
- Commissioning
- Training
- Optimization
- Service

Qualitätsmanagement
ISO 9001:
www.dekra-iso9d.de

DEKRA
zertifiziert

Montronix®
MONITORING SOLUTIONS