

## SIMON 2

Smart online condition monitoring system for DIN rail mounting

### Data Acquisition Unit

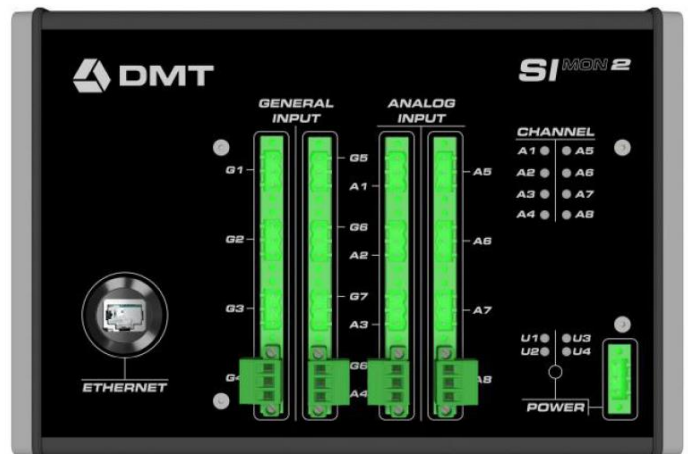
**SIMON 2** is the smart data acquisition module for DIN rail mounting, developed by DMT. The compact dimensions allow simple and easy installation in existing control cabinets, which saves acquisition and installation costs.

The signals from the structure-borne noise sensors and operating data channels are collected and processed in the internal data acquisition unit. In addition, a multitude of operating data channels can be recorded via digital industry protocols such as OPC DA/UA or Modbus TCP.

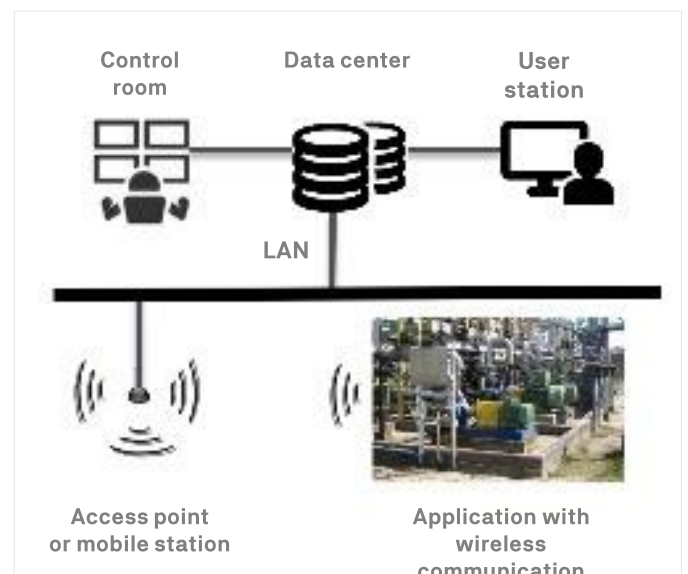
**SIMON 2** buffers and transmits the data via Ethernet to a central database server or cloud system in the network. The autonomous operation of the unit ensures that no data is lost in case of network failures.

### Optional: Wireless communication

**SIMON 2** buffers and transmits the data via WLAN or mobile web connection to a central database server or cloud system. This saves high cabling costs and enables fast commissioning.



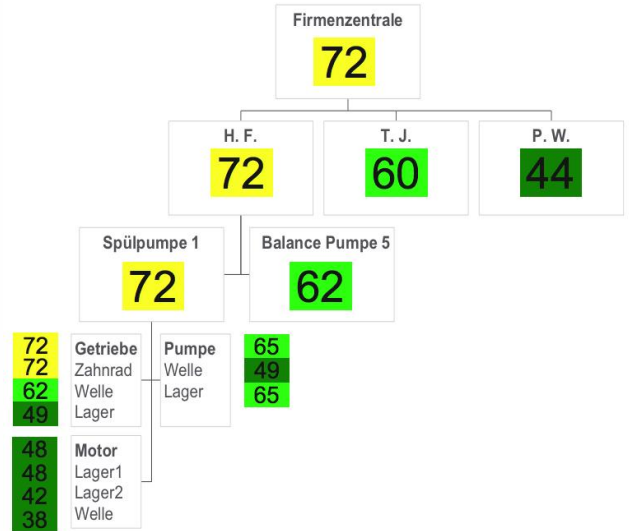
### Wireless monitoring concept



## Monitoring strategy

Characteristic changes in the condition of the monitored machines and plants are recorded by the online condition monitoring system. Wear and critical loads are reliably detected. Trend analyses and forecasts can be derived from this.

Relevant statuses are visualized for the user in form of an intuitive traffic light logic and the normalized CMI (Condition Monitoring Index) with a scale value between 10 an 100.



Aggregated Condition Monitoring index example:  
Deep drilling technology

Technical Data		
<b>Inputs</b>	Structure-borne noise Operating data	8 channels 8 channels
<b>Sampling rate</b>	Structure-borne noise Operating data	Up to 25,6 kHz per channel (5,12 kHz simultaneous) Up to 1,28 kHz per channel (simultaneous)*
<b>Frequency resolution</b> (2048 points)	in 20 Hz range in 200 Hz range in 2 kHz range in 10 kHz range	0,0125 Hz 0,125 Hz 1,25 Hz 12,5 Hz
<b>Dynamics</b>	138 dB (24 Bit)	
<b>Signal-to-noise ratio</b>	90 dB	
<b>Analytic process</b>	FFT, Envelope FFT, RMS, Order analysis via postprocessing, Remote Listening, DMT CMI	
<b>Connectivity</b>	Ethernet, Optional: WLAN, Mobile web connections (LTE, UMTS, Edge)	
<b>Protection class</b>	IP 30	
<b>Operating temperature</b>	-20 ... 60°C	
<b>Supply voltage</b>	24VDC	
<b>Power input</b>	50 W	
<b>Mounting</b>	DIN rail	
<b>Dimensions (HxWxL)</b>	180mm x 100mm x 246mm	

\* No digital AAF at Samplingrate 1,28 kHz. All other Samplingrates 0,8 x fNyquist.

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