

SIMON 2

Smart online condition monitoring system for DIN rail mounting

Data Acquisition Unit

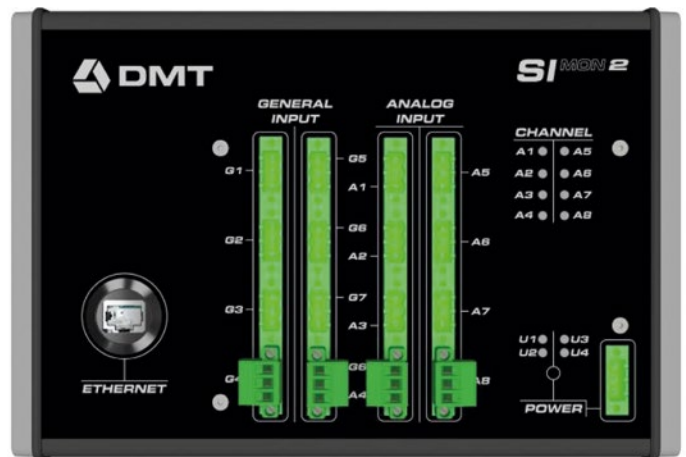
SIMON 2 is the smart data acquisition module for DIN rail mounting, developed by DMT. The compact dimensions allow simple and easy installation in existing control cabinets, which saves acquisition and installation costs.

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.

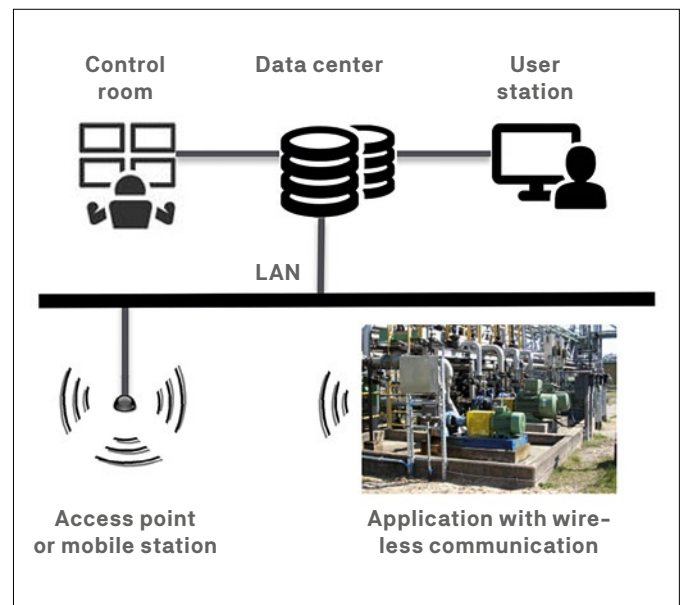
SIMON 2 buffers and transmits the data via Ethernet to a central database server or cloud system in the network. The autonomous operation of the unit ensures that no data is lost in case of network failures.

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.



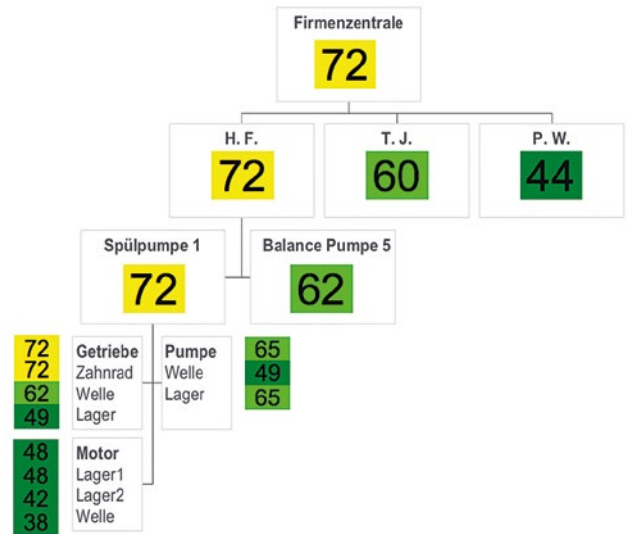
Wireless monitoring concept



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 and 100.



Aggregated Condition Monitoring index example: Deep drilling technology

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

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

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Disposal information:

Our products are subject to the WEEE directive. DMT has committed itself to take back all electrical and electronic components sold and to dispose of them professionally. Please contact: products@dm-t-group.com

WEEE Registration Number: **DE 25917380**



DIN EN ISO 9001
DIN EN ISO 14001
DIN ISO 45001