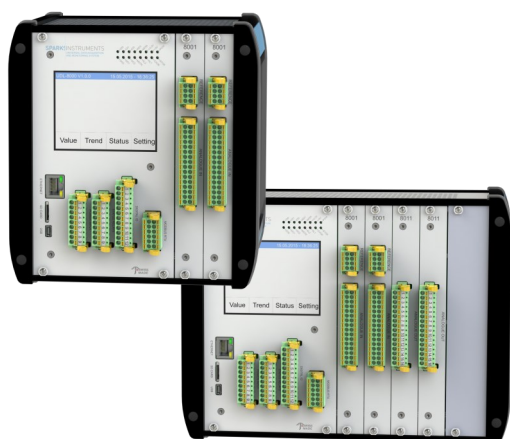


Endwinding Vibration Monitoring System for Turbo Generators



Key Features

- Continuous Acquisition and monitoring of the endwinding vibration
- Ethernet and Modbus RTU Interfaces
- Standalone Operation
- Local True Color Touch LCD

Application

- Endwinding Vibration Monitoring of Turbo Generators

UDL-8000 - EWM

General Description

The Endwinding vibration monitoring system for turbo generators is based on the **UDL-8000** data acquisition and monitoring system family for online condition monitoring of high voltage insulation systems and machines. UDL-8000 is a multi - modular system with a central CPU controller, various different signal conditioning modules and sensor interfaces (up to eight modules per controller) and application specific software packages as e.g. the package **EWM**, used for the acquisition, evaluation and monitoring of the endwinding vibration of large turbo generators.

The endwinding vibrations are typically measured by fiberoptic acceleration sensors installed directly on the endwinding of the generator. Usually 12 sensors are used (6 on each side) and are connected via two modules **M8001** to the **UDL-8000** monitoring system. The module offers the interface for up to 8 vibration sensors. The UDL-8000 can be extended with the Module **M8011** when 4-20mA analogue outputs are required.

The **UDL-8000** Controller offers standard interfaces as Ethernet, digital in- and outputs, relay contacts and Modbus RTU.

The Ethernet Interface is used for the communication with the analysis software running on a windows based computer the real-time data visualisation and analysis. Additionally the **UDL-8000** system can be connected to the TMS-2000 Database Server to record continuous the acquired signals (Monitoring).

Ordering Information

Order Code:

16.8000.E2.B28-0C8-2.C1.01.01.EWM

Endwinding Vibration Monitoring System
for 14/16 Sensors, 35mm DIN Rail Mounting,
24VDC

16.8000.E2.B28-0C8-2.C1.01.01.11.11.EWM

Endwinding Vibration Monitoring System
for 14/16 Sensors, 35mm DIN Rail Mounting,
24VDC, with 1x 4-20mA output per Channel
(16 in total)

Endwinding Vibration Monitoring System for Turbo Generators



Technical Data

UDL-8000 - EWM

Module M8001 Specifications

Endwinding Vibration Sensor Input

Sampling Rate: 4kS/s
A/D Resolution: 16 bit
Input Impedance: 100kOhm, Differential
No. of Channels: 8

Input Modes:

Software Selectable
Acceleration (V/g)
Velocity (V/mm/s)
Displacement (V/um)

Sensor PowerSupply:

No of Outputs: 8 (1 per Sensor)
Voltage Output: +24VDC

Current Output:

max 100mA / per Sensor
Output Protection: resettable fuse

UDL-8000 Controller

No of Relais Contacts NO/NC: 4 (240VAC)
Functions: -System
-Sensor
-AI1
-AI2

Modbus RTU slave:
Ethernet:

RS-485
100MBit

Display

Dimension: 3.5"
Resolution: 320 x 240pxl

Color Depth:
Touch:

24bit
Resistive

Local Results

Broadband Amplitude (20-400Hz) um pp
Narrow Band Amplitude (50/60Hz) um pp
Narrow Band Amplitude (100/120Hz) um pp

System and Alarm Status
Trend:
PC:

max. 1 Year
Time Signal / FFT

Power Supply

Input Voltage: 18-36VDC

Input Current:

1A Max without sensors

Mechanical Dimensions

Dimensions (L x W x D) 179x189x152mm
Weight 1.6kg

Protection Class:
Mounting:

IP55
35mm DIN-Rail

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