

4 Channel Online Partial Discharge Monitoring System (Wallmount Enclosure)



Key Features

- High Resolution PRPD Pattern
- Noise Elimination trough Gating Channel and variable Frequency Range
- Ethernet Interface for permanent Data Storage
- Local True Color Touch LCD

Applications

- Turbo Generators
- Hydro Generators
- Large Industrial Motors
- Ring Motors (GMD)

TMS-5141W

General Description

The **TMS-5141** is a four channel partial discharge trending system with a true color LCD display showing all the necessary information for the commissioning and surveillance of high voltage rotating machines or switch gears. The noise gating channel and variable LP Filter allows to separate noise from the pd signals. The **TMS-5141** shows actual partial discharge level for every individual channel (phase) on a bargraph, Realtime Partial Discharge Activities in Oscilloscope View as well as a color phase resolved partial discharge patterns. The touch functionality of the LCD display allows to parametrise, store and visualise the partial discharge signals without the use of any computer. Optionally a computer can be connected through the build in Ethernet Interface to store permanently measured results. Eight optional 4-20mA input channels allows to record machine operation conditions as MW, MVA, temperatures etc. together with the partial discharge signals. The Modbus RTU interface allows an easy integration into the existing SCADA/DCS system. Individual 4-20mA and relay outputs per channel are available. This make the **TMS-5141** the ideal cost effective partial discharge monitoring system for permanent installation with permanent data recording.

Ordering Information

Order Code: 17.5141.AAA.BBB.CCC.DDD

AAA: Enclosure type:
019: 19" Rackmount Enclosure (3HU)
065: IP65 Protected Wallmount Enclosure

BBB: Power Supply:
264: 85-264VAC, 50/60Hz or 90-375VDC
024: 18-36VDC

CCC: Communication Interface
485: Modbus RTU Interface

DDD: Additional Inputs
420: 8x4-20mA Input for Operation Parameters

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Technical Data

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Data Acquisition of Partial Discharge Channels

PD Input Channels (Simultaneous + Gating):	4+1	Acquisition Time Intervall:	1 to 600 sec/ch
Frequency Range *1			
Selectable LP Filter:	40KHz to 5MHz	Sensor Compatibility:	
Selectable HP Filter:	800kHz to 300MHz	Coupling Capacitors:	80pF - 10nF ²⁾
Signal Gain (HW):	40dB	RF CT's:	yes ²⁾

- 1) Frequency Range of complete measurement chain depends on selected PD sensor
2) Sensitivity of measurement circuit depends on selected sensor type

Voltage References

Reference from Coupler	10mV to 30VACrms	External Voltage Reference:	max 260VAC
Frequency Range:	0.1 to 200Hz	From Power Supply:	max 260VAC ²⁾

2) only available on AC Power Supply Version

Interfaces

Relais Contacts NO/NC	System OK+CH 1-4)	Modbus RTU::	RS-485
Analogue Output:	4x 4-20mA (1 per Ch)	Ethernet:	100Mbit/s
Analogue Input (OP Parameters):	8x4-20mA		

Display

Dimension:	4.3"	Color Depth:	24bit
Resolution:	480x272pxl	Touch:	Resistive

Local Results

Phase Resolved Partial Discharge Pattern:		Local Trend:	max. 1 Year
Resolution & Color:	256x256 -16bit color	Event Logging:	yes
Bargraph:	4 (1 per Channel)		

Mechanical Dimensions

Dimensions (H x W x D)	270x320x140	Protection Class:	IP65
Weight:	4.8kg		

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