

16 Channel Online Partial Discharge Monitoring System (19" Rack Mount Enclosure)



Key Features

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

TMS-5441R

Applications

- Turbo Generators
- Hydro Generators
- Large Industrial Motors

General Description

The **TMS-5441** is a 4x4 channel partial discharge monitoring system with a true color LCD display showing all the necessary information for the commissioning and surveillance of high voltage rotating machines. The noise gating channel and variable LP Filter allows to separate noise from the pd signals. The **TMS-5441** shows actual partial discharge level for every individual channel (phase) on a bargraph, Realtime Partial Discharge Activities in Oscilloscope View as well as a colorised phase resolved partial discharge pattern. 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 built 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 group are available. The System includes a 4:4 Multiplexer, where 4 simultaneous pd channels are measured at a time and then switched to the next 4 channels. This makes the TMS-5441 ideal for pd monitoring when more than 4 sensors are installed per machine.

Ordering Information

Order Code: 17.5441.AAA.BBB.CCC.DDD

AAA: Enclosure Type
 019: 19" Enclosure
 119: 19" Panelmount 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

TMS-5441R

Data Acquisition of Partial Discharge Channels

PD Input Channels (4x4 Simultan + 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-G 1-4)	Modbus RTU::	RS-485
Analogue Output:	4x 4-20mA (1 per Ch group)	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:		Trend:	max. 1 Year
Resolution & Color:	256x256 -16bit color	Event Logging:	yes
Bargraph:	4 (1 per Channel group)		

Power Supply

AC Power Supply:	85-264VAC, 50/60Hz	Power:	20W max.
DC Power Supply:	18-36VDC	Power:	20W max.

Mechanical Dimensions

Dimensions (H x W x D)	3HU x 19" x 235mm	Protection Class:	IP54
Weight:	4kg		

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