

DFA300

Radio Frequency Interference and Acoustic Signal Surveyor

CHECK FOR INSULATION OR MECHANICAL PROBLEMS IN GAS INSULATED SWITCHGEAR OR IN-SERVICE SUBSTATIONS

Identify and locate insulation defects with the DFA300, a surveying tool that combines radio frequency interference (RFI) and acoustic emission (AE). It can detect and locate partial discharge (PD) in a few seconds. Designed for surveying live, high voltage apparatus, its versatility makes it the perfect, multi-purpose tool for condition-based maintenance programs.

FEATURES

- Combination tool uses both RFI and acoustic technology
- Registers RFI from apparatus with insulation problems including PD and arcing
- Locate and diagnose internal problems using the acoustic sensor on grounded surfaces
- Easy to use, handheld device with large display screen

BENEFITS

- Perform non-invasive surveys of critical assets
- Identify and locate insulation defects in gas insulated and open air substations, transformers, instrument transformers and cable terminations
- Convenient tool for daily use or routine substation surveys along with thermography



DFA300 TECHNICAL SPECIFICATIONS

INPUT CHANNEL DESCRIPTION

The DFA300 is a dual function instrument capable of analysing either acoustic or RF emissions. There is a single input connection which can accept either a RF or an acoustic sensor.

ACOUSTIC EMISSION CHANNEL

Inputs	1 channel
Connector	BNC
Input Impedance	50Ω or 22kΩ, software switchable (low noise preamp: 22kΩ only)
AE Operating Frequency	10 kHz to 500 kHz at -3dB points
Phantom Power	28 VDC on BNC centre conductor (100mA current limited), software switchable
AE Sensor	R3a (standard), R6a, R6l, R15a R15l (optional)

UHF CHANNEL

Inputs	1 channel
Connector	BNC
Input Impedance	50Ω
Bandwidth	50-1000 MHz with 6 MHz RBW
Accuracy	± 100 kHz
Detection Types	Peak and average detector
Sweep Processing	Continuous, Average, Max Hold and differential

POWER SUPPLY

External Supply	External DC adapter, 12V @ 2A
DC Adapter	85-264 VAC (47-63 Hz) / 12 VDC
Internal Battery	Li-Ion, high capacity 7.2V, 91 Wh
Battery Life	>6 hours
Charging Time	± 3 hours

MECHANICAL

Instrument	225 x 310 x 70 mm (WxHxD) Weight 2.4 kg
Transport Case	425 x 284 x 155 mm (WxHxD) Weight 3.4 kg
Total Weight	6.0 kg incl. instrument, transport case, manuals, CD and charger

LCD SCREEN

Display	TFT, 6.4" Transreflective
Size (W x H)	132 x 100 mm
Resolution	640 x 480 pixels, 256 colours
Backlight	LED

DATA STORAGE

Internal	NV Flash memory (SD)
External	USB storage class compliant USB Flash Drive/Hard Disk Drive
Data Transfer	Measurements can be downloaded to a PC
Real Time Clock	Battery backed

ENVIRONMENTAL

Enclosure	IP64 – top covers closed IP51 – top covers open
Transport Case	IP67
Electrostatic discharge according to EN 61000-4-2	
Humidity	0-95% non-condensing
Temperature	Operating temperature: -10 to +50°C Storage temperature: -20 to +70°C

ORDERING INFORMATION

PRODUCT

Doble DFA300

Complete with transport case, antennas, acoustic sensor, battery charger, neck strap and wireless synchronization adapter. Software is included.

ACCESSORIES

Transient Earth Voltage (TEV) capacitive probe

Find PD in metal-clad switchgear (GIS). To be connected directly on the antenna input of the DFA300

HF CT

Scan for electrical pulses (f<200 MHz) as evidence for partial discharge to earth. Can be clipped on an apparatus ground wire (incl. transformers and dead tank breakers) and connected to a DFA300. (N to BNC cable required)

DA100 Directional Antenna

Provides more specific location of RFI sources for substation surveys. Including direction of the emissions.



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Specifications are subject to change without notice.

Doble is ISO certified.

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