

# Iris Power TGA™

The industry standard in monitoring motor and turbine generator partial discharges

Designed and developed for the Canadian Electricity Association (CEA), Iris Power's state-of-the-art portable TGA on-line partial discharge instruments are recognized as the industry standard by motor and turbine generator users around the world.



The Iris Power TGA instrument can reliably identify loose, contaminated, overheated or poorly impregnated stator windings to aid in assessing the risk of stator winding failure. This portable instrument is easily connected to test with permanently installed Iris Power 80 pF Epoxy Mica Capacitors™ (EMCs) and/or Iris Power Stator Slot Couplers™ (SSCs). It is factory-configured to work with specific types of machines:

Machine Type	Applicable Instrument	Applicable Sensors
Motors and Small Turbine Generators	TGA-B	Bus EMC
Large Turbine Generators	TGA-S	SSC
Motors and all Turbine Generators	TGA-SB	SSC and Bus EMC
Motors, Small Turbine and Hydro generators	TGA-BP	Bus and PDA EMC
Large Turbine and Hydro Generators	TGA-SP	SSC and PDA EMC

For further information on the Iris Power TGA-BP and TGA-SP, see specifications for the Iris Power PDA-IV™ instrument.

## OPERATING SPECIFICATIONS

### PULSE ANALYSIS

- Shortest pulse width (FWHM): less than 2.5 ns, at the 3 dB cut-off magnitude
- Magnitude ranges:
  - 2-34 mV in 2 mV steps,
  - 5-85 mV in 5 mV steps,
  - 10-170 mV in 10 mV steps,
  - 20-340 mV in 20 mV steps,
  - 50-850 mV in 50 mV steps,
  - 100-1 700 mV in 100 mV steps,
  - 200-3 400 mV in 200 mV steps
- Lowest magnitude window: 2 mV
- Magnitude windows: 32 per range
- Dual polarity
- 100 phase windows with 3.6° resolution

### NOISE SEPARATION

- Digital comparison of pulse arrival time and/or pulse shape, with magnitude difference up to 50%

- Resolution: 6 ns (corresponds to 2 m between a pair of sensors)

### SIGNAL INPUT

- Instrument for EMCs: 6 BNC connectors (multiplexor incorporated)
- Instrument for SSCs: Twelve SMA connectors for up to six SSCs (multiplexor incorporated)
- 50 Ω input impedance

# IRIS POWER TGA™

## OPERATING SPECIFICATIONS continued

### POWER FREQUENCY REFERENCE

- 50 Hz or 60 Hz
- Instrument for BUS EMCs: reference taken from input labelled "Machine", switchable to external reference 100 mV to 240 V

### DATA ACQUISITION TIME

- Selectable between either 1 s or 5 s per magnitude window, for each coupler pair

### POWER SOURCE

- 120/240 V, 50/60 Hz

### OPERATING ENVIRONMENT

- Temperature: 5 °C to 40 °C
- Relative humidity: 15% to 90%

### DIMENSIONS

- W x D x H: 41 x 31 x 21 cm
- Weight: 10.1 kg

### INSTRUMENT CONTROL AND ANALYSIS SOFTWARE

- Control Software: PDLitePro™
- Analysis Software: PDView™
- Runs on any computer with Microsoft Windows XP or higher 32-bit operating system
- Computer-instrument communications via USB or Ethernet ports

## SYSTEM OPTIONS

### HARDWARE

- Laptop PC with PDLitePro™ control software installed
- Low frequency option for off-line tests compliant with IEC 60034-27

### SOFTWARE

- PDView Advanced Level to create custom templates and advanced graphs

## TRAINING

- Two-day course on PD test theory, instrument use and data analysis
- One to four-day seminars designed to meet customers' specific needs

## ORDER

Part Nr.	Description
B1000	TGA-B portable instrument for PD testing with BUS couplers. Includes self-tester, manual, multiplexor for six couplers, signal cables, carrying case, PDView and PDLitePro Software.
S1000	TGA-S portable instrument for PD testing with SSCs. Includes tester, multiplexor for 6 SSCs, manual, signal cables, carrying case, PDView and PDLitePro Software.
B1010	TGA-BP portable instrument for PD testing with BUS and PDA couplers. Includes tester, manual, multiplexor, signal cables, carrying case, PDView and PDLitePro Software.
S1020	TGA-SB portable instrument for PD testing with SSCs and BUS couplers. Includes tester, multiplexor, manual, signal cables, carrying case, PDView and PDLitePro Software.
S1010	TGA-SP portable instrument for PD testing with SSCs and PDA couplers. Includes tester, multiplexor, manual, signal cables, carrying case, PDView and PDLitePro Software.
<b>OPTIONS:</b>	
B1230	Additional TGA-B instrument manual
B1240	Low frequency option, with one portable 16 kV coupler
B1241	Low frequency option, with one portable 25 kV coupler
S1230	Additional TGA-S instrument manual

For other options, contact your sales representative

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QUALITROL-IRIS POWER HAS BEEN THE WORLD LEADER IN MOTOR AND GENERATOR WINDING DIAGNOSTICS SINCE 1990, PROVIDING A FULL LINE OF ON-LINE AND OFF-LINE TOOLS, AS WELL AS COMMISSIONING AND CONSULTING SERVICES.



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