

## PHG 70 portable / PHG 80 portable BAUR VLF test system



true<sup>•</sup>sinus<sup>®</sup>

### Portable, high performance test generator with VLF truesinus<sup>®</sup> technology

- 3 voltage shapes in one device
- For medium-voltage cables of up to 50 kV operating voltage
- Convenient to operate with simple user guidance

The PHG 70 portable and PHG 80 portable VLF test systems are used for the cable and cable sheath testing of medium-voltage cables of up to 50 kV and offer three tried-and-tested voltage shapes:

#### VLF truesinus<sup>®</sup> and VLF square wave

BAUR VLF truesinus<sup>®</sup> digital technology enables the most reliable detection of damage and offers the comparability of measurement results by means of load-independent voltage generation with digital control. Unlike other voltage shapes, the voltage is exact, symmetrical and continuous. The cable length has no influence on the test level. Medium-voltage cables are tested with utmost care and in compliance with the standards.

#### DC voltage

For DC voltage testing, e.g. for earth cables, the PHG 70 and PHG 80 provide a stabilised DC voltage with positive and negative polarity of up to 70 or 80 kV respectively.

The PHG system satisfies the highest requirements with regard to safety, robustness, operational convenience and automation.

#### Functions

- Max. test voltage up to 38/57 kV<sub>rms</sub>
- Cable testing according to: IEC 60502, DIN VDE 0276-620/621 (CENELEC HD 620/621), IEC 60060-3, IEEE 400.2-2013, IEEE 400-2012
- Cable sheath testing according to IEC 60229

#### Features

- High-performance test generator with 3 kW
  - Compact, in a 19" housing
  - Control via laptop
  - Load-independent, reproducible sinusoidal high voltage by means of VLF truesinus<sup>®</sup> testing technology
  - Adjustable test frequency: 0.01 Hz – 1 Hz
  - Automatic sequences and reporting
  - Use of standardised diagnostics sequences for different applications and cable routes that can be accessed simply on site
  - Automatic breakdown detection
  - Burn mode or safe shutdown on breakdown
  - Intuitive user interface in multiple languages adapted to the work flow
  - Safety control unit in compliance with EN 50191
  - Variable connection options to cable stations of different models
  - Can be expanded in combination with the PD-TaD 62 or PD-TaD 80 to include the TD\* and PD diagnostics functions
- Further details on dissipation factor and partial discharge measurement can be found in the BAUR Software 4 cable testing and diagnostics data sheet

\* TD module required

## Technical data

Output voltage	PHG 70	PHG 80
Frequency range	0.01 – 1 Hz	0.01 – 1 Hz
VLF truesinus®	1 – 38 kV <sub>rms</sub> 1.4 – 53.7 kV <sub>peak</sub>	1 – 57 kV <sub>rms</sub> 1.4 – 80.6 kV <sub>peak</sub>
VLF square wave voltage	1 – 57 kV	1 – 80 kV
DC voltage	0 to ±70 kV	0 to ±80 kV
Max. capacitive load	Up to 20 µF	Up to 20 µF 1.2 µF @ 0.1 Hz @ 57 kV <sub>rms</sub> 3 µF @ 0.1 Hz @ 38 kV <sub>rms</sub> 4 µF @ 0.1 Hz @ 30 kV <sub>rms</sub>
Resolution	0.1 kV	0.1 kV
Accuracy	1%	1%
Output current	PHG 70	PHG 80
Measurement range	0 – 200 mA	0 – 200 mA
Output current	10 mA @ 70 kV 60 mA @ 50 kV 90 mA @ 20 kV	1.8 mA @ 80 kV 60 mA @ 50 kV 90 mA @ 20 kV
Max. burn current	120 mA	120 mA
Resolution	10 µA	10 µA
Dissipation factor measurement*	PHG 70	PHG 80
VLF truesinus®	1 – 38 kV <sub>rms</sub>	1 – 57 kV <sub>rms</sub>
Load range	≥10 nF	
Measurement range	0.1 x 10 <sup>-3</sup> – 1,000 x 10 <sup>-3</sup>	
Accuracy	1 x 10 <sup>-4</sup>	
Resolution	1 x 10 <sup>-6</sup> (mean value of the dissipation factor)	
Detection and compensation of leakage currents	automatic	

\* In combination with the TD module and PD-TaD 62 or PD-TaD 80

## BAUR Software 4

Details about the BAUR Software 4 and the system requirements can be found in the data sheet for the BAUR Software 4.

### General

Power supply	200 – 260 V, 50/60 Hz
Option	100 – 140 V, 50/60 Hz (with auto transformer)
Max. power consumption	3,500 VA
Reverse voltage protected	Up to 16 kV
Degree of protection	IP22
Dimensions HV generator (W x H x D)	approx. 755 x 850 x 991 mm (19", 15 RU)
Weight HV generator	Approx. 199 kg, incl. rack and connection cable
Ambient temperature (HV generator)	-20°C to +55°C (from 45°C with reduction in performance)
Storage temperature (HV generator)	-30°C to +70°C
Relative humidity	Non-condensing
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU), EMC Directive (2014/30/EU), EN 60068-2-ff Environmental testing

## Standard delivery

### PHG 70 portable or PHG 80 portable VLF test system:

- PHG 70 or PHG 80 HV generator
- SCU safety control unit
- Laptop incl.
  - pre-installed Windows operating system
  - pre-installed BAUR Software 4 (cable testing)
  - Carrying bag
- GDR 80-500 discharge and earth rod
- 19" rack for PHG 70 portable or PHG 80 portable incl.  
HV connection cable, earth cable and mains supply cord,  
cable lengths of 10 m respectively
- Set of 4 wheels for 19" rack, mounted
- Carry handle, 2 pcs
- User manual

## Accessories and options

- External auto transformer, 110/230 V; 3.0 kVA

### Optional software functions

- Mapping (available countries on request)
- GIS interface

## Contact:

BAUR GmbH (Headoffice Österreich)  
T +43 (0)5522 4941-0  
headoffice@baur.at

BAUR Prüf- und Messtechnik GmbH  
T +49 (0)2181 2979 0  
vertrieb@baur-germany.de

BAUR GmbH (Branch UAE)  
T +971 50 4440270  
shibu.john@baur.at

BAUR France  
T +33 (04) 69 98 27 27  
infoFR@baur.eu

Baur do Brasil Ltda.  
T +55 11 297 25 272  
atendimento@baurdobrasil.com.br

BAUR Test Equipment Ltd. (UK)  
T +44 (0)20 8661 0957  
sales@baurtest.com

奥地利保尔公司上海代表处  
电话 +86 (0)21 6133 1877  
shanghaioffice@baur.at

BAUR Representative Office Hong Kong  
T +852 2780 9029  
office.hongkong@baur.at

BAUR representatives:  
[www.baur.eu](http://www.baur.eu) > BAUR worldwide