

GE Energy



PAM360™

Phase Angle Meter
Programma® Products



imagination at work

PAM360™



Phase Angle Meter

The PAM 360™ phase angle meter is designed to test for example directional protection relays and to conduct directional tests on instrument transformers.

Since precise accuracy and versatility were given top priority by designers of the compact and handy PAM360™, its capabilities are equal to those of its heavier and more expensive competitors.

Thanks to fine resolution and high accuracy, the PAM360™ is also ideal for testing sensitive distance protection. It has a broad range and can sense either current or voltage. Moreover, the PAM360's inputs are galvanically separated from each other and from the mains.

Its many outstanding features make the PAM360™ a highly versatile instrument, and it is priced competitively.

The PAM360™ is delivered complete with test lead set in a handy transport case.

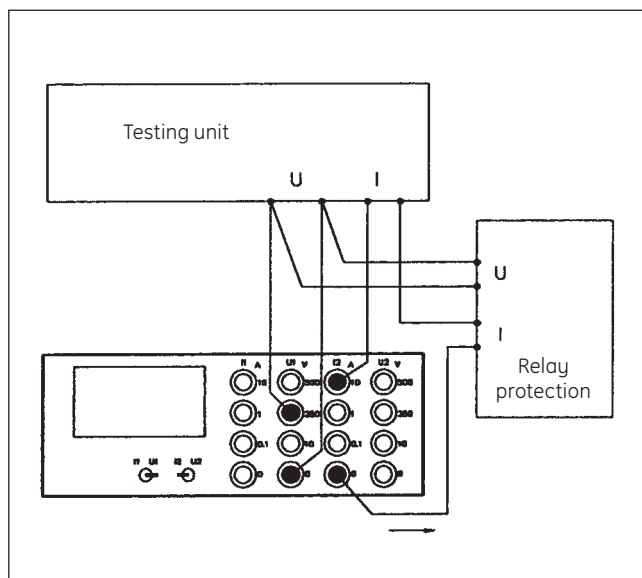
Application example

IMPORTANT!

Read the User's manual before using the instrument.

Directional test of relay protection

1. Connect PAM360 inputs U1 and I2 to the testing unit (SVERKER for example) and the relay protection.
2. Select U1 and I2 on the toggle switches.
3. Use the testing unit to trip the protective relay equipment.
4. Check that the relay trips within the specified angle range by reading the angle shown on the PAM360's display.



Specifications PAM360

Specifications are valid at nominal input voltage and an ambient temperature of +25°C, (77°F). Specifications are subject to change without notice.

Environment

<i>Application field</i>	The instrument is intended for use in high-voltage substations and industrial environments.
<i>Temperature</i>	
<i>Operating</i>	0°C to +50°C (32°F to +122°F)
<i>Storage & transport</i>	-40°C to 70°C (-40°F to +158°F)
<i>Humidity</i>	5% - 95% RH, non-condensing

CE-marking

<i>LVD</i>	Low Voltage Directive 73/23/ EEC am. by 93/68/EEC
<i>EMC</i>	EMC Directive 89/336/EEC am. by 91/263/EEC, 92/31/EEC and 93/68/EEC

General

<i>Mains voltage</i>	115 / 230 V AC, 50 / 60 Hz
<i>Power consumption (max)</i>	3 W
<i>Dimensions</i>	
<i>Instrument</i>	180 x 180 x 70 mm (7.1" x 7.1" x 2.8")
<i>Transport case</i>	350 x 280 x 90 mm (13.7" x 11" x 3.5")
<i>Weight</i>	2.1 kg (4.6 lbs) 3.1 kg (6.8 lbs) with accessories and transport case.
<i>Test lead set, with 4 mm stackable safety plugs</i>	4 x 2 m (6.6 ft), 2.5 mm ²
<i>Display</i>	LCD, 4 digits, 12.7 mm (0.5") high

Measurement section

<i>Range</i>	0 - 359.9°
<i>Type of phase angle measurement</i>	Current-current, voltage-voltage and current-voltage
<i>Wave form</i>	Sinusoidal
<i>Frequency range</i>	15 - 75 Hz
<i>Resolution</i>	0.1°
<i>Inaccuracy (sinusoidal voltage)</i>	±0.5° (if 20% or more of range is used) ±1° (if less than 20% of range is used)

Inputs

Current inputs

<i>Range</i>	0.002 - 10 A. Range can be increased by means of a clamp-on current transformer.
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Voltage inputs

<i>Range</i>	0.2 - 500 V
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Ordering information

PAM360

Complete with:
Test lead set GA-00082
Transport case 50-00100

Art.No.

BP-19090

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