PQA-CLAMP-1000

CURRENT CLAMP

DEWETRON

CONDITIONS OF REFERENCE

- Conductor centered in jaws
- Sinusoidal current: 48 Hz to 65 Hz
- Distortion factor: <1 %
- External DC magnetic field: earth magnetic field (40 A/m)
- External AC magnetic field: none
- Adjacent conductors: none (neither with AC nor DC currents)
- Measurement error or phase shift

Intensity in A~	2...200 A	200...1000 A
Intrinsic error	≤1 %	≤1 %
Phase shift	≤1.5°	≤1°

OPERATING CONDITIONS

The following conditions must be observed to ensure the safety of the user and to achieve the specified measurement accuracies.

MEASUREMENT RANGE

- Current measuring range: 2...1200 A~
- Input/output ratio: 5 mA~/A~
- Frequency range: 30...5000 Hz
- Nominal current: 1000 A~

ENVIRONMENTAL CONDITIONS

- Altitude for transport: ≤12,000 m
- Temperature : +20 to 26 °C, see *Fig. 1*
- Rel. humidity : 20 to 75 %, see *Fig. 1*

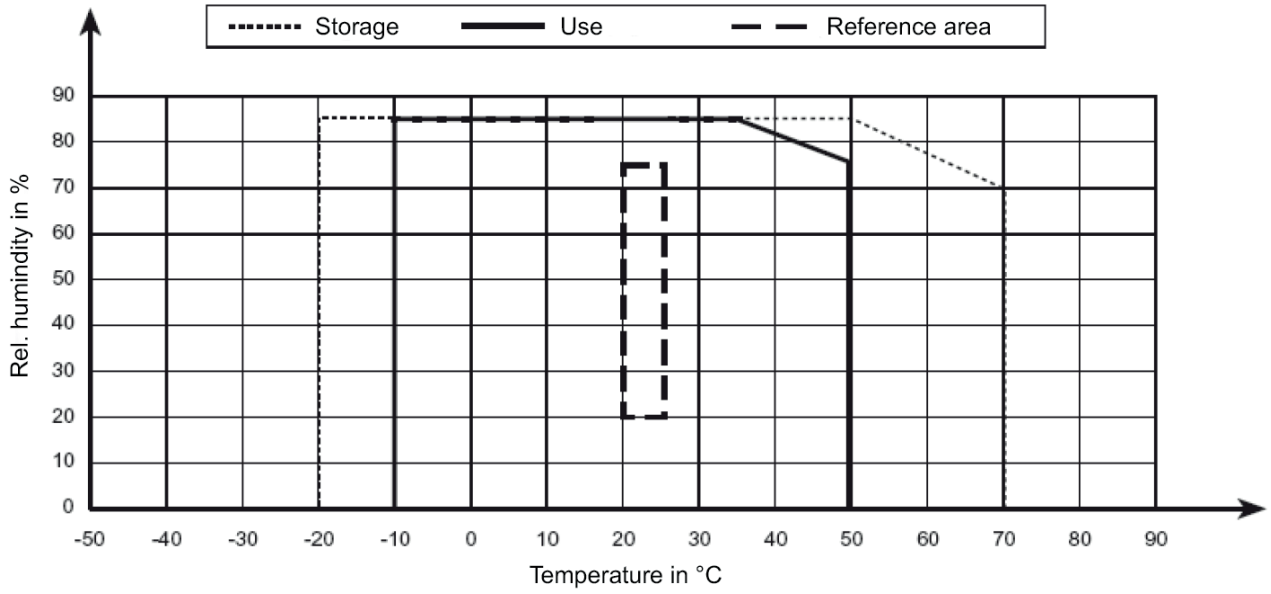

Fig. 1: Diagram

DEWETRON

INFLUENCING VARIABLES

FREQUENCY INFLUENCE

The following values are to be added to the errors under reference conditions:

Frequency	30...48 Hz	65...1000 Hz	1...5 kHz
Measurement error	<1 % of I_{out}	<0.5 % of I_{out}	<1 % of I_{out}

CREST FACTOR INFLUENCE

Measurement error: <1 % of the output signal for crest factors ≤6 and I ≤3000 A peak.

LOAD INFLUENCE

Influence of load impedance (0.2...0.6):

- <0.5 % of measured value
- <0.5° phase shift

TEMPERATURE INFLUENCE

<0.1 % of the output signal / 10 °C between -10 and +50 °C

OVERLOAD

Limit the operating time of the clamp-on current transformer for currents above 1000 A~.

- Frequencies ≤1 kHz

Current I	≤1000 A~	1000 A~ < I < 1200 A~
Operation	Continuous	<30 min operation >15 min pause

- Frequencies >1 kHz

  Determine the permissible continuous current intensity at frequencies >1 kHz according to the following formula:

  $$\text{I max. continuous in (A)} = \frac{1000}{\text{f (in kHz)}}$$

MECHANICAL DATA

- Size: 216 x 111 x 45 mm
- Weight: 550 g
- Max. jaw opening: 53 mm (patented opening system)
- Max. clamping capacity
  - Cable: max. Ø 52 mm
  - 1 bar 50 x 5 mm or 4 bars 30 x 5 mm

CONFORMITY WITH INTERNATIONAL STANDARDS

- Electrical safety: according to EN 61010-2-032 - 6: 600 V - CAT III
- Electromagnetic compatibility: according to EN 61326-1 – Industrial setting