## CURRENT CLAMP

## CURRENT CLAMP, UP TO 1000 A, VOLTAGE OUTPUT, INCLUDED ADAPTER CABLE



## SPECIFICATIONS

f.s.: Maximum display value or scale length (indicates the rated current)
rdg.: Reading value (the value currently being measured and indicated on the measuring instrument)

| SE-CUR-CLAMP-1000-DC-S |  |  |  |
| :---: | :---: | :---: | :---: |
| Operating environment | Indoors, pollution degree II, altitude up to 2000 m ( 6562 ft .) |  |  |
| Operating temperature and humidity | -40 to $85^{\circ} \mathrm{C}\left(-40.0\right.$ to $\left.185^{\circ} \mathrm{F}\right), 80 \%$ rel. humidity or less (no condensation) |  |  |
| Storage temperature and humidity | -40 to $85^{\circ} \mathrm{C}$ (-40.0 to $\left.185{ }^{\circ} \mathrm{F}\right), 80 \%$ rel. humidity or less (no condensation) |  |  |
| Dielectric strength | $4260 \mathrm{~V}_{\mathrm{AC}}$ (current sensitivity: 1 mA ), $50 / 60 \mathrm{~Hz}$, for 1 min , between jaw and output connector of cable |  |  |
| Standards | Safety: EN 61010-2-032:2012 Type D <br> EMC: EN 61326-1:2013 |  |  |
| Product warranty period | 1 year |  |  |
| Rated current | 1000 A AC/DC |  |  |
| Output voltage | $2 \mathrm{mV} / \mathrm{A}$ |  |  |
| Maximum input current | Within the derating curve (see Frequency derating curve on page 2) |  |  |
| Output resistance | $50 \Omega( \pm 5 \%)$ |  |  |
| Temperature and humidity for guaranteed accuracy | 0 to $40{ }^{\circ} \mathrm{C}$ ( 32 to $104.0{ }^{\circ} \mathrm{F}$ ), $80 \%$ rel. humidity or less |  |  |
| Guaranteed accuracy period | 1 year, opening and closing of the jaw: up to 10000 times |  |  |
| Accuracy | Sine wave input; conductor at center position; connected with Model CT9555; not including each effect; measuring instrument that has an input resistance of $1 \mathrm{M} \Omega$ or higher <br> - Amplitude accuracy: defined at the rated value or less and within the derating curve ${ }^{11}$; the accuracy defined for the frequency range of $\mathrm{DC}<\mathrm{f}<5 \mathrm{~Hz}$ is the design value) <br> - Phase accuracy: defined at the rated value or the maximum value of derating curve, whichever is smaller; the accuracy defined for a frequency range of $\mathrm{DC}<\mathrm{f}<10 \mathrm{~Hz}$ is a design value |  |  |
|  | Frequency | Amplitude | Phase |
|  | DC | $\pm 0.3$ \% rdg. $\pm 0.02$ \% f.s. ${ }^{2}$ | - |
|  | DC < f $\leq 100 \mathrm{~Hz}$ | $\pm 0.3$ \% rdg. $\pm 0.01$ \% f.s. | $\pm 0.1^{\circ}$ |
|  | $100 \mathrm{~Hz}<\mathrm{f} \leq 500 \mathrm{~Hz}$ | $\pm 0.5 \%$ rdg. $\pm 0.02$ \% f.s. | $\pm 0.2^{\circ}$ |
|  | $500 \mathrm{~Hz}<\mathrm{f} \leq 1 \mathrm{kHz}$ | $\pm 1.0$ \% rdg. $\pm 0.02$ \% f.s. | $\pm 0.5^{\circ}$ |
|  | $1 \mathrm{kHz}<\mathrm{f} \leq 5 \mathrm{kHz}$ | $\pm 2.0$ \% rdg. $\pm 0.02$ \% f.s. | $\pm 1.5^{\circ}$ |
|  | $5 \mathrm{kHz}<\mathrm{f} \leq 10 \mathrm{kHz}$ | $\pm 5.0$ \% rdg. $\pm 0.05$ \% f.s. | $\pm 2.0^{\circ}$ |
|  | $10 \mathrm{kHz}<\mathrm{f} \leq 20 \mathrm{kHz}$ | $\pm 30.0$ \% rdg. $\pm 0.10$ \% f.s. | $\pm 10.0^{\circ}$ |
| Offset adjustable range | $\pm 2 \mathrm{mV}$ |  |  |
| Output noise | $5 \mathrm{mV}_{\mathrm{pp}}$ or less (100 kHz or less) |  |  |

## SE-CUR-CLAMP-1000-DC-S

| SE-CUR-CLAMP-1000-DC-S |  |
| :---: | :---: |
| Temperature coefficient <br> - Amplitude sensitivity <br> - Offset voltage | $\begin{aligned} & -40^{\circ} \mathrm{C} \text { to } 0^{\circ} \mathrm{C} \text { and } 40^{\circ} \mathrm{C} \text { to } 85^{\circ} \mathrm{C} \\ & \pm 0.01 \% \text { rdg. } /{ }^{\circ} \mathrm{C} \text { or less } \\ & \pm 0.005 \% \text { f.s. } /{ }^{\circ} \mathrm{C} \text { or less } \end{aligned}$ |
| Effect of conductor position | $\pm 0.2$ \% rdg. or less (input current of $1000 \mathrm{~A}, 50 / 60 \mathrm{~Hz}$, using a 30 mm diameter wire) |
| Effect of external magnetic field | 150 mA or less (value scaled to the input, in a DC or 60 Hz magnetic field of $400 \mathrm{~A} / \mathrm{m}$ ) |
| Effect of magnetization | 150 mA or less (value scaled to the input, after 1000 A DC input) |
| Effect of common mode voltage | $0.05 \%$ f.s. or less ( $1000 \mathrm{~V}_{\text {RMS }}$, DC to 100 Hz ) |
| Effect of radiated radio-frequency electromagnetic field | $6 \%$ f.s. at $10 \mathrm{~V} / \mathrm{m}$ |
| Effect of conducted radio-frequency electromagnetic field | $6 \%$ f.s. at 3 V |
| Measurable conductor diameter | $\varnothing 50 \mathrm{~mm}$ (1.97 in.) or less |
| Supply voltage | $\pm 11 \mathrm{~V}$ to $\pm 15 \mathrm{~V}$ (tracking) |
| Power supply capacity | $\pm 300 \mathrm{~mA}$ or less (when measuring a current of 1000 A with a frequency of 55 Hz , while $\pm 12 \mathrm{~V}$ power is supplied |
| Maximum rated power | 7 VA or less (when measuring a current of 1000 A with a frequency of 55 Hz , while $\pm 12 \mathrm{~V}$ power supplied |
| Dimensions ( $\mathrm{W} \times \mathrm{H} \times \mathrm{D}$ ) | Approx. $238 \times 116 \times 35 \mathrm{~mm}$ ( $9.37 \times 4.57 \times 1.38$ in.); excluding protrusions or cable |
| Mass | Approx. 990 g. (34.9 oz.) |
| Cable length | Approx. 3 m |
| Output connector | HIOKI ME15W |

1) See frequency derating curve.
2) INFORMATION An accuracy of $\pm 0.02 \% \mathrm{f} . \mathrm{s}$ is accomplished after the offset voltage is adjusted within a range of $\pm 0.2 \mathrm{mV}$.

## FREQUENCY DERATING CURVE



## PIN ASSIGNMENT



| 1 | Power supply (+) | 7 | GND |
| :--- | :--- | :--- | :--- |
| 2 | Power supply (-) | 8 | GND |
| 3 | ID1 | 9 | Output (+) |
| 4 | ID2 | 10 | Output (-) |
| 5 | ID3 (DEMAG) | 11 | ID4 |
| 6 | ID5 | 12 | Shield |

