



## D<sub>N</sub> SERIES

The D<sub>N</sub> series comprises a range of high-performance clamp-on AC current probes designed for high current measurements. Their excellent current transformation ratios and low phase shift, combined with a broad frequency response, allows highly accurate current and power measurements. High-quality magnetic cores and windings mean high precision current measurement up to 3,000 A (AC). The rectangular jaws can be used to clamp large-diameter cables or busbars.

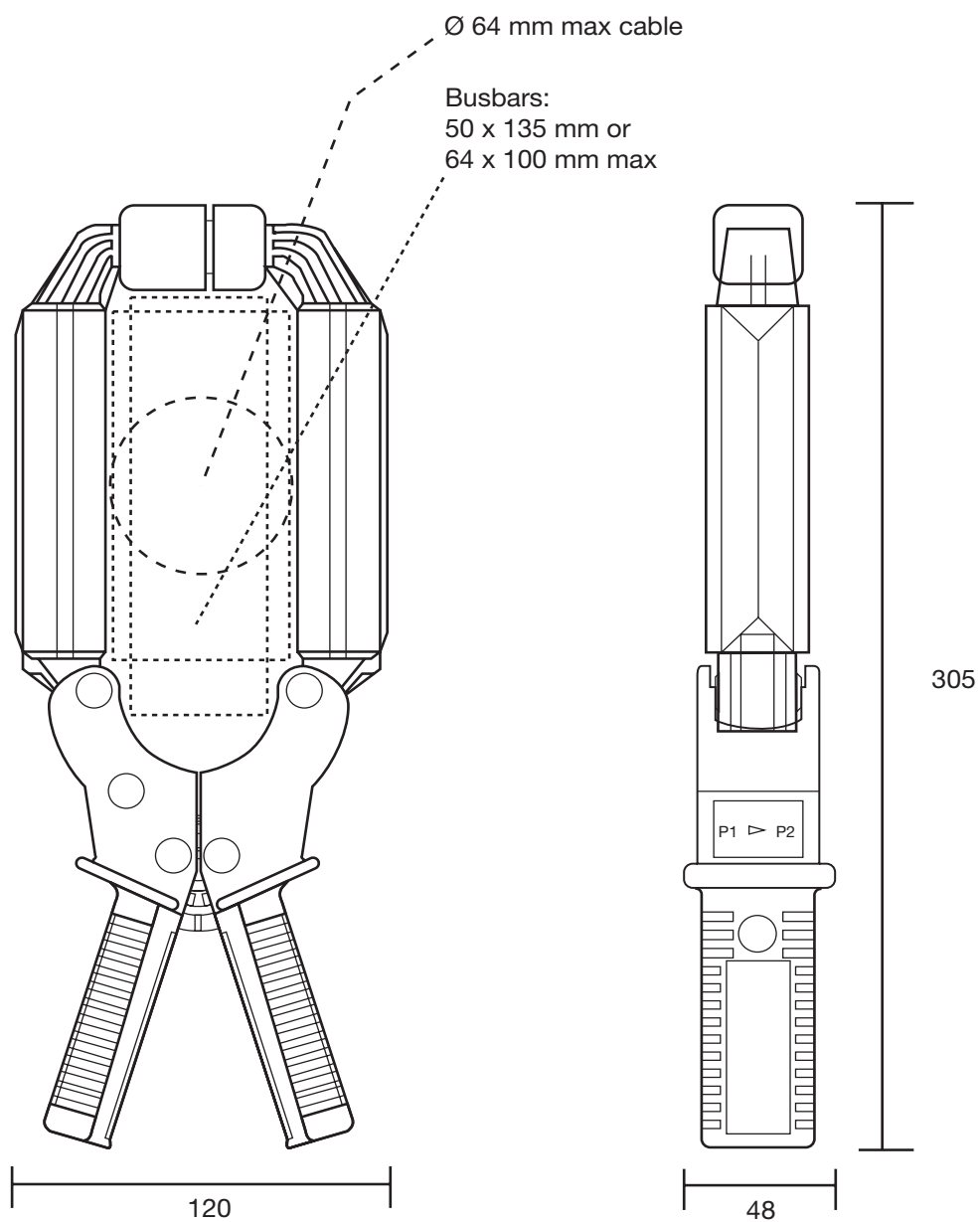
The DN series clamps provide true RMS measurement values and faithful signal reproduction.

There are two different kinds of model available in the D<sub>N</sub> series: the first acts as a traditional current transformer with a current output (mA) and has a wide range of voltage ratios.

These clamps may also be used with multimeters, harmonic and power measurement equipment, logging apparatus or other instruments allowing AC current input.

The second type of model gives a voltage output in precise proportion to the measured current (1 mV/A, 10 mV/A or 100 mV/A) so you can display and log currents on instruments without current inputs.

Model D38N has been specifically designed for use with oscilloscopes, or other instruments with a BNC input.



# Current clamp for AC current

## Model D33N

D<sub>N</sub> series

|         |            |
|---------|------------|
| Current | 2,400 A AC |
| Ratio   | 3000:5     |
| Output  | 1.666 mA/A |

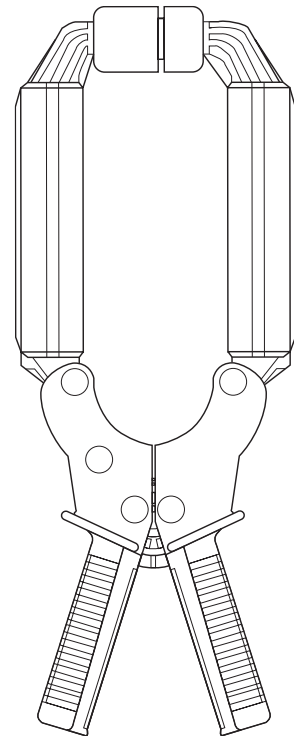
### ELECTRICAL SPECIFICATIONS

- **Current range:**  
1 A AC .. 2,400 A AC  
(3,000 A for temperature < 35 °C)
- **Current transformation ratio:**  
3000:5
- **Output signal:**  
1.666 mA/A AC (5 A for 3,000 A)
- **Accuracy and phase shift <sup>(1)</sup>:**

| Primary current                | 150 A | 600 A | 3,000 A |
|--------------------------------|-------|-------|---------|
| Accuracy in % of output signal | 3 %   | 1.5 % | 1 %     |
| Phase shift                    | 3°    | 1.5°  | 1°      |
- **Overload:**  
3600 A for 10 minutes
- **Accuracy:**  
In accordance with IEC 185-26-27, 5 VA class 1 from 48 Hz to 1,000 Hz
- **Bandwidth:**  
30 Hz to 5 kHz (in continuous use above 1 kHz, the max. measurement current is limited)
- **Ampere second product:**  
90 A.s
- **Load impedance:**  
< 1 Ω
- **Operating voltage:**  
600 V AC
- **Common mode voltage:**  
600 V AC
- **Influence of adjacent conductor:**  
0.005 A/A AC
- **Influence of conductor position in jaws:**  
1 % ± 0.1 A

### MECHANICAL SPECIFICATIONS

- **Operating temperature:**  
-10 °C to +50 °C
- **Storage temperature:**  
-25 °C to +80 °C
- **Influence of temperature:**  
< 0.1 % per 10 °K
- **Max. jaw opening:**  
90 mm
- **Max. jaw insertion capacity:**  
Cable: 64 mm  
Group of wires: 50 x 135 mm - 64 x 100 mm
- **Casing protection rating:**  
IP20 in accordance with IEC 529
- **Drop test:**  
500 mm (IEC 68-2-32)
- **Shock resistance:**  
100 g, in accordance with IEC 68-2-27
- **Vibration resistance:**  
10/55/10 Hz, 0.15 mm  
test in accordance with IEC 68-2-6
- **Self-extinguishing capability:**  
Casing: UL94 V0  
Jaws: UL94 V2
- **Dimensions:**  
120 x 315 x 48 mm
- **Weight:** 1,200 g
- **Colour:**  
Dark grey casing with red jaws
- **Output:**  
2 Safety sockets (4 mm)



### SAFETY SPECIFICATIONS

- **Electrical safety:**  
Double insulation or reinforced insulation between the primary and the secondary circuits and the outside casing in accordance with IEC 1010-2-032.  
- 600 V category III, pollution degree 2  
- 300 V category IV, pollution degree 2
- **Electromagnetic compatibility (EMC):**  
EN 50081-1: class B  
EN 50082-2:  
- Electrical discharge: IEC 1000-4-2  
- Radiated field: IEC 1000-4-3  
- Fast transients: IEC 1000-4-4  
- Magnetic field at 50/60 Hz: IEC 1000-4-8

(1) Conditions of reference: 23 °C ± 5 °K, 20 % to 75 % RH, 48 Hz to 65 Hz, external magnetic field < 40 A/m, no DC component, no current-carrying conductor nearby, centred test sample, load impedance 0.2 Ω.

| To order                                                 | Reference  |
|----------------------------------------------------------|------------|
| AC current clamp model <b>D33N</b> with operating manual | P01120052A |