

CENTURACORES

Nanocrystalline Transformer Cores

<https://centuracores.com/products/ccnt-030-020-010-mfbl/>

Product datasheet: CCNT-030-020-010-MFBL

Product information

Nanocrystalline toroidal core 30x20x10 mm

Bare size: 30x20x10 mm

Finish: Blue PBT Class B 130C

CCNT-030-020-010-MFBL is a 30x20x10 mm nanocrystalline toroidal core for ground-fault CTs, metering CTs, and medium-frequency transformers. Its 20 mm inner diameter supports practical secondary windings, while high-permeability nanocrystalline material helps achieve useful magnetizing inductance at low turns. Choose this size when winding window, magnetic area, and envelope must stay in balance for the target current or VA.

Bare core dimensions

Outer diameter (OD): 30 mm

Inner diameter (ID): 20 mm

Height (H): 10 mm

Cased / finished dimensions

Outer diameter (OD): 33 mm

Inner diameter (ID): 17.6 mm

Height (H): 13.2 mm

Tolerance: 0.3mm

Size marking on the case is the bare core dimension, not the cased or finished size.

Magnetic properties

Effective area A_e : 0.41 cm²

Mean path length L_e : 7.85 cm

AL @ 1kHz: 110 uH/T²

AL @ 10kHz, 2mT: 35 uH/T²

AL @ 100kHz, 2mT: 9.5 uH/T²

Saturation B_s : 1.25 Tesla

Initial permeability μ_i : 80000

Curie temperature: 560 C

Operating temperature: -40 deg C to +130 deg C

Net weight: 28.3 g

Applications

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CCNT-030-020-010-MFBL

- ground-fault CTs
- metering CTs
- medium-frequency transformers
- protective relaying
- ground-fault protection current transformers
- revenue-grade metering CTs
- medium-frequency (400Hz–20kHz) power transformers
- protective relaying current sensors