

## 1 INTRODUCTION

RC-Vxxx-100 shielded coil have been designed for accurate non-intrusive measurement of AC, pulsed DC or complex waveforms This type of transducer may be used to measure all AC current from low frequencies to 5 kHz. RC-Vxxx-100 transducers are manufactured in different length for diameters of current conductors.

## 2 SPECIFICATION

### 2.1 General data

#### Dimension

	METRIC	INC
Transducer O.D. (coil cross section)	12mm	0.47inch
Transducer length (standard)	see below	see below
Cap coupling O.D. (max)	17mm	0.67inch
Max diameter of conductor or bus bar	see below	see below

#### Materials

Transducer & cable	Thermoplastic RUBBER, flame retardant UL 94 V-O rated
Couplings	Polypropylene UL 94 V-O rated
Colour (transducer)	Orange
Cable and couplings	Black
Cable:	1000V UL STYLE 20940; External diameter 5mm; Wires 2x 24AWG
Shielded:	100% Coil , 100% output cable

#### Working temperature

-20°C to 70°C

### Electrical data

Maximum measurable current:	100kA at 50/60 Hz.
Internal Resistance:	30 Ohms/400 mm. ; 30 Ohms/1ft and 4inc transducer length $\pm 10\%$
Accuracy:	$\pm 1\%$ (calibrated with amplifier/integrator load impedance)
Linearity:	$\pm 0.2$ (with opportunity integrator)
Output signal (sinusoidal waveform )	100mV/1000A @ 50 Hz ; 120mV/1000A @ 60Hz; (* rated at 1000A 50Hz)
Frequency range	20Hz - 5 kHz

° All accuracies specified at 20°C ( $\pm 2^\circ\text{C}$ ) with transducer centred on bus

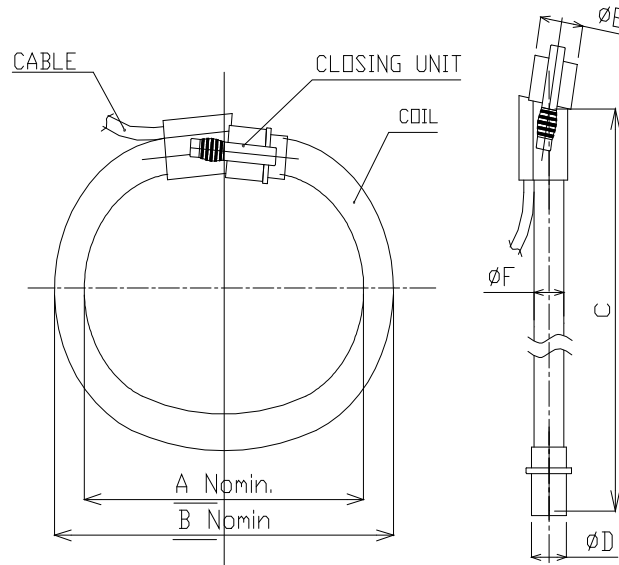
### Position sensitivity

Measured bus	$\pm 2\%$ maximum on closing unit
Ext. field influence	$\pm 0,5\%$ maximum
Temperature sensitivity (max)	$\pm 0.07\%$ per °C

### Safety

Working voltage (max)	1000V @ 50/60Hz.	600V @ 50/60Hz.
Over Voltage Category (IEC 61010-1)	CAT III	CAT IV
Hi Pot Test (transducer & output cable)	7400Vac @ 50/60Hz. for one minute	





### STANDARD DIMENSIONS

- A Coil diameter (mm)
- B Coil external diameter (mm)
- C Coil length
- D Cap coupling cross section = 17mm ; 0.67 inc
- E Cap coupling cross section = 20 mm ; 0.78 inc
- F Coil cross section= 12mm; 0.47 inc

### OUR PART NUMBER

TYPE	COIL LENGTH	OUTPUT at 50 Hz	ACCURACY	CABLE LENGTH
RC-V	XXX	100mV	1%	2MS

### EXAMPLE

RC-V	250	100	AC01	2MS
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### DESCRIPTION:

**RC-V250-100** – Flexible Rogowski coil length 250mm ; Output 100mV/kA @ 50 Hz Accuracy +/-1% Cable length= 2m.

Type	Max conductor diameter A		Coil external diameter (mm) B		Coil Length (mm) C	
	mm	inch	mm	inch	mm	inch
RC-V250-100	68	2.66	92	3.67	250	9.84
RC-V400-100	115	4.53	139	5.88	400	15.75
RC-V500-100	147	5.80	171	6.73	500	19.68