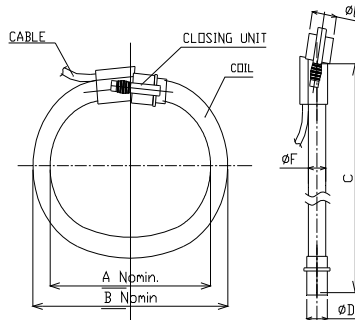


CIEs.r.l. – Rogowski's Sensors CURRENT TRANSDUCER

Flexible Rogowski coil Type FLEX IV xxx. 100.AC xx . xMS

Operating Instruction



1 INTRODUCTION

FLEXIV.xxx.100.ACxx.xMS 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. FLEXIV.xxx.100.ACxx.xMS transducers are manufactured in different length for diameters of current conductors from 60mm to 365 mm.

2 SPECIFICATION

2.1 General data

METRIC

INC

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	PA6 UL 94 V-O rated
Colour (transducer)	Blue, Grey, Orange and Red (others on required)
Cable and couplings	Black
Cable:	1000V UL STYLE 20940; External diameter 5mm; Wires 2x 26AWG
Shielded:	100% Coil , 100% output cable

Environmental conditions

Working temperature	-20°C to 70°C
Relative humidity	85% (without condensation)
Pollution degree	2
Maximum altitude	2000m

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:	± 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

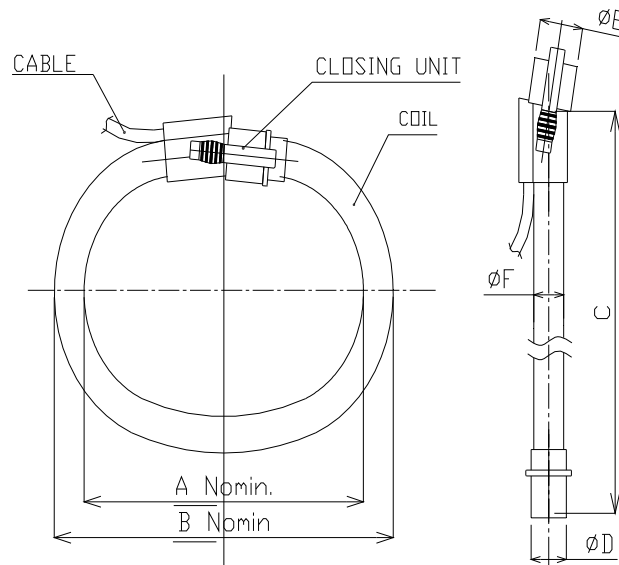
Safety

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	



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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
FLEX IV	XXX	100mV	1%	2MS

EXAMPLE

FLEX IV	350	100	AC01	2MS
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DESCRIPTION:

FLEX IV – Flexible Rogowski coil length 350mm ; 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
FLEXIV250.100.AC01.2MS	68	2.66	92	3.67	250	9.84
FLEXIV300.100.AC01.2MS	84	3.29	108	4.23	300	11.81
FLEXIV400.100.AC01.2MS	115	4.53	139	5.88	400	15.75
FLEXIV500.100.AC01.2MS	147	5.80	171	6.73	500	19.68
FLEXIV600.100.AC01.2MS	179	5.51	203	7.99	600	23.62
FLEXIV700.100.AC01.2MS	211	8.04	235	9.43	700	27.56
FLEXIV800.100.AC01.2MS	243	9.58	267	10.50	800	31.50
FLEXIV900.100.AC01.2MS	275	10.81	299	11.76	900	35.43
FLEXIV1000.100.AC01.2MS	306	12.66	330	13.01	1000	39.37
FLEXIV1100.100.AC01.2MS	338	13.20	362	14.26	1100	43.31
FLEXIV1200.100.AC01.2MS	370	14.73	394	15.52	1200	47.24

If you have any queries regarding the FLEX IV or require specification outside our standard ranges please do not hesitate to contact us

If you need bigger coils use our FLEX IIxxx Maximum coil length 2700 mm.

