

FLEX 3000

Flexible Current Transformers



The flexible current transformers FLEX 3000 ensure safe, accurate and non-intrusive measurements in applications that may be completely inaccessible with conventional current clamps and probes.

The probes provide a linear voltage output that is an exact replica of the input waveform for three user selectable input current ranges of 30, 300 or 3000 Amperes. The standard 610 mm flexible conductor allows a measuring diameter of up to 194 mm.

Advantages

- Ideal for large and hard to reach conductors
 - Flexible and lightweight, less than a quarter of the weight of conventional CTs
 - No restrictions with regard to duty cycle or overload current
 - Selectable current ranges of 30/300/3000A
 - AC coupled mV output proportional to measured current
 - Accuracy: $E_{in} + E_m$
 - E_{in} : Accuracy of instrument input
 - E_m : Accuracy specified by manufacturer
- Basic specifications for 45 Hz ... 65 Hz:
- Accuracy: $\pm 1\%$ of range
 - Phase error: $< \pm 1^\circ$
 - Position sensitivity: $\pm 2\%$ of reading

Technical Data of sensor FLEX 3000 (specified by the manufacturer (E_m))

Electrical Characteristics

Measuring Quantity	Description	
Current Ranges	Selectable via rotary switch	30 / 300 / 3000 A AC _{RMS}
Output Sensitivity	AC coupled	100 mV / 10 mV / 1 mV per A
Accuracy	at 25 °C	± 1 % of range (45 Hz ... 65 Hz)
Load impedance		100 kΩ minimum
Linearity	(10 % to 100 % of range)	± 0.2 % of reading
Noise		8 mV (30 A) / 2 mV (300 / 3000 A)
Bandwidth	-3 dB	10 Hz ... 50 kHz
Phase error	45 Hz ... 65 Hz	± ≤ 1°
Temperature Coefficient		± 0.08 % of reading / °C
Position Sensitivity		± 2 % of reading
External field	Cable > 100 mm from the head	± 0.25 % of range
Power supply	external	3.3 V DC ± 1.2 V
Overload indication		Red LED
Working Voltage	Probe and integrator	1000 V AC _{RMS} or DC
	Output	30 V max.

General Characteristics

Measuring Quantity	Description	
Probe and cable material		Alcryn 2070 NC double insulated, UL94 V-0
Couplings material		Ultradid A3U Q720, UL94 V-0
Probe length		610 mm
Conductor diameter		194 mm
Probe diameter	Nominal	9.9 mm
Output connection	7 core cable / 2 m long	Redel-plug
Operating temperature		-20 ... +80 °C
Storage temperature		-40 ... +90 °C
Operating humidity	Noncondensing	15 % ... 85 %
Degree of protection	Probe	IP 65
	Integrator module	IP 4x

Safety Standards

EN 61010-1:2001

EN 61010-031:2002

EN 61010-2-032:2002

1000 V_{RMS} / CAT III, 600 V_{RMS} / CAT IV, pollution degree 2 (Probe and integrator)

Use of the probe on uninsulated conductors is limited to 1000 V AC_{RMS} or DC and frequencies below 1 kHz.