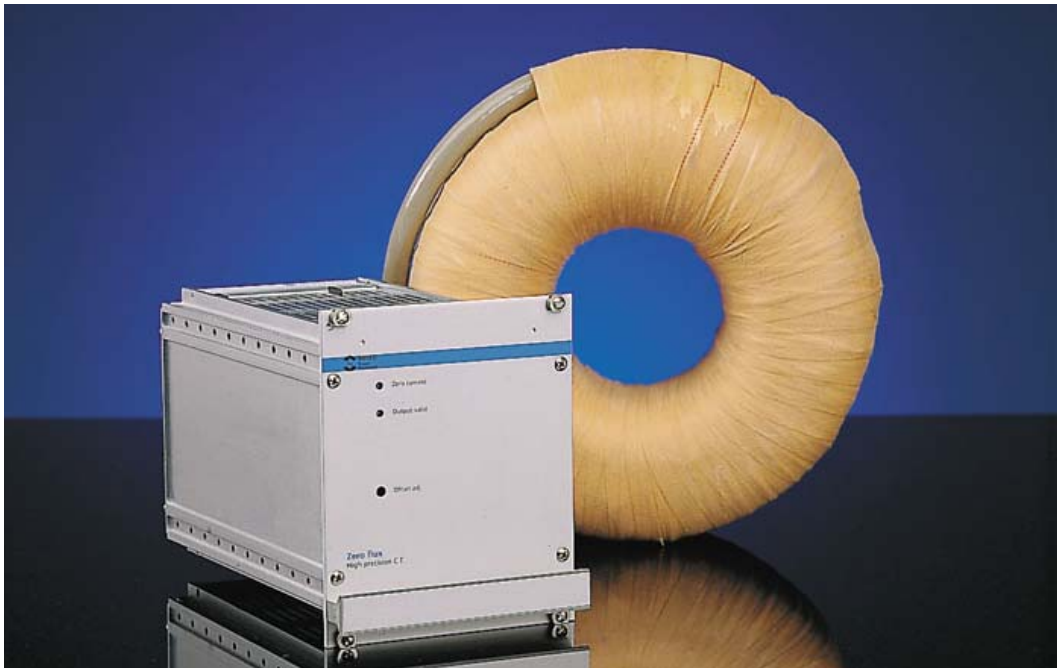


CURACC

ZERO-FLUX™

DC CURRENT



The CURACC Zero-flux™ is a high precision DC current measuring system, based on the zero-flux principle, for currents up to 6000 A. The CURACC has a current output, resulting in a Zero-flux™ measuring system with the highest specifications to which the user can add his own output circuitry. Like all other Zero-flux™ measuring systems, the CURACC has many features such as automatic reset after overload and zero-current detection. The system can be switched on when the main current is already present.

The CURACC can be used as a control/measuring unit in a feed-back loop high performance power supplies and amplifiers, or as a current reference system.

The CURACC features

- ◆ Available for currents up to 6000 Adc. Small signal bandwidth 500 kHz.
- ◆ 1 A output current at customer specified rated current.
- ◆ No extra power consuming temperature control electronics. No warming-up time.

- ◆ Exceptionally high stability and accuracy.
- ◆ Unique peak detection method to ensure perfect operation under all circumstances.
- ◆ Temperature coefficient even less than 0.05 ppm/K.
- ◆ Linearity better than 2 ppm.
- ◆ Saturation detection circuit with automatic reset.
- ◆ Zero-current detection.
- ◆ Optional uninterrupted operation through power failures up to 200 msec.
- ◆ Can be switched on with main current already present.

The current output

A current output has several advantages above a measuring system with a voltage output:

- The burden resistor can be installed at the place the signal is needed.
- Less limitations on cable lengths in respect to voltage losses.
- In many cases no precision amplifier needed, resulting in a higher accuracy.
- Output voltage across an external burden can be directly used to feed an ADC.






Specifications CURACC

Primary Circuit	rated current	up to 6000 A (bipolar)
	permissible overcurrent	115 % of rated current (10s)
	short-circuit current	1000 % of rated current (0.1s)
	current transfer ratio	I rated / 1
	external burden max/min	2 Ω / 0 Ω
Output Circuit	output current at rated current	1 A
	output impedance	> 10 MΩ
	output slew rate (10-90%)	> 200 A/ms
	small signal-bandwidth (-3 dB, 5% signal)	0...500 kHz
	rms value of output noise related to rated V _{out} , 0 ... 10 Hz	< 0.05 ppm
	0 ... 100 Hz	< 0.3 ppm
DC accuracy	0 ... 10 kHz	< 1 ppm
	0 ... 50 kHz	< 2 ppm
	<u>offset stability</u> related to rated output current (1A)	
	- initial (adjustable, at 25°C)	< 5 ppm
	- versus temperature	< 0.05 ppm/K
	- versus time	< 0.05 ppm/month
Signalling	- versus supply voltage	< 0.1 ppm/V
	total <u>linearity error</u> related to actual output current	< 2 ppm
	LED's + relay contacts	
	output valid	Up to 1.15 I rated
General data	zero current detection	At 0.1 % of I rated
	ambient temperature	measuring head 0...55 °C
		electronics module 10...40 °C
	on board supply loading +/- 15 Vdc	± 10 mA
	Auto reset after overload. Starts with load at power on	




Available types

C06 → 0 ... 600 A, C20 → 600 ... 2000 A, C40 → 2000 ... 4000 A, C50 → 4000 ... 5000 A, C60 → 5000 ... 6000 A

Available versions

C**-1		* 1 (Eurocard) PCB for 3U sub-rack mounting	128.5x40.3x160 mm (3U,8HP)
		Supply voltages:	C06,C20,C40 = ± 24Vdc / C50 = ± 32Vdc / C60 = ± 40Vdc
C**-3		* Eurocassette with 1 PCB for 3U sub-rack mounting	128.5x106.3x160 mm (3U,21HP)
		Supply voltages:	C06,C20,C40 = ± 24Vdc / C50 = ± 32Vdc / C60 = ± 40Vdc
C**-5		* 2 (Eurocard) PCB's for 3U sub-rack mounting	128.5x40.3x160 mm (3U,8HP) / 128.5x50.5x160 mm (3U,10HP)
		Supply voltages:	100, 115 or 230 Vac (state at ordering)
C**-6		* Eurocassette with 2 PCB's for 3U sub-rack mounting	128.5x142x160 mm (3U,28HP)
		Supply voltages:	100, 115 or 230 Vac (state at ordering)
C**-8		* Chassis for 19" rack mounting	44x483x215 mm (1U,19")
		Supply voltages:	100, 115 or 230 Vac (state at ordering)

Applied measuring heads

	Model		Dimensions (mm)	Bore (mm)	Weight (kg)	Test Voltage (kV,1 min)
	A for C06	standard	Ø 65 H=35	25	1	2.5
	B for C20	standard	Ø 120 H=60	45	2.5	2.5
		optional	172x132x70	44	5	5
	E for C40, C50, C60	standard	Ø 220 H=110	60	14	2.5
		optional	225x225x180	57	15	5

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