

# CA30

## Current Amplifier



- High output and compliance voltage
- Patent pending technology
- Designed for integration with FREJA 300 to boost power and capability

### Description

The CA30 is a 3-channel current amplifier with a switched mode power supply capable of delivering up to 3 x 35 A.

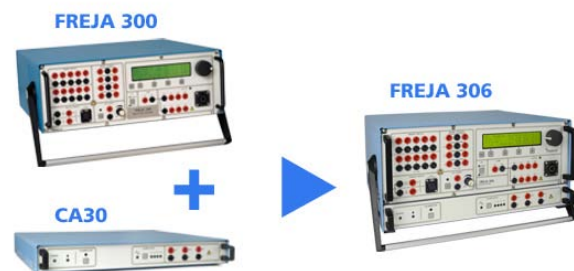
The DC-coupled design makes it suitable for acyclic generation.

In use together with FREJA 300 the CA30 can increase the current output from FREJA to 3 x 35 A or to 1 x 100 A, but also increase the output voltage at lower current, for example when testing electromechanical relays.

The CA30 is a differential amplifier with floating inputs. The differential amplifier design makes it possible to use CA30 even if there is a small voltage difference in the ground system between input and output.

Maximum output power is 250 VA per channel, and the maximum compliance voltage is 50 V<sub>RMS</sub>. The amplifier can generate 50 V<sub>RMS</sub> up to a current generation of 5 A per channel.

CA30, in combination with FREJA, allows the generation of six currents, which is convenient when testing differential relays. See the FREJA 306 data sheet for more information.



**A FREJA 300 can easily be upgraded to a FREJA 306 by adding in the CA30.**

**Specifications CA30**

The specifications are valid at an input voltage of 100 – 240 V and at an ambient temperature of +25°C (77°F) and at generated frequency of 50/60 Hz. Specifications are subject to change without notice.

**Environment**

<i>Application field</i>	The instrument is intended for use in high-voltage substations and industrial environments.
<i>Temperature, operating</i>	0°C to +50°C (32°F to +122°F)
<i>Temperature storage &amp; transport</i>	-40°C to +70°C (-40°F to +158°F)
<i>Humidity</i>	5% – 95% RH, non-condensing
<i>Altitude (operational)</i>	3000 m Full duty cycle up to 2000 m. Duty cycle limitation based on internal over temperature protection for altitudes >2000 m.

**CE-marking**

<i>EMC</i>	2004/108/EC
<i>LVD</i>	2006/95/EC

**General**

<i>Mains voltage</i>	100 – 240 V AC, 50–60 Hz
<i>Power consumption</i>	1500 VA (max)
<i>Dimensions</i>	
<i>Instrument</i>	446 x 55 x 395 mm (17.6" x 2.2" x 15.6")
<i>Transport case</i>	535 x 140 x 520 mm (21" x 5.5" x 20.5")
<i>Weight</i>	
<i>Instrument</i>	7,9 kg (17.4 lbs)
<i>Transport case</i>	5,1 kg (11.2 lbs)

**Control input**

<i>Control voltage</i>	0 – 6 Vrms SELV To be connected to outputs fulfilling IEC/EN 61010-1
------------------------	---

**Monitor output**

<i>Monitor voltage</i>	0 – 6 Vrms SELV To be connected to inputs fulfilling IEC/EN 61010-1
------------------------	--

**Current outputs**

<i>Voltage transients - Immunity</i>	2500 V transient level (to chassis) + working voltage level (255 V)
<i>Working voltage</i>	255 V Not to be used on live circuits
<i>Application</i>	
<i>3-phase AC (per phase)</i>	250 VA, 5 A < I ≤ 25 A 200 VA, 25 A < I ≤ 30 A 150 VA, 30 A < I ≤ 35 A
<i>1-phase AC (3 ch. in parallel)</i>	750 VA, 15 A < I ≤ 75 A 600 VA, 75 A < I ≤ 90 A 450 VA, 90 A < I ≤ 100 A
<i>3-ch. DC</i>	3 x ±20 A
<i>Compliance voltage</i>	≤50 Vrms
<i>Time limits</i>	
<i>Continuous</i>	3 x 20 A, 150 VA (max)
<i>0.5 s on 1 s off repeatedly</i>	3 x 35 A

<i>Resolution</i>	1.7 mA
<i>Inaccuracy<sup>1)</sup> typical</i>	< 0.3% (of reading), 0.5 A < I ≤ 35 A < 8 mA, 0 A < I ≤ 0.5 A

<i>Phase accuracy error<sup>1)</sup></i>	< ±0.2°
<i>Distortion (THD+N)<sup>2)</sup></i>	< 0.4% typical

1) Values at max amplitude, 50% power and resistive load.  
2) THD+N: Values at 25 A, 125 VA.

**Ordering information**

<b>Item</b>	<b>Art. No.</b>
<b>CA30</b>	CA-29000
<b>CA30</b> Including software FREJA Win and soft transport case	CA-29090
<b>CA30</b> Including software FREJA Win and hard transport case	CA-29091