Programma
CA30 Current Amplifier

- **World Class current amplifier**
- **Up to 35A for each phase (70Vp compliance voltage)**
- **Compatible with all FREJA 300**
- **Patent pending design**

DESCRIPTION

Higher voltages are often needed to provide test currents for older electro-mechanical relays. The three-phase switched current amplifier designated CA30 solves this problem. It can provide 3 x 35 A or 1 x 100 A connected in parallel. Maximum output power is 250 VA per channel, and the maximum compliance voltage is 50 VRMS.

Since the amplifier can be controlled by both current and voltage, it can be used instead of FREJA's voltage generators. The number of current generators can thus be increased to six, which is convenient when testing differential relays.

SPECIFICATIONS

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 frequence of 50/60 Hz. Specifications are subject to change without notice.

Environment

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

CE-marking

EMC	EMC 2004/108/EEG EN 61326-1:2006 + A1:1998 +A2:2001 + A3:2003 (Industrial locations)
Safety	LVD 73/23/EEC EN/IEC 61010-1:2001 incl. all national deviations

General

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

Control input

Control voltage	0 – 6V rms SELV To be connected to outputs fulfilling IEC/EN 61010-1

Monitor output

Monitor voltage	0 – 6V rms SELV To be connected to inputs fulfilling IEC/EN 61010-1

Current outputs

Voltage transients - Immunity	2500 V transient level (to chassis) +working voltage level (255 V)
Working voltage	255 V Not to be used on live circuits
Application	
3-phase AC (per phase)	250 VA, 5 A < I ≤ 25 A 200 VA, 25 A < I ≤ 30 A 150 VA, 30 A < I ≤ 35 A
1-phase AC (3 ch. in parallel)	750 VA, 15 A < I ≤ 75 A 600 VA, 75 A < I ≤ 90 A 450 VA, 90 A < I ≤ 100 A
3-ch. DC	3 x ±20 A
Compliance voltage ≤	50 Vrms
Time limits	
Continuous	3 x 20 A, 150 VA (max)
0.5 s on 1 s off repeatedly	3 x 35 A
Resolution	1.6 mA
Accuracy error[1] typical	< 0.3% (of reading), 0.5 A < I ≤ 35 A < 8 mA, 0 A < I ≤0.5 A
Phase accuracy error[1]	< ±0.2°
Distortion (THD+N)[2]	< 0.4% typical

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

ORDERING INFORMATION

Item	Cat. No.
CA30	
Complete with: soft transport case	CA-29090
Complete with: hard transport case	CA-29091

Optional accessories

See section “Relay testing accessories” in the complete Programma Catalog.