



C 28:4



- ▶ **Unprecedented power density** – Total output of 2800 W (4 ohms) in a 2U cabinet
- ▶ **Four channels** – All channels bridgeable for 2- or 3-channel configurations
- ▶ **Lo-Z or Hi-Z (70 V / 100 V)** – Selectable per channel, normal or bridged
- ▶ **Patented Class TD amplifier topology**
- ▶ **Voltage Peak Limiter (VPL)** – Configurable per channel to optimize each output for connected loads
- ▶ **Phoenix-type input connectors**
- ▶ **Screw terminal output connectors**
- ▶ **Comprehensive protection and warning** – Excessive output current, DC, high temperature, very high frequency (VHF), short circuit, open load, mains fuse protection, and soft start
- ▶ **Efficient and uniform Intercooler® cooling**
- ▶ **NomadLink® network ready**

An Installation Amplifier without Compromise

Installed or on tour, uncompromising quality begins with superior sound. Over the past decade, the sound of Lab.gruppen amplifiers has earned praise from renowned FOH engineers and owners of the world's premier sound rental companies. At the core of the C Series high-power* model's tight and transparent sound is patented Class TD technology. As a proprietary implementation of tracking Class D, Class TD approaches the exceptional efficiency of Class D while retaining the superior sonic quality of the best Class B output stages.

A Regulated Switch Mode Power Supply (R.SMPS) contributes to the remarkable efficiency of the C Series high-power models, while at the same time providing stable operation even with wide fluctuations in mains voltage. R.SMPS also works in conjunction with Class TD to give extraordinary power density. More channels with more power are condensed into a smaller package, allowing C Series amplifiers to minimize rack space requirements and reduce installation costs.

Extreme power density demands efficient cooling, and here Lab.gruppen's Intercooler® proves remarkably effective. Thousands of small copper cooling fins dissipate heat, and all output devices are mounted on one row perpendicular to airflow for uniform cooling.

C Series amplifiers are uniquely capable of adapting to a wide variety of demanding load conditions. Each channel has an individually configurable Voltage Peak Limiter (VPL), which allows

the output to be optimized for any loudspeaker load – whether one massive subwoofer or a series of small 100 V loudspeakers. VPL works in combination with adjustable input gain to achieve maximum headroom regardless of input levels or output impedances.

To assure reliability, and minimize service interruptions, C Series amplifiers offer comprehensive warning and protection features. Whenever faulty wiring, improper use, or extreme ambient temperatures threaten trouble, a C Series amplifier gives clear and accurate warning indications. Protection measures are inserted only when dangerous thresholds are passed. Conditions are re-checked at six-second intervals, and normal operation resumes when measurements return to nominal.

Every C Series amplifier is ready for the NomadLink® network right out of the box. With NomadLink®, key amplifier parameters are displayed via DeviceControl software, and remote control of channel mutes and power on/off is under network control. (NomadLink® requires the separate NLB 60E NomadLink® Bridge & Network Controller.)

Applications

- ▶ Auditoriums
- ▶ Performing Arts Centers
- ▶ Convention Centers
- ▶ Stadiums and Arenas
- ▶ Theme Parks
- ▶ Hotels
- ▶ Houses of Worship
- ▶ Restaurants
- ▶ Clubs
- ▶ Educational Establishments
- ▶ Boardrooms
- ▶ Museums
- ▶ Offices
- ▶ Shopping Malls
- ▶ Transportation Facilities

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* C Series high-power models are:
C 88:4, C 68:4, C 48:4, C 24:4 and C 16:4



Specifications C 28:4

General

Number of channels	4
Peak total output all channels driven	2800 W
Peak output voltage per channel	141 V
Max. output current per channel	12 Arms

Max. Output Power	16 ohms	8 ohms	4 ohms	2 ohms	Hi-Z
Per ch. (all ch.'s driven)	600 W	700 W	700 W	300 W	700 W (70 Vrms / 100 V peak)
Bridged per ch.	1400 W	1200 W	600 W	n.r.	1400 W (140 Vrms / 200 V peak)

Performance with Gain: 35 dB and VPL: 100 V

THD 20 Hz - 20 kHz for 1 W	<0.1%
THD at 1 kHz and 1 dB below clipping	<0.05%
Signal To Noise Ratio	>112 dBA
Channel separation (Crosstalk) at 1 kHz	>70 dB
Frequency response (1 W into 8 ohms) +0/-3 dB	6.8 Hz - 34 kHz
Input impedance	20 kOhm
Input Common Mode Rejection, CMR	50 dB
Output impedance @ 100 Hz	30 mOhm

Voltage Peak Limiter (VPL), max. peak output

VPL, selectable per ch. ³⁾	141, 118, 100, 85, 71, 59, 50, 42 V
VPL, when bridged ^{3) 1)}	282, 236, 200, 170, 142, 118, 100, 84 V
Voltage Peak Limiter mode (per ch.)	Hard / Soft

Gain and Level

Amplifier gain selectable (all channels) ¹⁾	23, 26, 29, 32, 35, 38, 41, 44 dB
– rear-panel switches	
Default gain	35 dB
Level adjustment (per ch.)	Front-panel potentiometer, 21 position detented from -inf to 0 dB, hidden behind security panel/dust filter grille

Connectors and switches

Input connectors (per ch.)	3-pin Phoenix, electronically balanced
Output connectors (per ch.)	Barrier strip 2-pole screw terminals
Output bridge mode	A+B and/or C+D, inputs A and C are input source
NomadLink® network	On board, 2 x RJ45 connectors
Intelligent fans (on/off)	Yes, depending on presence of output signal
Power on/off and Remote enable on/off	Individual switches on front-panel
Cooling	Two fans, front-to-rear airflow, temperature controlled speed

Front-panel indicators

Common	NomadLink® Network; Power Average Limiter (PAL) ²⁾ ; Power on
Per channel	Signal present / High-impedance; -10 dB and -4 dB output signal; Voltage Peak Limiter (VPL); Current Peak Limiter (CPL); Very High Frequency (VHF); High Temperature; Fault; Mute

Power

Operating voltage, 230 V / 115 V nominal	130 -265 / 65-135 V ⁴⁾
Minimum power-up voltage, 230 V / 115 V	171 V / 85 V
Power Average Limiter (PAL) ²⁾	Yes
Soft start / Inrush Current Draw	Yes / max. 5 A
Mains connector	230 V CE: 16 A, CEE7; 115 V ETL: 20 A / NEMA 5-20P

Dimensions (W/H/D)

W: 483 mm (19"), H: 88 mm (2 U), D: 343 mm (13.5")

Weight

12 kg (26.4 lbs.)

Finish

Black painted steel chassis with gray painted steel front

Approvals

CE, ANSI/JUL 60065 (ETL), CSA C22.2 NO. 60065, FCC

Note 1): Automatic -6 dB gain compensation when bridging channels. Ch.'s A+B and/or C+D, can be bridged individually.

Note 2): PAL can reduce the maximum output power to keep the power supply operating safely, and/or to prevent excessive current draw tripping the mains breaker. Refer to Operation Manual.

Note 3): For sine waves, peak voltage output values translate to Vrms with the formula $V/1.41 = V_{rms}$. E.g. 100 V peak equals app. 70 Vrms. Hence, outputs can be set for high-impedance loads without requiring a transformer.

Note 4): Separate 230 V or 115 V versions available. Not selectable on the amplifier.

All specifications are subject to change without notice.

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LAB.GRUPPEN AB ▶ SWEDEN

INTERNATIONAL CONTACT ▶ INFO@LABGRUPPEN.COM | US & CANADA CONTACT ▶ INFO@TCG-AMERICAS.COM

WWW.LABGRUPPEN.COM

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