



# FP 6000Q



- ▶ **Very high power and channel density** - The four-channel FP 6000Q delivers a total of 6000 W (4 x 1500 W @ 2 ohms) in only 2U
- ▶ **Four-channel flexibility** - Four channels in one cabinet increases efficiency, flexibility and value in powering monitor systems, line arrays, and bi- or tri-amped systems. Adjacent channels bridgeable for 2- or 3-channel operation
- ▶ **Lab.gruppen sound quality** - FP 6000Q amplifiers maintain the impeccable sonic performance standards set by the original fP Series, with the same durability and even greater efficiency
- ▶ **NomadLink® network ready** - Monitoring and control of key functions accessible via the intuitive DeviceControl software and the robust, daisy-chained NomadLink network
- ▶ **Patented Class TD amplifier topology** - Road-proven output stage delivers Class A/B audio quality with Class D efficiency
- ▶ **Regulated Switch Mode Power Supply (R.SMPS)** - Output power remains constant even with significant drops in the mains voltage
- ▶ **Efficient cooling system** - Unique, lightweight Intercooler® copper cooling system dissipates more heat to allow extended peak output
- ▶ **Adjustable parameters** - Selectable Gain, scalable Voltage Peak Limiter (VPL), and bridge-mode operation allow custom configuration for any system or application
- ▶ **XLR input connectors**
- ▶ **Heavy duty binding post or Speakon output connectors**
- ▶ **Comprehensive protection and warning** - Excessive output current, DC, temperature, very high frequency (VHF), short circuit, open load, mains fuse protection, and soft start

## A New Benchmark For Touring Amplification

Over the past decade, the tight and transparent sound of Lab.gruppen touring amplifiers has earned the praise of renowned FOH engineers and leading sound rental companies worldwide. FP 6000Q, the second four-channel model of new the FP+ Series, continues this tradition. At the core of the FP 6000Q's performance is the patented Class TD output stage, a breakthrough amplifier topology that approaches the exceptional efficiency of class D while retaining the sonic purity of proven class A/B designs. Further contributing to the remarkable efficiency of the FP 6000Q is a Regulated Switch Mode Power Supply (R.SMPS), which gives the added benefit of stabilizing rail voltages to the output even with wide fluctuations of mains voltage. A highly refined and updated circuit layout optimizes the interaction of R.SMPS and Class TD to produce the extraordinary power and channel density of the FP 6000Q.

To keep its cool under extreme demands, the FP 6000Q relies on Lab.gruppen's proprietary Intercooler®. This innovation uses thousands of copper fins to multiply the exposed heatsink surface's rapid heat dissipation. Also, all output devices are mounted transverse to the airflow for uniform cooling. As a result, the FP 6000Q delivers Lab.gruppen's trademark "all the power, all the time" with no degradation of sonic performance.

To maximize headroom in any application, the FP 6000Q offers adjustable input gain along with Lab.gruppen's exclusive Voltage Peak Limiter (VPL). Adjustable on a per-channel basis, VPL optimizes the output for any load, from a single massive subwoofer to a series of HF compression drivers.

The comprehensive warning and protection features on the FP 6000Q safeguard output circuits and connected loads while also extending amplifier life and minimizing the chance of service interruptions. Whether it's a matter of faulty wiring, improper use, or extreme ambient temperatures, the FP 6000Q gives clear indication of any problems. Automatic protection measures engage only at critical thresholds, and conditions checked every six seconds with normal operation resumed when measurements return to nominal.

The FP 6000Q is shipped with a NomadLink® network interface as standard. In conjunction with DeviceControl software, NomadLink® allows monitoring of all key amplifier parameters and remote control of power on/off, channel mutes, and channel solo functions. (NomadLink® requires the separate NLB 60E NomadLink Bridge and Network Controller).



## Specifications FP 6000Q

### General:

Number of channels	4
Max. total output all channels driven	6000 W
Max. output voltage per channel	101 V <sub>peak</sub>
Max. output current per channel	27 A <sub>rms</sub>

### Max. Output Power

	2 ohms	4 ohms	8 ohms	16 ohms
Per ch. (all ch.'s driven)	1500 W	1250 W	625 W	320 W
Bridged	- 3)	3000 W	2500 W	1250 W

### Performance with Gain: 35 dB and VPL: 101 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 Ohm) +0/-3 dB	6.8 Hz - 34 kHz

### Voltage Peak Limiter (VPL), max. peak output

VPL, selectable per ch. (V)	101, 83, 70, 56, 47, 38 V
VPL, selectable when bridged (V) <sup>1)</sup>	202, 166, 140, 112, 94, 76 V
Voltage Peak Limiter mode (per ch.)	Hard / Soft

### Gain and Level

Amplifier gain selectable (all channels) <sup>1)</sup>	Rear-panel switches: 23, 26, 29, 32, 35, 38, 41, 44 dB
Default gain	35 dB
Level adjustment (per ch.)	Front-panel potentiometer, 21 position detented from -inf to 0 dB

### Connectors and Switches

Input+Link connectors (per ch.)	3-pin XLR, electronically balanced
Output connectors (per ch.)	Neutrik Speakon or Binding Posts (must be specified upon order)
Output bridge mode	Connect Ch. A/C+ and Ch. B/D- . Ch. A/C are signal input sources
NomadLink® network	On board, 2 x RJ45 EtherCon connectors, IN and OUT
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) <sup>2)</sup> ; Power on
Per channel	Signal present/High-impedance; -20 dB, -15 dB, -10 dB and -4 dB output signal; Voltage Peak Limiter (VPL); Current Peak Limiter (CPL); Very High Frequency (VHF); High temperature; Mute

### Power

Operating voltage, 230 V / 115 V nominal <sup>4)</sup>	130-265 V / 65-135 V
Minimum power-up voltage, 230 V / 115 V	171 V / 85 V
Power Average Limiter (PAL) <sup>2)</sup>	Yes
Soft start / Inrush Current Draw	Yes / max. 5 A

### Dimensions (W/H/D)

W: 483 mm (19"), H: 88 mm (2 U), Overall D: 396 mm (15.6"), Mounting D: 358 mm (14.1")

### Weight

12 kg (26.4 lbs.)

### Finish

Black painted steel chassis with black painted steel / aluminum front

### Approvals

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

### Mains plug type

230 V CE: 16 A, CEE7; 115 V ETL: 30 A Twist lock

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

**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):** The amplifier will be fully operational at bridge-mode 2 ohm loads, but due to physical constraints in the construction, the max. output power will not be significantly higher than running individual channels and therefore not stated here.

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

**All specifications are preliminary and subject to change without notice.**



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