

Compact FM Power Amplifiers

VL 1 – 1000 W

VL 05 – 500 W

The VL1 and VL05 are really innovative FM Amplifiers with 1000W and 500W output power respectively. Thanks to the new solutions that our engineers have implemented in the circuitry and to the compact design, for these amplifiers we have estimated a 20% longer MTBF with respect to the average similar models available in the market.

The VL1 and VL05 are equipped with a microprocessor board that allows the programming from the local display or even remotely, through a standard RS232 or SNMP. Thanks to the ultimate electronic components that have been largely implemented in the design, also the RF spectrum specifications have been significantly improved.



The equipment complies with the RTTE European Requirements.

- Solid state amplifier with Mosfet technology.
- Output Power adjustable from 100W to 1000W
- User friendly for monitoring and control
- Double stage power supply
- Fast and multiple protections
- Compact and modular design for quick and easy maintenance
- Flexible telemetry system and remote control
- N+1 hardware and software control facility

CODE	MODEL	DESCRIPTION
F868	VL 1	1000 W Power Amplifier 87.5-108 MHz
F867	VL 05	500 W Power Amplifier 87.5-108 MHz

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FM Broadcasting Equipment

Technical data

RF OUTPUT SPECIFICATIONS		REMOTE CONTROL	
Range	87,5 ÷ 108 MHz	Output Connector	RS232 interface Connector DB9 Male – Two Connector DB9 Female programmable – RS 485 – Connector DB15 Male
Overall efficiency	Better than 58 %	Output Connector Analogue	Signal proportional to the output voltage of the power supply module Signal proportional to the current supplied by the power supply module Signal proportional to the square root of the direct power Signal proportional to the square root of the reflected power
Impedance RF Connector	50 Ohm input and output	Output Connector Digital	“Stand-by” signal (contact is N.C. in normal operations, connected to GND in stand-by mode) “N.O.” alarm contact (contact is not connected in normal operation, connected to pin 15 in alarm) “N.C.” alarm contact (connected to pin 15 in alarm, contact is not connected in normal operation)
Output power stability	± 3 %	Input Connector	Stand-by command Reset command
Harmonics suppression	≥ - 80 dBc (typically better than 90 dBc)	Ethernet interface (option)	Connector RJ 46 WEB browser or SNMP client
Spurious Emission	< 1 µW (without Modulation)	STANDARDS COMPLIANCE	
Residual Asynchrony AM	- 74 dB Weighed	Radio spectrum	ETSI 302-018
Residual Synchrony AM	- 58 dB Weighed	EMC	ETSI 301-489
Probe	BNC connector RF – 60 dBc	Safety	EN 60950 - EN 60215
POWER SUPPLY		TEMPERATURE	
Type	Switch mode (Double conversion voltage direct mains)	Operating range	0° to 45° C
Protections	Overheating 70 °C (by means of the General Control stage) Over charge Short Circuit on the output voltage Crow – Bar protection: (Excessive output voltage limit) Excessive current consumption of the RF module Over-voltage	Storage range	- 40° to 70° C
Display Meter	Forward power - Reflected power - DC supply voltage - DC supply current - Power supply temperature - Power amplifier voltage	Maximum relative Humidity	90% @ 26 °C non condensing
Protections	RF Amplifier module over-temperature 70 Excessive reflected power Permissible VSWR ≤ 1.5	Max Operating Altitude	2500 mt. a.s.l.
Programmable logic protection	Stopping of the unit after 8 alarms Stopping of the unit after 16 alarms	DESIGN DATA	
Logic protections reset	Manual , Remote or Automatically every 24 hours	Radio spectrum	ETSI 302-018
Controls	Mains - DB 15 Connector (Stand-by and Reset command)	EMC	ETSI 301-489
Alarm	Excessive output SWR (red led) 50 W adj. – Alarm (red led) - Stand –by (yellow led) - Mains - DC out – ALC	Safety	EN 60950 - EN 60215
Type	Solid state direct FM frequency	TEMPERATURE	



SPECIFICATIONS	VL 05	VL 1
RF output power	From 50 to 500 W	From 100 to 1000 W
Output Connector	7/16 Type Female	7/16 Type Female
Dimensions (WxHxD) mm	482 x 132 x 700 (550 x 220 x 800 Package)	482 x 132 x 700 (550 x 270 x 800 Package)
Weight	17 Kg (19 Kg. Package)	18 Kg (20 Kg. Package)
Power consumption	Approx. < 900 VA	Approx. < 1800 VA
Number of power supplies	230 Vac±15%, single phase;	230 Vac±15%, single phase;
Number of fans	2 blowers 24 V dc	2 blowers 24 V dc