

3B1K5A

1,5KW DAB/DMB SOLID STATE TRANSMITTER

DAB/DMB VHF BIII TRANSMITTERS LINE

3B1K5A Transmitter belongs to Electrolink high power DAB/DMB product family. Electrolink DAB/DMB air-cooled transmitter generation covers a power range from 50W to 5kW (higher output power available on request). Each transmitter includes the following components:

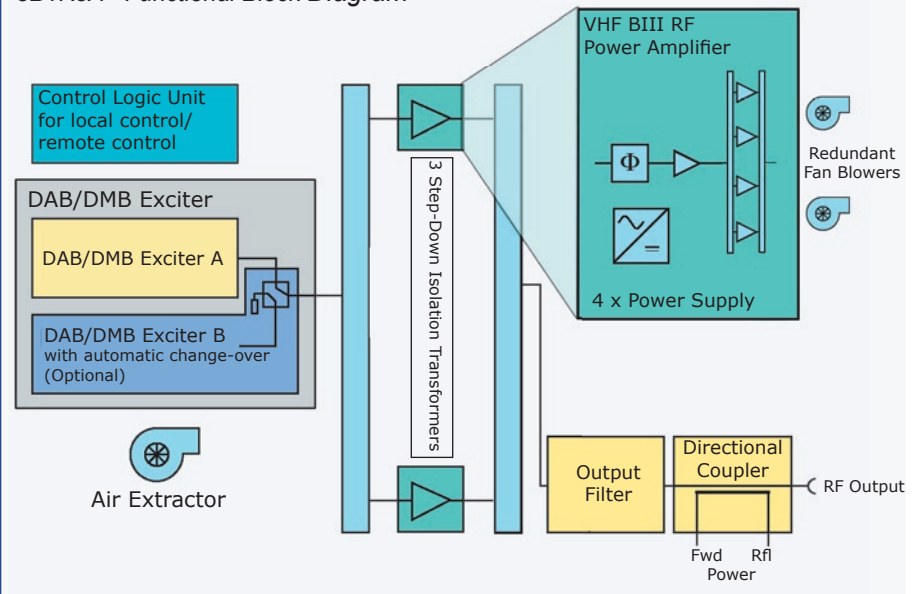
- DAB/DMB Exciter (dual-exciter optional)
- Power Amplifiers (horizontal and vertical line)
- Stainless steel transmitter rack with cooling system
- Power combiner
- Power distribution
- Control unit (for local/remote control)
- Step-down transformers (complete protection).

All transmitters can boast outstanding technical parameters, optimum cost/benefit ratio, maximum reliability and ease of servicing. Dual DAB/DMB exciter with automatic change-over unit is available on request. The transmitter control logic unit, equipped with a touchscreen, can handle and display all the parameters and diagnostic about the equipment status and its related sub-units, providing all control functions. All transmitter and amplifier parameters required for diagnostics can be retrieved locally or remotely via standard (IP) protocol and standard software (web browser and SNMP). Each power amplifier is self-protected and self-controlled. Three step-down transformers, used to provide a total redundancy and protection, are mounted on slide-out wheels in order to get ease installation and maintenance operations.



3B1K5A - 1,5KW DAB Solid State Transmitter

3B1K5A - Functional Block Diagram



KEY FEATURES

- Fully broadband DAB/DMB exciter
- "State of the Art" solid state technology
- LD MOS transistors
- 19" standard rack
- Ultra-high redundant power amplifier
- Low junction temp. of the RF transistors
- Three Step-down transformers
- One power supply for each final stage
- Remote/local control
- Protection for the RF pwr transistors
- High suppression of intermod. products
- Efficient low noise forced air cooling



3B1K5A - Technical Data

Frequency Range	170 to 240MHz
RF Output Connector	1"5/8 EIA
RF Output Power	1,5 kWrms
RF Output Impedance	50ohm.
Shoulder at $\pm 0,97$ MHz	35dB (typical 37dB)
MER	>33dB (typical 35dB)
Harmonic Spurious Output	in accordance with ETSI EN 302 077-2
Remote Control	via serial interface RS232, Webserver and SNMP
Power Supply:	3-Phase 230 - 400 $\pm 10\%$ with neutral 47 to 70 Hz
Modulation Input	2xETI(NI) ETI(NA) (75ohm)
DAB Modes	I, II, III, IV
Frequency Stability	Internal reference 0.3ppm or in accordance with external reference accuracy
Frequency Response, DAB Block	<1dB
Static (Tx trimming) Delay Compensation	up to 2,4 second, step 1 μ s
Dynamic (network padding) Delay Comp.	0 to 1,5 second
Power Consumption	9kVA (all included)
Dimensions (mm)	580 x 1230 x 1662 (H)
Weight	400Kg
Environmental Conditions	
Ambient Temperature	- 5 to +45°C
Storage Temperature	-20 to +70°C
Humidity	95 % (non-condensing)
Installation Height	up to 3.000 m (asl)

DAB EXCITER Innovative state-of-the-art 1U DAB/DMB Modulator. Robust and efficient COFDM RF modulation technology. It is resistant to multi-path interference even in a mobile environment. Dual NA inputs which can automatically and seamlessly switch between the two network feeds. Dual NI Inputs with Auto Switching between inputs. Both digital Linear and digital Non Linear precorrection are available. An easy-to-use LCD Display allows the access to the menu structure.



POWER AMPLIFIERS Fully solid state and fully broadband all over Band III (from 170MHz to 240MHz). For complete redundancy, each final stage (4 final stages per each module) has its own power supply. The outpower is displayed in the front panel by means of a multifunction display. 2 blowers ensure the complete cooling of the power amplifier. The power amplifiers can be taken out the equipment without turning off the transmitter, thanks to the already included extender: this allows personnel to work into the power amplifiers with complete output power of the transmitter and in safe conditions (only 50V).



CONTROL LOGIC UNIT Thanks to it, you can control the status of the transmitter and have a complete control of the equipment. The touch-screen display is very user-friendly and help monitoring all the parameters of the complete system. On the right side, a needle meter always shows the output power.



MAINS DISTRIBUTION In order to ensure complete the power supply voltages, the transmitter is equipped with 3 step-down isolation transformer with electrostatic shield that can guarantee 100% redundancy. In case of fault phase lack or one/two transformers fault, the transmitter keeps on working automatically reducing the output power, but not turn off at all. This allows continuous on-air condition.

