

Low Power FM Transmitters

TX 25 PLUS – 25 W

TX 250 PLUS – 250 W

The TX 25 PLUS and TX 250 PLUS FM Exciters are designed to accept Stereo Mono MPX Audio Signals to be modulated in FM and to amplify the RF.

The TX 25 PLUS and TX 250 PLUS FM are equipped with an innovative and high-performance power supply stage «switching-mode mains direct», without mains transformer (the mains voltage can vary from 80 to 265 Vac with no variation on the output power).

The major features include high insulation from mains, high overall efficiency, modular design for

friendly maintenance, compliance with European norms EN61000-4-3 and long term reliability.

In these FM Exciters, an AGC audio circuit control is included to keep the modulation level below the maximum figures allowed in compliance with CEPT/ERC 5401 E.

The RF output specifications have been drastically improved, thus obtaining figures which are comparable to digital transmitters.

These FM Exciters can be controlled locally by a PC or remotely by modem.



The TX 25 PLUS is a completely solid state Exciter, frequency agile controllable from the front panel with adjustable output power up to 25 W.

The power device used to obtain 25 W is the PHILIPS BLF 245.

In TX 250 PLUS FM Exciter, usable also as a stand-alone transmitter, we have added a power amplifier module with the power device PHILIPS 278, able to grant 250 W output power in the entire frequency range.

CODE	MODEL	DESCRIPTION
F662	TX 25/S PLUS	25 W Stereo, Mono MPX Transmitter
F663	TX 250/S PLUS	250 W Stereo, Mono MPX Transmitter

Technical data

FREQUENCY	
Range	87,5 ÷ 108 MHz
Internal Setting mode	10 KHz steps
External Setting mode	10 KHz steps by remote control RS232-RS485
Generation	PLL synthesizer
Control	Microprocessor
Output frequency stability	± 300 Hz / 3 months
Reference	TCXO 12,8 MHz
Nominal deviation	± 75 KHz
Stability of Frequency Deviation	± 2,5 % over 6 months
Impedance RF Connector	50 Ohm
RF OUTPUT SPECIFICATIONS	
Harmonics suppression	< - 75 dBc
Spurious Emission	< - 90 dBc
Off Lock Attenuation	> 60 dBc
S/N RATIO (weighted)	> 73 dB (referred to ± 75 KHz)
THD	0,10%
VSWR	Less then 1,5:1
Probe	BNC connector RF – 40 dB BNC connector LF
MONO MPX SPECIFICATIONS	
Mono/MPX Impedance	600 Ohm bal. or 10 KOhm unbal., XLR female Connector
Mono Level	From - 6 to + 12 dBm
MPX Level	- 6 dBm
Audio Filter Response	> 30 dB (from 19 KHz to 100 KHz)
THD	< 0,2% From 40 Hz to 15 KHz
Suppression of 19 KHz	> 46 dB
RDS and SCA Impedance	10 KOhm unbal., BNC Connector (with 30 Hz to 100 KHz Filter)

STEREO SPECIFICATIONS	
Left, and Right Impedance	600 Ohm bal. or 10 KOhm unbal, XLR female Connector
Left, Right Level	From – 6 to + 12 dBm
Crosstalk	> 50 dB (@ 19 KHz)
THD on Encoded channels	< 0,3 % From 0,4 Hz to 15 KHz
Suppression of 38 KHz	> 50 dB
Spurious suppression outside band	According to ETSI 300-384
Sub Carrier Generation	Internal Cristal
Pilot Frequency	19 KHz ± 1 Hz
DESIGN DATA	
Type	Solid state direct FM frequency
Pre-emphasis	Flat or 75 or 50 µs
Audio frequency response	± 0,2 dB (from 40 Hz to 15 KHz) (stereo) ± 0,3 dB (from 40 Hz to 100 KHz) (MPX)
Unbalance rejection	> 40 dB
Modulation	Type: Direct VCO frequency modulation F3E/F8E Capability: Meets or exceeds all CE 99/ 05 R&TTE requirements
REMOTE CONTROL	
Output Connector	RS 232 – PC connection (front panel) RS 232 Amplifier connection (rear panel) RS 485 (rear panel)
Input Connector	RS 485 (rear panel)
STANDARDS COMPLIANCE	
Radio spectrum	ETSI 300-384; ETS 302-018
EMC	ETSI 300-447; ETS 301-489
Safety	EN 60950 - EN 60215
TEMPERATURE	
Operating range	0° to 45° C
Storage range	- 40° to 60° C
Maximum relative Humidity	90% non condensing
Max Operating Altitude	2500 mt. a.s.l.



SPECIFICATIONS	TX 25 PLUS	TX 250 PLUS
RF output power	From 0 to 25 W	From 5 to 250 W
Output Connector	N Type Female	N Type Female
Dimensions (WxHxD) mm	482 x 88 x 500 (550 x 220 x 60 Package)	482 x 88 x 500 (550 x 220 x 60 Pack)
Weight	10 Kg (12.6Kg. Package)	12 Kg (15.5 Kg. Package)
Power consumption	Approx. < 75 VA	Approx. < 350 VA
Number of power supplies	1 From 80 to 265 Vac, single phase;	1 From 80 to 265 Vac, single phase;
DC Power Supply	Not included	Not included
Number of fans	1 blower 220 V ac	2 blowers 220 V ac