

## 500 W VHF/FM Transmitter T3272



### Highlights of the VHF/FM Transmitter T3272

- Simple and intuitive menu control via graphic display
- Service friendly design with plug-in Eurocard modules
- 19" slide-in technology of height 6 U
- All important functions and status information of the transmitter are simultaneously shown on the graphic display
- Prepared for all reserve concepts
- Directly modulated synthesizer with 10 kHz channel separation
- Integrated stereo encoder with deviation limiter
- Proven MOSFET technology of the power transistors
- Excellent reliability due to low junction temperatures of <math>90^{\circ}\text{C}</math> at T (ambient) = <math>25^{\circ}\text{C}</math>
- Very good quality data in with respect to unweighted- and weighted S/N ratio, stereo cross-talk, frequency response and non-linear distortion
- Protective circuits against overvoltage, fan failure, overtemperature and mismatch
- RF output power continuously adjustable between 100 W and 500 W in 1 W steps
- The output is delivered by two 250 W amplifiers, connected in parallel by a 2:1 combiner.
- Each 250 W amplifier is equipped with a harmonic filter

### Technical Data

RF output connector  
Remote interfaces

Operating mode (freely selectable)  
Number of preset frequencies  
AF patching for the left- and right channel  
Level controller for 40 kHz deviation  
Setting accuracy  
Pilot tone level adjustable  
RDS input level adjustable  
SCA input level adjustable  
Preemphasis (on/off switchable)  
Cooling  
Operational in the temperature range  
Humidity  
Dimensions W x H x D in mm  
Weight

N, 50  $\Omega$   
Standard: RS232  
Option: Relay, BITBUS, SNMP or HTTP  
Mono, stereo, MPX, (L+R)/2  
6  
Option, LEMO-Triaxial  
- 5.25 dBm ... + 12.5 dBm, in 0.25 dB steps  
 $\leq 0.1$  dB  
- 25 dBu ... - 5 dBu  
- 23 dBu ... - 9.5 dBu  
- 23 dBu ... - 9.5 dBu  
25, 50, 75  $\mu\text{sec}$   
Internal fan  
-  $10^{\circ}\text{C}$  ... +  $50^{\circ}\text{C}$   
to 95 %, without dew  
483 x 264 x 370  
21 kg

The VHF/FM transmitter fulfils the national standards as well as the technical specifications of the ARD (5/ 3.1), the Deutschen Telekom (TS 0216) and ETSI EN 302 018-2.

**Transmitter Power**

Output power $P_{RF}$	500 W
Amplifiers	2 * 250 W
Output power setting range	100 W ... 500 W, continuous
Full power up to VSWR = 1.5	thereafter down regulation of output power

**Frequency**

Frequency range	87.5 MHz ... 108 MHz, in 10 kHz steps
Frequency change	< 1 sec
Frequency drift over 3 months	< 300 Hz
Setting accuracy	< 50 Hz
Middle frequency shift during modulation	0 Hz
Deviation instability	< 1 %
Warm-up time	< 5 min

**Out-of-band Emission**

0.2 MHz	< - 110 dBc/Hz
0.3 MHz	< - 126 dBc/Hz

**Spurious Emission**

Harmonic emissions	< - 80 dBc
Noise power density	< - 150 dBc/Hz

**Reverse Intermodulation Products**

	> 15 dB
	> 2000 $\Omega$ or 600 $\Omega$

**Input Impedance****Linear Distortion**

Stereo cross-talk attenuation	
40 Hz ... 15 kHz	> 45 dB
Amplitude deviation	
40 Hz ... 65 kHz	$\pm$ 0.1 dB
> 65 kHz ... 76 kHz	$\pm$ 0.2 dB
100 kHz	- 2 dB $\pm$ 0.5 dB
Damping of the 15 kHz low-pass	
40 Hz ... 15 kHz	< 0.2 dB
at 19 kHz	> 50 dB

**Non-Linear Distortion**

Distortion factor 40 Hz ... 15 kHz, at 75 kHz deviation	< 0.1 % = - 60 dB
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**Selective S/N Ratio**

Mono	> 80 dB
Stereo	> 80 dB

**Unweighted S/N Ratio (effective peak value)**

Mono	> 72 dB
Stereo	> 72 dB
AM unweighted S/N ratio, asynchronous	> 60 dB
AM unweighted S/N ratio, synchronous	> 60 dB

**Weighted S/N Ratio (effective peak value)**

Mono	> 70 dB
Stereo	> 70 dB
AM weighted S/N ratio, asynchronous	> 60 dB

**Power Supply**

Voltage range	1/N/PE 115 V	95 V ... 132 V
	1/N/PE 230 V	195 V ... 264 V
Mains frequency		47 Hz ... 63 Hz
Power consumption		1100 W at $P_{RF}$ = 500 W
$\cos \varphi$		> 0.7
Ready after mains failure		< 2 sec

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