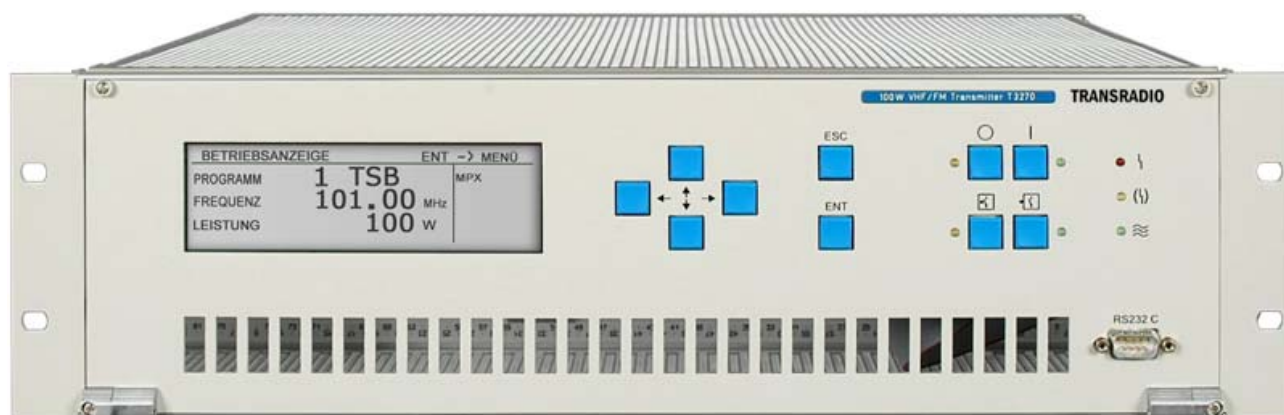


100 W VHF/FM Transmitter T3270



Highlights of the VHF/FM Transmitter T3270

- Simple and intuitive menu control via graphic display
- Service friendly design with plug-in Eurocard modules
- 19" slide-in technology of height 3 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 $< 90^{\circ}\text{C}$ at $T(\text{ambient}) = 25^{\circ}\text{C}$
- Very good quality data in with respect to unweighted- and weighted S/N ratio, stereo crosstalk, frequency response and non-linear distortion
- Protective circuits against overvoltage, fan failure, overtemperature and mismatch
- RF output power continuously adjustable between 5 W and 100 W in 1 W steps

Technical Data

RF output connector

N, 50 Ω

Remote interfaces

Standard: RS232

Option: Relay, BITBUS, SNMP or HTTP

Operating mode (freely selectable)

Mono, stereo, MPX, (L+R)/2

Number of preset frequencies

6

AF patching for the left- and right channel

Option, LEMO-Triaxial

Level controller for 40 kHz deviation

- 5.25 dBm ... + 12.5 dBm, in 0.25 dB steps

Setting accuracy

≤ 0.1 dB

Pilot tone level adjustable

- 25 dBu ... - 5 dBu

RDS input level adjustable

- 23 dBu ... - 9.5 dBu

SCA input level adjustable

- 23 dBu ... - 9.5 dBu

Preemphasis (on/off switchable)

25, 50, 75 μsec

Cooling

Internal fan

Operational in the temperature range

- 10°C ... + 50°C

Humidity

to 95 %, without dew

Dimensions W x H x D in mm

483 x 132 x 370

Weight

10 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}	100 W
Output power setting range	5 W ... 100 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

Input Impedance> 2000 Ω or 600 Ω **Linear Distortion**

Stereo cross-talk attenuation	
40 Hz ... 15 kHz	> 45 dB
Amplitude deviation	
40 Hz ... 65 kHz	± 0.1 dB
> 65 kHz ... 76 kHz	± 0.2 dB
100 kHz	- 2 dB ± 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 230 V 85 V ... 276 V
Mains frequency	47 Hz ... 63 Hz
Power consumption	240 W at $P_{RF} = 100$ W
$\cos \varphi$	> 0.9
Ready after mains failure	< 2 sec

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