



# PolyEco 1000

FULL DIGITAL FM TRANSMITTER

Headquarter: Via Toscana, 57/59 - 20090 - Buccinasco (MI) Italy  
Tel. +39-02-45713300 Fax +39-02-45713351 e-mail: [info@sielco.org](mailto:info@sielco.org) / [www.sielco.org](http://www.sielco.org)



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## FULL DIGITAL FM TRANSMITTER

PolyEco is the innovative family of high-end digital FM transmitters of Sielco. They are especially suited as high performance power system exciters or compact low-mid power transmitters. The same cabinet may in fact be fitted with 50, 100, 300, 500, 1000W power stage (PolyEco50, 100, 300, 500, 1000).

Lightness, compactness and ease of use along with “Full-Digital” processing make them along the most innovative and versatile equipment currently on the Broadcast market and allow performance and functionality nowadays unimaginable with current analog ones, assuring the absolute compatibility with all analog and digital audio sources.

All features can be controlled via the large touch-screen display 4.3” or remotely. Many advanced features are inside by default in the basic version such as: stereo and RDS encoder, audio change-over, remote-control via LAN and SNMP, “FFT” spectral analysis of the audio sources, SFN synchronization and much more. Other functionalities are then available as options (audio streaming, MP3 player, N+1, ecc.).



### TECHNICAL DATA

<b>Frequency range</b>		from 87,5 to 108 MHz (other ranges available on request)
<b>Transmitter tuning steps</b>		1 kHz - fine tuning with 10 Hz steps
<b>Frequency error</b>		Error < 50 Hz not synchronized, <1Hz synchronized
<b>GPS Synchronization</b>	10MHz / 1PPS	Internal/external with digital PLL
<b>Modulation Type</b>	FM	DDS , Direct Digital Synthesis 256kF3E
<b>Audio and Mpx\L\R input level</b>		from -6 to +15 dBu @ 75 KHz deviation, 0.1dB steps
<b>Auxiliary input channel level (RDS/SCA)</b>	SCA	from -15 to +6 dBu @ 7,5 KHz deviation
	RDS	from -24 to -3 dBu @ 2 KHz deviation
<b>Digital audio input</b>	AES/EBU	da - 6 a +12 dBfs @ 75 KHz deviation , step of 0.1dB
<b>Modulation distortion</b>	75 KHz dev.	≤0.02%
<b>Audio backup</b>	μSD / USB	MP3 48kHz
<b>S/N ratio, mono</b>	30÷20000Hz	>76 dB, typical 83
	CCIR	>75 dB, typical 79
<b>S/N ratio, stereo</b>	30÷20000Hz	>72 dB, typical 77
	CCIR	>68 dB, typical 72
<b>Audio channels frequency response</b>	30÷15000 Hz	±0.1 dB
<b>MPX input frequency response</b>	30÷75000 Hz	±0.1 dB - (75 ÷ 100 kHz in according to the filter selected)
<b>Pre-emphasis time constant</b>		0μS, 50μS (CCIR), 75μS (FCC)
<b>Detached LF Channel</b>		Mpx, L, R, AES/EBU, Aux, SCA (all main plus reserve)
<b>Modulation Delay</b>		Digitally programmable from 0,1 μs to > 3s
<b>Stereo coding</b>		According to ITU-R BS.450-3, pilot frequency
<b>Stereo separation</b>		>55dB
<b>Pilot frequency</b>		19kHz ±0.1Hz, adjustable level 0 – 12%
<b>RDS generator</b>		According EN62106 PI, PS, ECC, PTY, TP/TA, AF, MS, DI, CT
<b>Rated RF output power</b>		1000W
<b>Output power ALC stability</b>		±3%
<b>Harmonic and spurious emissions</b>		<75dB (harmonic), <80 dBc (spurious)
<b>RF output connector</b>		7/16"
<b>Monitor ports and remote control</b>		Analogic Mpx on BNC, parallel control on SubD9, RS232, RS485, 10/100T serial ports, GSM, Web server, SNMP
<b>Power supply</b>		100÷250 Vac, 1400W max at nominal power
<b>Operative temperature range</b>	Suggested	da 0 a 35 °C
	Extreme	from -10 to +45 °C (50°C max with derating)
<b>Relative humidity</b>		Up to 95% not condensing
<b>Dimensions (WxHxD) and weight</b>		483x88x455 mm, 10kg max
<b>Reference norms</b>		ETSI EN 302 018 v2.1.1

Note: The data are subject of variations without notice.

