

ET20000-5

20000W SOLID STATE FM TRANSMITTERS



indiumseries



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ET20000-5

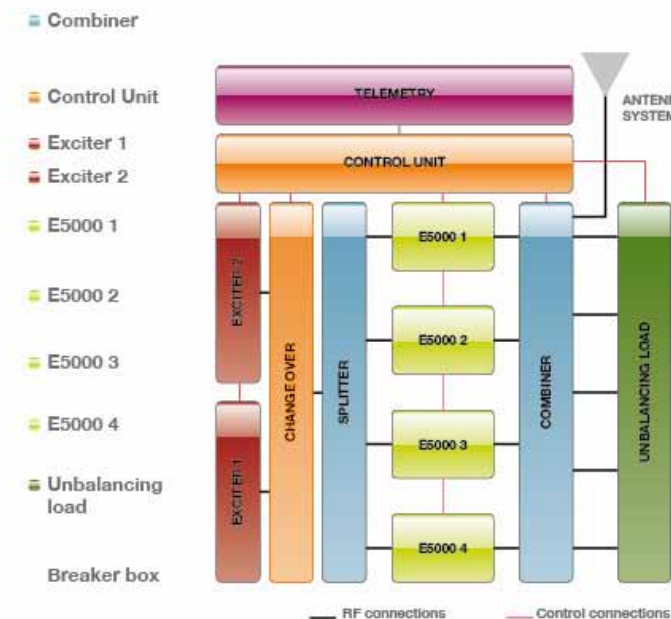
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ET20000 has all the characteristics that distinguish an Elenos product from the rest of the devices: avant-garde technologies (such as ICEFET, which ensures low temperatures, reduced consumptions and extension the useful life), fast hardware protection and appropriate software algorithms to control parameters (so as to have operation even in critical and extreme conditions), rich and intuitive interfaces, innovative design. The metal parts are made of stainless. The electronic boards are treated with high-strength resin to protect them in extreme humidity and salt conditions. Power supplies, RF modules and ventilation section are overstaffed. The quality checks include a long burn-in process at high temperatures.

- ✓ Ultra compact size – just 1 cabinet
- ✓ "Antenna short/open circuit" protection
- ✓ Easy installation and maintenance
- ✓ Very low power consumption
- ✓ GSM – TCP/IP – SNMP WEB INTERFACE
- ✓ Fully "interchangeable" modules



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COMPOSITION

Exciter (Indium series)	n°1 ETG 700.7 in single drive configuration n°2 ETG 700.7 in dual drive configuration
Amplifier	n°4 Amplifier E5000-series
Combiner	n°1 4-way combiner IN 5000 - OUT 20000 with external CPU/control unit and load (4U)
Dummy load	n°1 dummy load (4U)
Control unit	n° 1 control unit (4U). From the frontal panel/from PC, a careful analysis of the functioning through detailed measurement of currents, voltages, temperatures and powers
RF output connector	3+1/8"
Circuit breaker box	9U (on rear panel)

GENERAL DATA

Output nominal maximum power	20000W
Output power range	1500 - 20000W
Operating band	87.5 - 108 MHz
Dimensions: Rack units	40U
Dimensions: W - H - D	56.5 - 228.2 - 107.8cm (with fan)
Weight	370 kg
RF power stage technology	ICEFET & ECOSAVING
Automatic power RF control	Stabilized output power value on the set value
Overall output power RF stability	+/-0.1 dB
Cooling system	Forced air-cooling
Air outlet	On the top. Cooling flow 4000 m3/h (depending on environment)
RS232/RS485	Yes
Points of measure	RF Sample - MPX Monitor

EXCITER DATA

Driving power	< 550W
Displayed parameters	A careful analysis of the functioning through detailed measurement of currents, voltages, temperatures and powers
Adjustments	From the frontal panel/from PC
L-DMOS	n°1
Cooling fans	n°2 x 24Vdc, 0.56A (on rear panel)
Power supply	n°1 1KW
Dimensions: Rack units	2U
AES/EBU input resolution	24bits
AES/EBU input sample rate	32,44.1,48,96 KHz Automatically selected
AES/EBU-Analog input automatic changeover	Yes
L/R audio input level	+15/-10 dBu for 75KHz standard deviation
L/R level adjustment	Soft adjust 0.1dB steps from front panel
L/R input impedance	Selectable 10K - 600Ω

MPX audio input level	+15/-10 dBu for 75KHz standard deviation
MPX level adjustment	Soft adjust 0.1 dB steps from front panel
MPX input impedance	5KΩ selectable
SCA/RDS audio input level	0 dBu for 75KHz standard deviation
PILOT amplitude adjustment	Soft adjust 0.05% steps from front panel
PILOT phase adjustment	Soft adjust 0.01 degree steps from front panel
PILOT tone frequency	19 KHz
PILOT tone deviation	7.5 KHz Adjustable
PILOT tone frequency stability	+/-1 Hz
THD+N	< 0.05% with 75 kHz frequency deviation < 0.05% with 100 kHz frequency deviation @ 30 Hz to 15 kHz, L/R channel

Pre-emphasis	0/25/50/75 microseconds +/-0.1dB
FM S/N MPX FCC	82 dB 20Hz - 23KHz - 50uS - ref @ 53KHz - RMS
FM S/N STEREO CCIR weighted	72 dB Weight-ref@53KHz-Qpk
FM S/N STEREO CCIR unweighted	72 dB Unweight-ref@53KHz-QPk
Stereo crosstalk	-65 dB or better @ 1KHz
PLL lock time	<10sec
Intermodulation distortion	<0.05% Measured with two of tones 1KHz & 1.3KHz, ratio 1:1 at 100% modulation
Frequency deviation	+/- 75 KHz 0.1 dB steps adjustable
RF frequency steps	10 KHz
Phase response	0.1 degree from linear phase; 53kHz to 100kHz
Modulation capability	+/-250 KHz
External reference	On demand (10MHz)

AMPLIFIER DATA

Output nominal maximum power	5000W
Output power range	500 - 5000W
Displayed Parameters	A careful analysis of the functioning through detailed measurement of currents, voltages, temperatures and powers
Adjustments	From the frontal panel/from PC
L-DMOS	n°16
Cooling fans	n°6 x 24Vdc, 2A (on rear and front panel)
Power supply	n°3 x 3KW, 50V
Dimensions: Rack units	4U

INSTALLATION REQUIREMENTS

Power supply	380V or 400V, Threephase + neutral wire 50-60Hz * 210V, Threephase (WYE without neutral) *
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Power consumption	* to be specified when placing the order < 30KW
Current consumption @230VAC/Threephase	75A
Current consumption @380VAC/Threephase	45A



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ENVIRONMENT

Temperature range (operating)	-5 - +45 °C
Temperature range (non operating)	-20 - +55 °C
Humidity range (operating)	95% @ 40 °C (not condensing)
Humidity range (non operating)	90% @ 55 °C
Altitude range (operating)	< 3000 meters
Altitude range (non operating)	< 15000 meters

TELECONTROL & TELEMETRY

Remote control	Yes
Remote Control at clean contacts	Yes
SNMP option	Yes (external)



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