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Addendum to Flexiva TM GX LP FM Manual 888-9071-001 Rev F

Specifications

Specifications and designs are subject to change without notice

GENERAL								
Transmitter Type	Solid-State VHF Low Power Amplifier for FM							
Exciter	Direct-digital synthesis, direct-to-channel modulator							
Frequency Range	87.5 to 108.0 Mhz, 10 kHz steps							
Operating Modes	FM							
Frequency Stability	<ul style="list-style-type: none"> ±150 Hz <10-6 0° to 50° C using high accuracy internal TCXO 10 MHz input for synchronization to external (GPS) reference Automatic switching to internal oscillator if external reference fails 							
Power Stability	≤ ±0.25 dB, across full range of power.							
Modulation Indication	Front-panel UI Display to 140% Web GUI modulation display with peak hold auto-ranging (14%/140% full scale)							
Composite Peak Limiter	Integrated							
Asynchronous AM SNR	80dB below equivalent 100% amplitude modulation by 400Hz using 75µs de-emphasis (no FM modulation present)							
Synchronous AM SNR	70dB below equivalent 100% amplitude modulation with 75µs de-emphasis and 400Hz high pass filter (FM deviation +/-75kHz by a 1kHz sine wave). Measured at wideband input							
RF Harmonic & Spurious Suppression	-75 dBc							
VSWR	Up to 1.5:1 at nominal forward power. Proportional fold-back threshold from 1.5:1. Continued operation (with fold-back) up to infinite VSWR. Protected against sudden short and open circuit conditions with mute to remove sustained arcing conditions, at all phase angles. User selectable (1.3 to 1.5:1 foldback) and the selectable 3.0:1 VSWR mute							
Compliance	RoHs, FCC, IC, Anatel, CE							
OUTPUT POWER - MAX WATTS								
	GX50	GX150	GX300	GX500	GX1K	GX2K	GX3K	GX3.5K
Nominal Power	50W	150W	300W	500W	1000W	2000W	3000W	3500W
FM Analog Power Range	5-55W	15-165W	30-330W	50-550W	100-1,100W	200-2,200W	300-3,300W	350-3,850W
50 ohms RF Output Connector	N-type	N-type	N-type	N-type	7/16 DIN	7/16 DIN	7/16 DIN	7/8 EIA Unflanged
ELECTRICAL								
AC Input Voltage AC Line Freq 47-63 Hz Single Phase	90-277 VAC	90-277 VAC	90-277 VAC	90-277 VAC	90-277 VAC	180-277 VAC	180-277 VAC	180-277 VAC
Power Consumption MAX Watts	179W	228W	424W	702W	1472W	2943W	4,521W	5,348W
AC-RF Analog FM Efficiency at Nominal Power	>49%	>65%	>74%	>76%	>75%	>73%	>73%	72%
Power Factor	.9 or better				.98 or better			
Power Connector	IEC320-C14	IEC320-C14	IEC320-C20	IEC320-C20	IEC320-C20	Bulgin PX0931/03/P	M6 Lugs	M6 Lugs
MECHANICAL								
Number of Power Amplifiers	1	1	1	1	1	2	3	3
Number of Power Supplies	1	1	1	1	1	1	3	3
Number of Fans	1	2	2	2	2	2	3	3
Width (in)	19	19	19	19	19	19	19	19
Depth (in)	14.5	14.5	18.8	18.8	18.8	19.2	21	25
Height	2RU	2RU	2RU	2RU	2RU	2RU	3RU	3RU
Weight (lb)	14	12.1	20.2	20.2	21.6	27.1	49.6	55

ENVIRONMENTAL	
Altitude	10,000 ft (3,048 m), 3000 AMSL
Ambient Temperature Range	0 to +45° C inlet air temperature must not exceed 45° centigrade at sea level. Derate at 2° C per 1,000 ft (300 m) AMSL
Humidity	95%, noncondensing
Ambient Noise at 30C	The volume and the evaluated noise level intensity of an individual system in normal operating mode may not exceed 65 dB(A). The measurement is made at a distance of 1 m at a height of 1.5 m.
AUDIO PERFORMANCE - DIGITAL MODULATION	
FM Modulation Capability	±150 kHz deviation, 200% modulation
Stereo Amplitude Response	±0.05 dB
Wideband Amplitude Response	< +/- 0.04 dB, 20 Hz to 53 kHz
Stereo Separation	>80 dB
Crosstalk	>70 dB
Total Harmonic Distortion	≤0.05%
Intermodulation Distortion	≤0.05%
Stereo FM SNR	≥83 dB 75 μs de-emphasis "A" weighting
Composite/Mono FM SNR	≥90 dB
Pre-emphasis	Selectable 0, 25, 50, or 75 microseconds
PROGRAM INPUTS	
1 - AES Input	Single AES3 input, female XLR, 110 Ohms balanced; -2.8dBfs nominal; Electronically adjustable level from 0 dBfs to -15 dBfs in 0.1 dB steps for +/- 75 kHz deviation; input sample rate 44.1 to 196kb/s. Supports AES192 Digital MPX/ Composite/MPX on L or R channels.
1 - Analog Input	XLR, Female, >10K Ohms, balanced, resistive; default level is +10dBu for +/-75kHz deviation. Level GUI adjustable from -10 dBu to +15 dBu
1 - Analog MPX/Composite	1 BNC female balanced input. Impedance 10K Ohms or 50 Ohms (selectable) Input level: 3.5V P-P for +/-75 kHz deviation; adjustable 2V P-P to 5 V P-P
External SCA Injection	67 kHz at 1.5 Vpp for 10%. (1) BNC female, balanced; >10K Ohm; 1.5V p-p nominal for +/-7.5kHz (10%) deviation of main carrier; adjustable from 1V P-P to 4V P-P. Presence of the audio inputs is monitored and may be configured to report loss of SCA/RDS envelope
Internal RDS Generator	Static or Optional Dynamic RDS/RBDS encoder
REFERENCE I/O	
External 10 MHz Clock Input	BNC female, unbalanced, 50 ohms, -10 dBm to +10 dBm
External 1 PPS Clock Input	BNC female, unbalanced, 50 Ohm, 4.5Vp level
External 10 MHz Clock Output	BNC female, unbalanced, 50 Ohm, 7 dBm sinewave
External 1 PPS Clock Output	BNC female, unbalanced, 50 Ohm, TTL level pulse
GPS Antenna Input w/ Internal GPS Option	Optional GPS with supplied antenna +5v 30ma
19kHz Pilot Sync Output	BNC female, unbalanced, 50 Ohms resistive, sinewave, AC coupled, 4.5 V P-P nominal, unterminated
REMOTE I/O	
Transmitter I/O	15 Pin, FAX Protocol Compatible
Ethernet Port	1 rear panel with static or DHCP IP address for LAN/WAN access to Web GUI and SNMP
Telnet Control	Telnet Support
Parallel GPI/O	DB25 female standard remote control GPI/O Active-low, 5v 100ma
RF Sample Outputs	1 x rear panel
RF Sample Output Front	47.5dB+/-1 dB
RF Sample Output Rear	47.5dB+/-1 dB
RF INPUTS	
Dual Drive Input	External, low-level digital modulator may be inserted. Automatic failover switching
MISCELLANEOUS	
8 Full Operational Presets	All operation parameters should be saved and recalled via GUI, MIB, and GPIO
Options	GPS Receiver Intraplex IP Link 100e Integrated Audio Processor Dynamic RDS Encoder