



FT20K-D

20 KW FM DIGITAL TRANSMITTER

The FT20K-D FM transmitter is designed to provide more reliable FM transmitters using the extremely rugged LDMOS power transistor for the FM broadcast market.

FT20K-D consists of a 25W digital exciter (FTC300-D), 20KW FM amplifier (FA20K) and a cabinet.

Main Features

- Direct to channel digital exciter with built in RDS encoder
- Very Efficient LDMOS Amplifier
- Excellent audio performance
- Measurement and display of the transmitter's working parameters
- Built-in silence detector (adjustable time)
- Built-in automatic audio source selector
- Seven Selectable Complete Set-up Ready For Use N+1 System
- Automatic start/stop for air conditioner
- Ready for SFN
- RDS Alarm contact
- Event logs can be seen on display or printed out with date&time of event
- High Reliability Use Of Microstrip Technology

Options

- Double Exciter With Automatic Changeover System
- GSM/GPRS Modem for internet connection
- Remote Control Via Internet (TCP/IP, SNMP)





FT20K-D

20000 W FM DIGITAL TRANSMITTER

Technical Parameters

| | | |
|---------------------------------|--|---|
| COMPOSITION | Exciter | FTC25, 25W FM Exciter |
| | Amplifier | FA20K, 20KW FM Amplifier |
| GENERALDATA | RF Output Connector | 3-1/8 |
| | Output Power Range | 0-20000W |
| | Operating Band | 87.5-108.0 MHz |
| | Dimensions:W - H - D | 2 pieces 60 - 138 - 1105cm (26U RackUnit) |
| | Weight | 595 kg |
| | RF Power Stage Technology | LD MOS |
| | 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 rear. Cooling flow 2200/2400 m3/h (depending on environment) |
| | RS232/RS485 | 2xRS485 (RJ45), 1xRS232 (DB9). RS232 only for printer. RS485 for communication with other devices |
| | Points of measure | RF Sample |
| | N+1 Redundancy System | Available for max. 7+1 |
| | Automatic Change Over Unit | Available via relay contacts of the amplifier |
| | Automatic Aircondition Control | Available via relay contacts of the amplifier |
| | Humidity Control | Available to see the humidity ratio and run the air condition automatically |
| | Event Log | Last 100 events in LCD menu, 26 events via remote connection |
| AC Voltage & Current Protection | Available | |
| EXCITER PERFORMANCE | L/R Input Level | -3 to +9 dBm |
| | L/R Level Adjustment | Soft adjust 0.1 dBu steps from front panel |
| | L/R Input Impedance | 600 ohm balanced, 10K ohms unbalanced |
| | MPX Input Level | +15/-10 dBu for 75 KHz standard deviation |
| | AES/EBU input resolution | 24 bits |
| | AES/EBU input sample rate | 32, 44.1, 48, 96, 192 KHz automatically selected |
| | AES/EBU input level | -20 dBFS - 0 dBFS |
| | SCA/RDS input level | 0 dBu for 10% deviation |
| | PILOT Tone Frequency Stability | ± 1 Hz |
| | THD+N | 0.03% @ 400Hz (stereo/mono operation), 0.01% @ 400Hz (MPX operation) |
| | Pre-emphasis | 50/75µs selectable |
| | FM S/N CCIR Mono/Stereo | >80dB weighted >80dB unweighted @400Hz, 75KHz deviation, quasi-peak detector, 50us de-emphasis |
| | FM S/N MPX | 85 dB 20 Hz to 23 KHz @ 53 KHz - detector RMS |
| | Amplitude-frequency characteristic | ± 0.15 dB, 30 Hz to 15 KHz |
| | Linear crosstalk | > 70 dB 20 Hz to 15 kHz |
| | Intermodulation distortion | <0.05% Measured with two of tones 1 kHz & 1.3 KHz, ratio 1:1 at 100% modulation |
| | Class of Emission | F3 |
| Stereo Emission | According to ITU-R recommendation 450 (pilot tone) | |
| Frequency Deviation | ± 75 KHz | |
| Maximum Frequency Deviation | ± 150 KHz | |
| Frequency Stability | ± 1ppm from -5 to 45°C. | |
| RF Frequency Steps | 100 KHz | |
| INSTALLATION REQUIREMENTS | AC Voltage | 3 phases 180/264VAC – 47-63 Hz |
| | Power Consumption | 28500 VA |
| | Current consumption @220VAC | Each phase 45A |
| | Overall Efficiency | 0.58 |
| | Power Factor | >0.95 |
| ENVIRONMENT | Temperature Range (operating) | -5 / +45 °C, 23 / 113 °F |
| | Humidity Range (operating) | 90% @ 40 °C, 104 °F |
| | Altitude Range (operating) | <2000 meters / <13125 Feet |
| TELECONTROL & TELEMETRY | Remote Control via TCP/IP | Option |
| | SNMP | Option |
| | Remote Control via GSM Modem | Option |
| | Alerting via E-mail & SMS | Option |