



# FT16K-D

## 16 KW FM DIGITAL TRANSMITTER

The FT16K-D FM transmitter is designed to provide more reliable FM transmitters using the extremely rugged LDMOS power transistor for the FM broadcast market.

FT16K-D consists of a 300W digital exciter (FTC300-D), 600W FM amplifier (FA16K) 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)





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## Technical Parameters

|                                 |                                    |   |
|---------------------------------|------------------------------------|---|
| COMPOSITION                     | Exciter                            | FTC25 25W FM Exciter  |
|                                 | Amplifier                          | FA16K 16KW FM Amplifier   |
| GENERALDATA                     | RF Output Connector                | 1-5/8   |
|                                 | Output Power Range                 | 0-16000W  |
|                                 | Operating Band                     | 87.5-108.0 MHz  |
|                                 | Dimensions:W - H - D               | 60 - 202 - 128cm (31U RackUnit)   |
|                                 | Weight                             | 420 kg  |
|                                 | RF Power Stage Technology          | LDMOS   |
|                                 | 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   |
|                                 | EXCITER PERFORMANCE                | Humidity Control  |
| Event Log                       |                                    | Last 100 events in LCD menu, 26 events via remote connection                                      |
| AC Voltage & Current Protection |                                    | Available   |
| 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   |
| INSTALLATION REQUIREMENTS       | 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   |
|                                 | AC Voltage                         | 180/264V AC – 47-63 Hz  |
| ENVIRONMENT                     | Power Consumption                  | 780 VA  |
|                                 | Current consumption @220VAC        | 3.5 A   |
|                                 | Overall Efficiency                 | 0.67  |
|                                 | Power Factor                       | >0.95   |
| TELECONTROL & TELEMETRY         | 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  |