

User Manual for the Radio Module 70TX-D

SAFETY- RF EXPOSURE COMPLIANCE

This device has been designed to use as a low power transmitter. It complies with the Federal Communications Commission (FCC) RF exposure limits for General Population / Uncontrolled exposure environment. In addition, it complies with the following Standards and Guidelines:

- FCC 96-326 (1996), Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation.
- FCC OET Bulletin 65 Edition 01-01 (2001) Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave.
- Use **ONLY** the supplied antenna and accessories. Unauthorized accessories may violate the FCC rules and regulations.
- The module must be installed or integrated by providing a minimum separation distance of 20 cm between the antenna and the human body at all time.

Label Requirement:

- A label must be affixed to the outside of the end product into which the authorized module/product is incorporated, with a statement similar to the following: "This device contains TX with FCC ID: PUX70TX-D"

1. Purpose and application of the radio module 70TX-D

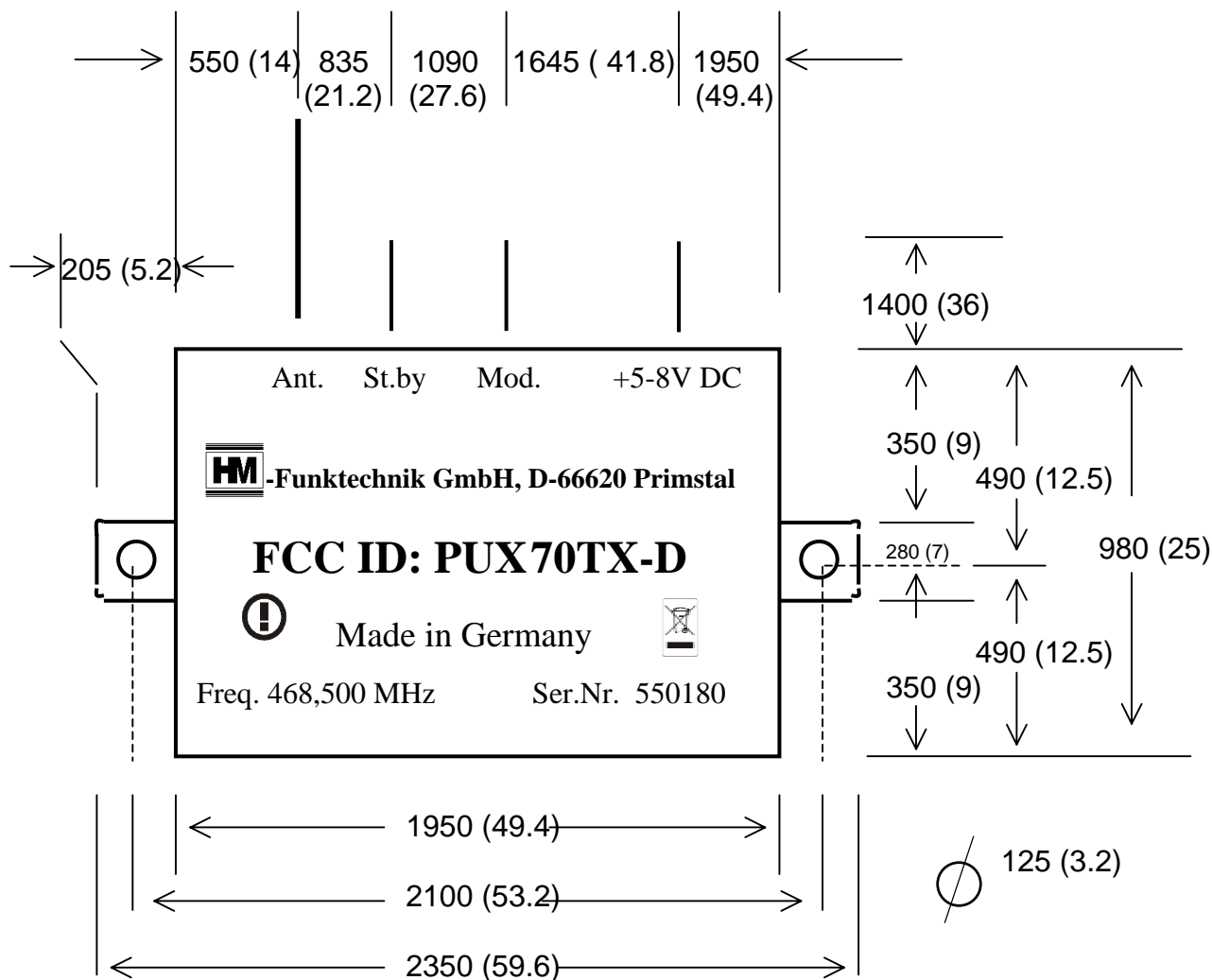
The 70TX-D radio transmitter is a FM-narrow bandwidth type radio module. It's a single channel, crystal controlled device with 500mW output power on an assigned frequency in the range from 460 – 470 MHz, in 12.5 or 25 KHz spacing.

The modules are supplied by HM-Funktechnik GmbH as an OEM product and are to be installed in customer designed peripherals, such as

- radio remote control devices for machinery in industrial sites
- burglar alarm system, data in general and voice, only in alarm conditions
- data transmission in telemetry systems
- data transmission in wireless hand held terminal systems
- wireless data transmission in general

2. Dimensions and connections to peripheral devices

are in mil, values in brackets are the corresponding mm values



Module height: 500 (12.7)

Tolerance: +/- 0.2 mm

²⁾ information shown on this label may be not identical to the label on the module

3. Port description and technical data

+5-8V DC	supply voltage of the modul without reverse voltage protection minimum 4.8V DC , maximum 8 V DC (continous wave) absolut maximum rating 11V DC only with duty cycle (pay attention to the heating of the modul)
Metal case	ground of the modul
St.by	standby pin of the modul to improve a faster startup time open pin = transmitting mode, grounded pin = standby mode If you don't use this function let the pin unconnected! Do not put some voltage to this input!
Mod.	modulation input of the modul is calibrated to TTL signals maximum input voltage 2.5V DC + 2.5V sin(ωt)
Ant.	antenna output of the modul (impedance 50 Ω)
Modulation frequency	0 - 5 KHz
Modulation input impedance	> 4.7 K Ω
Supply current	330 mA (+ / - 100mA, depends on load)
RF – output power	27 dBm +/- 1.5 dB conducted
Frequency deviation	+/- 2.5KHz with TTL signal at the modulation port
Frequency accuracy	+ / - 1.5 KHz
Temperature stability	+ / - 2.5 KHz (- 20°C .. + 55°C)

4. Restrictions

- **Do not supply a higher modulation input level to the modulation input as specified in 3.**
- **Do not use the 70TX-D radio modul to transmit voice**
- **Do not build illegal spy devices using the 70TX-D radio module**
- **Do not operate the modules at lower or higher supply voltages as specified**
- **Do not put reverse voltage to the modul (it will be damaged)**

For any further question, comments or advices, please contact HM-Funktechnik at

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