

FMT1 FSK Data Transmitter

A Very Compact Data Transmitter!



Design Features

- 1.2 Cubic Inch Package (1.25"x2.5"x0.375")
- Weighs 1.2 oz.
- Up to 250mW RF Output Power
- Port Settings Configurable to Pelco-D and Other Standard UART Settings
- Full Band Channelization
- 2 Frequency Selection Modes
- RS232, RS485, RS422, or 3.3V TTL Data and/or Comms Formats
- J-STD-001D Class 3 Assembly (Medical/Aerospace)

FMT1 Series

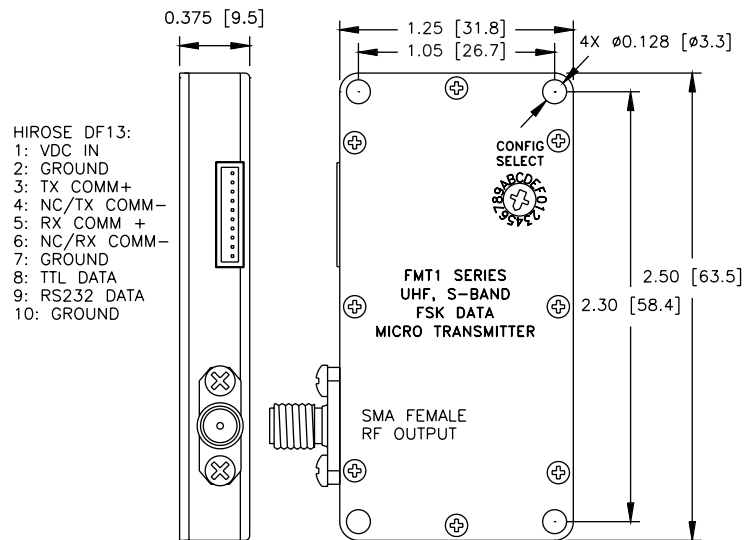
AMP's FMT1 Series 1.2 cubic inch FSK Data transmitters with matching FSR1 FSK Data receivers create a miniature, robust, cost-effective solution for remotely controlling aerial and ground vehicles, communicating with remote sites, controlling PTZ cameras, and other serial applications with data rates of up to 115.2 kbps.

Transmitter carrier frequency, input data type, and data port settings are user-configurable. A 16-position switch accessible through the chassis lid provides pre-programmability of up to 15 configurations. The 16th switch position allows real-time remote control and programming. Data port settings may be configured to Pelco-D or other standard serial UART protocols.

AMP's FSK transmitters and receivers may be ordered with rugged aluminum chassis and military-grade connectors as illustrated or as stand-alone PCBs allowing for custom installation and integration.

FMT1 transmitters are military grade products designed and built to withstand harsh environments. This series is ideal for applications requiring high quality data transmission in a compact, rugged package.

FMT1 transmitters can be mated to AMP's HSF1 or HHA1 High Power Amplifier for applications that require higher RF output power.



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RF Characteristics

Frequency Range (Specify):	433.0-434.8 MHz
(Other Ranges Available)	868.0-870.0 MHz
	902.0-928.0 MHz
	2400-2500 MHz
Frequency Step Size:	< 1 GHz Models 100 kHz
	> 1 GHz Models 500 kHz
Frequency Selection (Specify):	Full Band Channelized - Remote Control Only or Remote/Programmable Switch
Frequency Stability:	±5 ppm Over -20°C to +60°C
Output Power (Specify):	20 mW or 250 mW Nominal
Output Impedance:	50 Ohms Nominal, VSWR 2:1 Maximum
Output Protection:	None – 20:1 VSWR Indefinitely
Spurious Output:	-13 dBm Maximum

FSK Modulator and Data Characteristics

Modulator Type:	BFSK, Positive Logic
Carrier Deviation:	50 kHz or 400 kHz Nominal, Dependent on Bit Rate
Incidental AM:	2% Maximum
Incidental FM:	2 kHz RMS Maximum
Bit Rate (Specify):	Up to 57600 bps or 115200 bps
Signalling Type (Specify):	RS232/3.3V TTL, RS485, or RS422
Input Impedance:	5 kΩ to Gnd (RS232, TTL), 120 Ω Differential (RS422), 12 kΩ Differential (RS485)
Port Settings:	8 Data Bits, Selectable Baud / Parity / Stop Bits

Configuration Interface Characteristics

Interface Type:	Two-Way UART
Signalling Type (Specify):	RS232, RS485, RS422, or 3.3V TTL
Interface Parameters:	9600/8/1/None/None (Baud/Data Bits/Stop Bits/Parity/Handshake)

Power Requirements

Input Voltage:	+9 to +16 Vdc, Reverse Polarity Protected
Current Draw:	< 1 GHz Models 70 mA for 20mW, 170 mA for 250 mW
(Specified Typical @ 12V Input)	> 1 GHz Models 110 mA for 20mW, 210 mA for 250 mW

Mechanical

Material (Specify):	CNC Machined T6061-T6 Nickel Plated Aluminum or OEM PCB
Finish (Specify):	Nickel Plated or Gold Iridite
Dimensions:	1.25" W x 2.50" L x 0.375" H
Weight:	1.2 oz. Typical
Connectors:	RF Output: SMA Female
	DC Supply, Data In, Comms: Hirose DF13-10P-1.25DS, Mate Supplied

Environmental

Temperature (Operating):	-20°C to +60°C
Acceleration:	100 g, 3 Axes
Altitude:	Unlimited
Humidity:	Up to 95% @ Any Temperature Forming Frost or Condensation

* Note – FSK transmitters/receivers available as unpackaged PCB for reduced size and weight. When supplied this way, connectors are DF13-10P-1.25DSA for DC, Data, and Comms. RF Connector is edge-mount SMA. Contact factory for dimensions and weight of unpackaged PCBs.