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, RS422, or 3.3V TTL Data and/or Comms Formats
- J-STD-001D Class 3 Assembly (Medical/Aerospace)

FMT1 Series

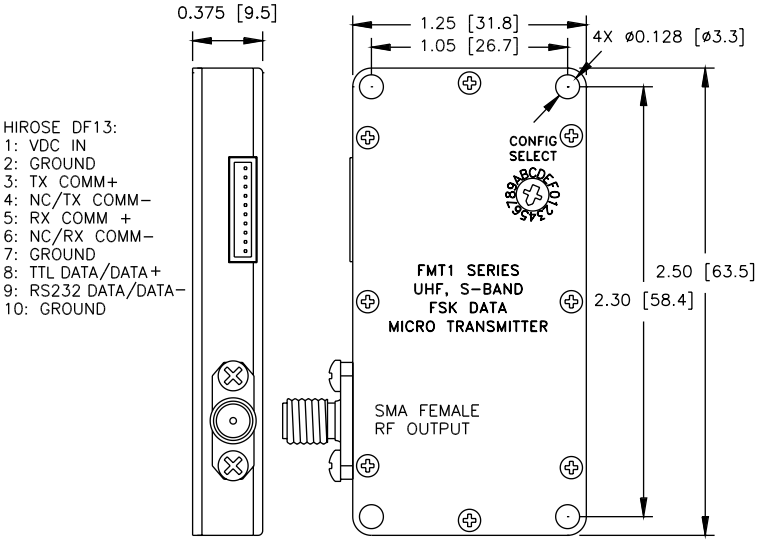
AMP's FMT1 Series 1.2 cubic inch FSK Data transmitters with matching FSR1 FSK Data receivers create a miniature, robust, cost-effective solution for remotely controlling aerial and ground vehicles, communicating with remote sites, controlling PTZ cameras, and other serial applications with data rates 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, 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, 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, 190 mA for 250 mW
(Specified Typical @ 12V Input)	> 1 GHz Models	130 mA for 20mW, 250 mA for 250 mW

** 433.0-434.8 MHz models with 115,200 bps bit rate have the same current draw as the > 1 GHz models.*

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 Axis
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.