

Flight Termination Receiver/Decoder

Model HFTR120-1

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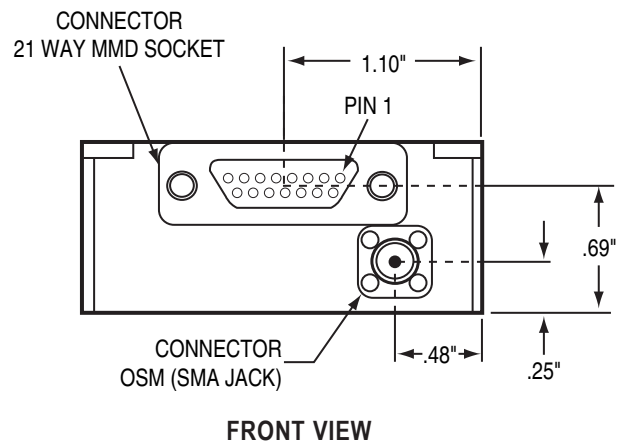
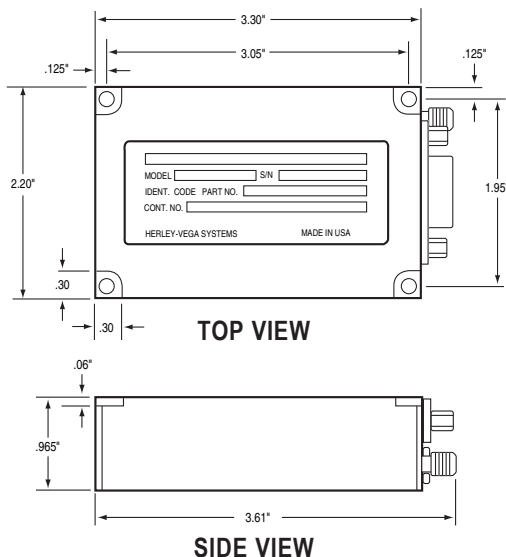


FEATURES:

- Covers full 406 to 450 MHz band
- 3 Decoder Channels
- All solid-state design
- Over 2 Amp, output current capability through command relay output
- High sensitivity receiver
- Small, less than 6.8 cubic inches (17.3 cubic cms)
- Lightweight, less than 7 ounces (200 grms)
- No RF/IF tuning elements
- Standard range safety logic
- Reverse polarity power lead protection
- Power and output lead ground isolation
- -40°C to +85°C operation standard

The HFTR120-1 Flight Termination Receiver/Decoder is a three (3) channel unit designed for missile and target applications. This unit is compact, and desirable for usage where size and weight are important considerations. The HFTR120-1 is a single-conversion receiver, with phase-locked loop tone decoders and advanced phase lock loop local oscillator. It is designed to the requirements of both RCC313-94 and 319-92 documents.

The design of the HFTR120-1 employs the latest in devices, circuitry, and modern production processes to provide a reliable product with extremely long operating life. This unit is intended for programs and applications with stringent environmental, EMI, and reliability requirements.



Typical Outline - does not show all features - not to be used for generation of control drawings. For detailed outline drawing of a specific part number please contact Herley Industries, Inc.

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Flight Termination, Receiver/Decoder - *Model HFTR120-1*

Versions: This product is available in several versions. Call to discuss other variations, or your particular requirements.

Product Numbers:

P/N 570004-XXX Reorders Only

P/N 570009-XXX New Orders

ELECTRICAL

FREQUENCY RANGE: 406 to 450 MHz
IMPEDANCE: 50 ohms nominal
VSWR: Less than 2:1
REVERSE POLARITY PROTECTION: Built-in
VOLTAGE TRANSIENT PROTECTION: Internal power supply stabilizes transients to the normal operating voltages
INPUT VOLTAGE: +22 to +36 VDC
QUIESCENT CURRENT: 130 mA typical, 200 mA maximum
INPUT CURRENT (COMMANDED): 150 mA
OUTPUT CURRENT: 2 Amps per output
OUTPUT LEAKAGE CURRENT: 50 microAmps maximum
Failsafe: Loss of tone, carrier, and low voltage standard

PHYSICAL

SIZE: 3.3 x 2.2 x 0.965 inches (8.4 x 5.9 x 2.5 cms), less connectors
VOLUME: 6.8 cubic inches (17.3 cubic cms)
WEIGHT: 7 ounces (200 grms) maximum
ANTENNA CONNECTOR: RF input (J1) SMA
POWER, OUTPUT, MONITOR CONNECTOR: 21 way MMD socket

ENVIRONMENTAL

VIBRATION SINE: 15 g's peak
VIBRATION RANDOM: 0.2 g²/Hz (20 g's rms)
TEMPERATURE, OPERATING: -40°C to +85°C
TEMPERATURE, STORAGE: -62°C to +95°C
SHOCK: 100 g's, 11 msec, half-sine
ALTITUDE: Unlimited
HUMIDITY: 95%
ACCELERATION: 100 g's
RFI/EMI: Meets MIL-STD-461B for antenna, power and signal leads for category A1a receivers. Tests, CE03, RE02, RS03, CS02, CS03, CS04 and CS05

PIN OUTS CONN J2

PIN	FUNCTION	PIN	FUNCTION
1	26.5V DC. P	12	0V DC RTN
2	CHAS. GND	13	N/C
3	N/C	14	FIRE BU1 RTN
4	FIRE BU1 SIG	15	CHAS. GND
5	FIRE BU2 SIG	16	FIRE BU2 RTN
6	N/C	17	N/C
7	CHAS. GND	18	ARM MON
8	SIG STR MON	19	SIG STR MON RTN
9	TONE A	20	FIRE MON
10	TONE C	21	0V TONE RTN
11	TONE B		

RECEIVER

DESIGN: Single conversion superheterodyne
SENSITIVITY: 1 μ V (-107 dBm)
FREQUENCY BAND: 406 to 450 MHz
FREQUENCY TUNING: Synthesized local oscillator settable in .2 MHz steps
FREQUENCY STABILITY: 0.0025%
TUNING ACCURACY: 0.005%
DYNAMIC RANGE: -107 dBm to +13 dBm
OPERATING BANDWIDTH: \pm 45 kHz minimum
IF BANDWIDTH: 3 dB @ \pm 90 kHz minimum
SELECTIVITY: 60 dB @ \pm 180 kHz maximum
IMAGE REJECTION: Greater than 60 dB
RESPONSE TIME: 15 msec. nominal, 25 msec maximum
CAPTURE RATIO: Less than 0.8
AM REJECTION: 100%
FREQUENCY DEVIATION: \pm 30 kHz per tone, nominal
TELEMETRY OUTPUTS: Signal strength, Channel 1, Channel 2, Channel 3, ARM - MON 2.25V into 10Kohm load
FIRE - MON (Safe) 5.7V into 10Kohm load
COMMAND OUTPUT: 1 relay output: Safe Mode = closed
Fire Mode = open

DECODER

NUMBER OF CHANNELS: 3
SIMULTANEOUS USABLE TONES: 3
TONE CHANNEL BANDWIDTH: \pm 1% minimum at 2 dB
ADJACENT CHANNEL REJECTION: Greater than 40 dB
DECODER THRESHOLD DEVIATION: \pm 11 kHz, nominal

OPTIONS

SELECT LOSS OF TONE TIME OUT IN SECONDS WHEN ORDERED
FUNCTIONAL TEMPERATURE TO 95°C

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