

Flight Termination Receiver/Decoder

Model HFTR120-2

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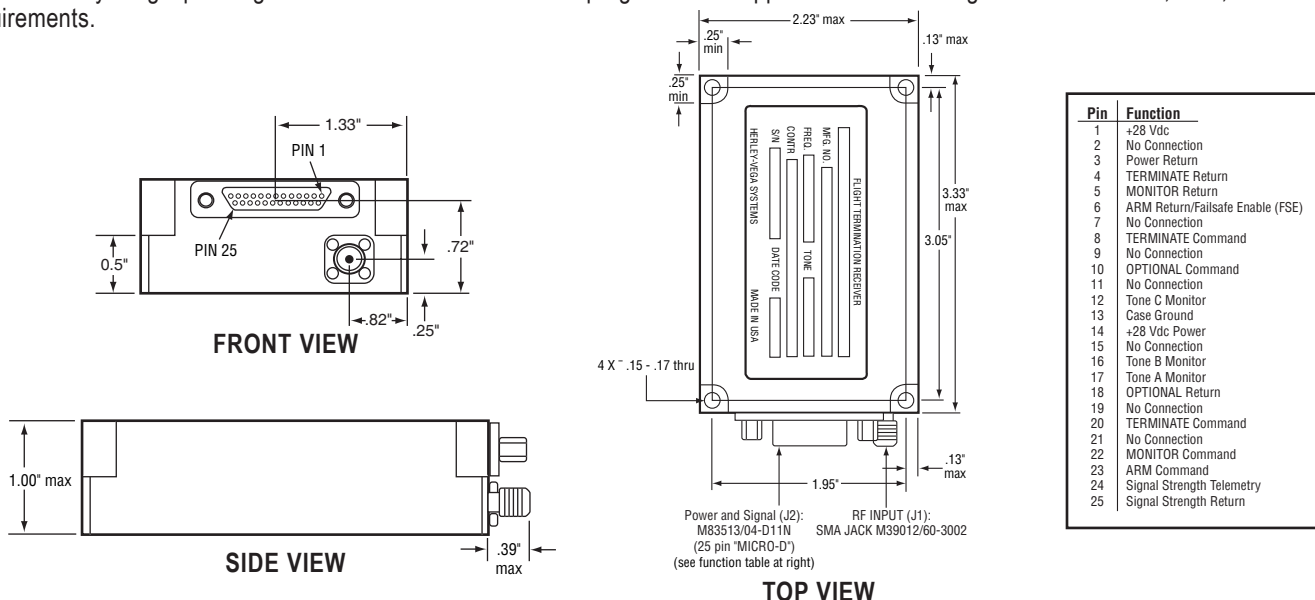


FEATURES:

- Covers full 406 to 450 MHz band
- 3 simultaneous decoder channels
- All solid-state design
- Over 3 Amp dc, 10 Amp pulsed output current capability
- High sensitivity receiver
- Small, less than 7.4 cubic inches (18.9 cubic cms)
- Lightweight, less than 8 ounces (229 grms)
- No RF/IF tuning elements
- Standard range safety logic
- Reverse polarity power protection

The HFTR120-2 Flight Termination Receiver/Decoder is a three (3) simultaneous channel unit designed for missile and target applications. This unit is compact, and desirable for usage where size and weight are important considerations. The HFTR120-2 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 RCC319-92 documents.

The design of the HFTR120-2 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 HFTR120-2*

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

Product Numbers:

P/N 570104-xxx (see below for ordering options)

P/N 570304-xxx (gun hardened for high shock environments)

RECEIVER

FREQUENCY RANGE: 406 to 450 MHz
(factory preset to customer specified frequency)
IMPEDANCE: 50 ohms nominal
VSWR: Less than 2:1
DESIGN: Single conversion superheterodyne
SENSITIVITY: 1 μ V (-107 dBm) to 0.36 μ V (-116 dBm)
FREQUENCY BAND: 406 to 450 MHz
FREQUENCY TUNING: Synthesized local oscillator
FREQUENCY 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: Greater than 0.8
AM REJECTION: 100 μ V with 100% AM rejected
SPIROUS RESPONSE REJECTION: 60 dB, 10 to 1000 MHz, max

DECODER

FREQUENCY DEVIATION: \pm 30 kHz per tone, nominal
NUMBER OF CHANNELS: 9
SIMULTANEOUS USABLE TONES: 3
TONE CHANNEL BANDWIDTH: \pm 1% min. at 2 dB, \pm 4% min. at 14 dB
ADJACENT CHANNEL REJECTION: Adjacent \pm 50 kHz tones rejected
DECODER THRESHOLD DEVIATION: \pm 12 kHz, nominal

PHYSICAL

SIZE: 3.3 x 2.2 x 1.0 inches (8.4 x 5.9 x 2.5 cms), less connectors
VOLUME: 7.4 cubic inches (18.9 cubic cms)
WEIGHT: 8 ounces (229 grms) maximum
ANTENNA CONNECTOR (J1): RF input SMA, female M39012/60
POWER AND SIGNAL CONNECTOR (J2): 25-pin MICRO-D socket M83513/04-D11N

ELECTRICAL

REVERSE POLARITY PROTECTION: Built-in
INPUT VOLTAGE: +22 to +36 Vdc
INPUT CURRENT: 210 mA max. at 22 Vdc, 140 mA max. at 36 Vdc
OUTPUT LEAKAGE CURRENT: 50 microAmps maximum
RFI/EMI: Meets MIL-STD-461C for antenna, power and signal leads for category A1a receivers. Tests, CE03, CE06, CE07, CS01, CS02, CS03, CS04, CS05, CS06, RE02, RS02, and RS03
TELEMETRY OUTPUTS: Signal strength, tone monitors
TONE MONITOR OUTPUTS: Activated 4.0Vdc \pm 1.0Vdc into 10k Ohms, Unactivated 0.5Vdc maximum
SIGNAL STRENGTH MONITOR OUTPUT: No RF 0.5Vdc \pm 0.25Vdc monotonically increases to 4.5Vdc minimum at -50dBm input, max output voltage is 4.75Vdc \pm 0.25Vdc
COMMAND OUTPUTS: 4 solid-state outputs
OUTPUT CURRENTS:
ARM, MONITOR, OPTIONAL: 1 Amp dc, 5 Amp 10 msec pulse;
TERMINATE: 3 Amp dc, 10 Amp 10 msec pulse
ISOLATED RETURNS: Signal strength output isolated from DC return and chassis ground

ENVIRONMENTAL

VIBRATION RANDOM: 0.1 g²/Hz (12 g's rms) standard
TEMPERATURE, OPERATING: -40°C to +71°C standard
TEMPERATURE, STORAGE: -62°C to +95°C
SHOCK: 100 g's, 11 msec, and 1100g, 0.5 msec, half-sine
ALTITUDE: Unlimited
HUMIDITY: To 100%
ACCELERATION: 50 g's
EXTENDED TESTS: Salt fog, dust (fine sand), explosive atmosphere

OPTIONS

OPERATING TEMPERATURE TO -54°C AND +85°C
VIBRATION TO 32 g's RMS WITH VARIOUS G²/HZ PROFILES
FAILSAFE OPTIONS: No failsafe, STD failsafe (STD failsafe: Loss of Tone A (8 \pm 2 sec standard) (Low voltage sense: 23.0Vdc \pm 1Vdc)
COMMON RETURNS: Signal strength return tied to DC return
ALL RETURNS CONNECTED TO CHASSIS

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