

STEP TRACKING RECEIVER (STR)

BEACON TRACKING RECEIVER
FOR SATCOM ANTENNA TRACKING

- Delivers DC output voltage proportional to received signal strength
- Accepts PM or BPSK input modulated carrier and includes an anti-sideband system
- Performance advantage remote control/monitoring is achieved via RS232 and ethernet



ISO9001/EN9100/AS9100/JISQ9100

EUROPEAN CONFORMITY
EN 62368-1
EN 301489-1 V2.2.0

STEP TRACKING RECEIVER (STR) BEACON TRACKING RECEIVER FOR SATCOM ANTENNA TRACKING

The new generation STR tracking receiver is an essential element in the pursuit of both commercial and military satellites. These satellites can be either geostationary (GEO) or in low earth orbit (LEO) or medium earth orbit (MEO).

This tracking receiver uses the step-by-step technique, searching for the maximum received beacon signal to maintain the axis of the antenna beam in the direction of the satellite, despite the movement of the satellite or station.

An anti-sideband function prevents the receiver from locking to the sidebands of the signal to be tracked.

INPUT

- Impedance: 50 Ω
- VSWR: ≤ 2.0
- Noise factor: 13 dB typ.
- Input Frequency: cf. Models
- Dynamic Range: -100 to -55 dBm

AGC OUTPUT

- Voltage Dynamic: 0.5 V/dB (0 to 10 V max)
- Signal Dynamic: 20 dB
- Connector Type: BNC (F)
- Impedance: 1 k Ω

M&C OUTPUT

- One RJ15 Output Interface (TCP/IP)
- One RS232 Output Interface
- One dry loop for alarm signal
- One dry loop for lock information

EXTERNAL FREQUENCY REF.

- Frequency: 10 MHz
- Connector: BNC (F)
- Expected Value: 0 dBm ± 3 dB
- VSWR: < 1,5 - 50 Ω

RECEIVER PERFORMANCES

- Acquisition Threshold – C/N0: ≥ 35 dBc/Hz
- Acquisition Time: <1 s (PM)
- Search Range: ± 25 kHz/ ± 50 kHz
/ ± 100 kHz/ ± 150 kHz
with anti-sideband rejection facility

POWER SUPPLY

- Voltage: 110 V / 250 V
- Frequency: 48 to 63 Hz
- Consumption: 20 VA max

MECHANICAL CHARACTERISTICS

- Drawer: 19" x 1 U x 310 mm
- Weight: < 4.5 kg

ENVIRONMENTAL CONDITIONS

- Climatic:
 - Operating: +5 $^{\circ}$ C to +50 $^{\circ}$ C with non-condensing
95% of humidity at 30 $^{\circ}$ C
 - Non-operating: -20 $^{\circ}$ C and +71 $^{\circ}$ C with non-condensing
95% of humidity at 40 $^{\circ}$ C
- Vibrations:
 - ± 1 mm from 5 to 16 Hz
 - 1 g from 16 to 55 Hz
- Shocks:
 - $\frac{1}{2}$ sinus 15 g, 11 ms on the 3 axis

MODELS

- Input Frequency
 - STR-L: 950 -2150 MHz
 - STR-X: 7.25 -7.75 GHz

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