

# UNIVERSAL BASE STATION

## *SRS 610D*



- ★ Duplex operating mode (Base & Repeater)
- ★ DATA & Voice transmission
- ★ Embedded FFSK modem 1200/2400b/s
- ★ Serial communication RS-232 interface
- ★ Constant carrier ( 24/7)
- ★ Remote controll. of the transmission parameters
- ★ Wide operating temperature range

# TECHNICAL SPECIFICATIONS

## 1 - FUNCTIONAL

- Operating mode.....Duplex
- Number of duplex channels..... 10
- Type of transmission ..... DATA (up to 2,4kb/s) or Voice
- Controlling <sup>d)</sup> ..... Local & remote (RS-232)
- Connection with Contr.Center.....duplex (cable or radio)

### Commands

- Power ON (1/0) <sup>d)</sup> ..... switch
- Channel selection <sup>d)</sup> ..... switch with 10 pos.
- Type of transmission (DATA/Voice) <sup>d)</sup> ..... switch
- Selection of the control. (Local/Remote) ..... switch
- Local connection (Line/Radio) ..... switch
- Squelch ..... back switch

### Indications

- Power ON..... LED
- Working channel..... 1 digit (7-segm. LED ind.)
- DATA transmission..... decimal point (7-segm. LED ind.)
- Output power (directional) <sup>d)</sup> ..... LED
- Reflected power <sup>d)</sup> ..... LED
- RSSI <sup>d)</sup> ..... **RS-232**

### Connectors

- Antenna ..... N (female) (1+1, opt.)
- Connection line ..... 6-cont. (female), bayonet
- Handset ..... 7-cont. (male), PCF-TB
- RS-232 ..... 12-cont. (female), circular
- Power supply ..... 10-cont. (female), bayonet

<sup>d)</sup> - POSSIBLE ( ONLY) WITH REMOTE CONTROLLING

## 2 - ELECTRICAL

### General

- Frequency range (MHz) ..... 300÷350; 4200÷450
- Duplex separation (MHz) ..... 36; 10
- Channel spacing (kHz) ..... 25
- Syntesizer step (kHz) ..... 12,5
- Type of modulation ..... FM
- Output impedance (Ω) ..... 50
- Operating temperature range (°C) ..... -25...+55
- Frequency stability; over temper. range (10<sup>-6</sup>) ..... ± 2,5

### Transmitter

- Switchable bandwidth (MHz) ..... 10
- Output RF power (W) ..... 10... 20
- Class of emission ..... 16K2C2D and 16K0F3E
- Maximum SWR (1:1) ..... 3,0
- Spurious emission (μW) ..... ≤ 2,5
- Adjacent channel emission (μW) ..... ≤ 2,5
- Residual AM (%) ..... ≤ 3
- Residual FM (dB<sub>NOM</sub>) ..... ≤ -40
- Transmitter bandwidth (kHz) at level:
  - 30 dBc ..... ≤ 16; -60 dBc ..... ≤ 32

### Voice transmission

- Maximum deviation (kHz) ..... ±5
- Nominal deviation (kHz) ..... ±3
- Total harmonic distortion (%) ..... ≤5
- AF band (kHz) ..... 0,3...3
- AF response resp. +6 dB /okt ..... < +1,5/-3

### DATA transmission

- Frequency deviation (kHz) at modulation:
  - DPSK 1200 b/s ..... ±3,6
  - FFSK 1200 b/s ..... ±4,0
  - FFSK 2400 b/s ..... ±3,0

### Receiver

- Switchable bandwidth (MHz) ..... 10
- Type ..... double heterodyne
- Reflection attenuation (dB) ..... ≥ 14
- Adjacent channel selectivity (dB) ..... ≥ 75
- Intermodulation rejection IM<sub>3</sub>/2sg. (dB) ..... ≥ 75
- Spurious response rejection (dB) ..... ≥ 80
- Co-channel selectivity (dB) ..... ≥ -8
- LO emission (nW) ..... ≤ 2
- Hum & noise level (dB) ..... ≤ -40

### Voice reception

- Sensitivity for 12dB SINAD (μV/50 Ω) ..... ≤ 0,45
- Frequency stability (10<sup>-6</sup>) ..... ≤ 1,0
- AF band (kHz) ..... 0,3...3
- AF response resp. -6 dB /okt ..... < +1,5/-3
- Total harmonic distortion (%) ..... ≤ 5

### DATA reception

- Sensitivity for BER = 10<sup>-3</sup> (μV/50Ω)
  - DPSK 1200 b/s (at ±3,6kHz) ..... ≤ 0,40
  - FFSK 1200 b/s (at ±4,0 kHz) ..... ≤ 0,35
  - FFSK 2400 b/s (at ±3,0kHz) ..... ≤ 0,60

### AF line (connection with Control Center)

- Output impedance, simetr. (Ω) ..... 600
- Reflection attenuation - input & output (dB) ..... ≥ 14
- Input AF level for nominal deviation (dBm) ..... -6
- Input level range (dBm) ..... -14...+2
- Output AF level at nominal deviation (dBm) ..... 0
- Output level range (dBm) ..... -12...+4

### Duplexer

#### Receive path (Antenna⇒Receiver)

- Insertion loss, 3MHz bandwidth (dB) ..... ≤ 2,2
- Protective attenuation (transmitter band) (dB) ..... ≥ 75

#### Transmit path (Transmitter⇒Antenna)

- Insertion loss, 4MHz bandwidth (dB) ..... ≤ 1,1
- Protection attenuation (receiver band) (dB) ..... ≥ 80

### Power supply

- Supply voltage (V) ..... +13,5±0,5
- Current drain (A):
  - Transmission (20W) ..... ≤ 6,1
  - Reception/Stand-by ..... ≤ 0,4

### Handset (with PTT key)

- Impedance - mike and earphone (Ω) ..... 40
- Earphone level (mV) ..... 0,06-0,16

## 3 - Dimensions & weight

- Dimensions (mm):
  - Width ..... 220
  - Height ..... 110
  - Length (without connect. cables) ..... 370
- Weight (kg) ..... 4,4

- May be changed without notice -