

# DARC encoder

Sectra TSE 760



Sectra TSE 760 is a DARC encoder located at the FM transmitter. It accepts a number of data transmission protocols and generates the DARC compliant 76 kHz subcarrier.

### Minimize operating cost

Sectra TSE 760 minimizes operating costs by providing remote monitoring and control via SNMP. Local control and monitoring uses a powerful console interface which also implements fast software upgrade routines and an efficient user-friendly front interface.



### Easy installation

To facilitate installation in existing sites, the Sectra TSE 760 has an auxiliary subcarrier input for daisy chaining with, for example, RDS-encoders.

The unit is simple to install, quick to start and easy to handle. Signal measurement during installation and service can easily be performed via the testmonitor output on the front of the unit.

### Future proof

Sectra TSE 760 has several network interfaces so that existing and future networks can be used for starting DARC transmissions at low cost. The unit meets every requirement on the DARC standards.

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## Technical specifications

### In General

- Fully compliant with the ETSI 300 751 DARC standard
- Synchronous DARC

### Local Management

- Local console port with PIN
- Front interface with PIN
- Software update with Zmodem
- LED indicators for Alarms, NWS connection, DARC transmission, Power-on and Defective AC fuses

### Remote Management

- SNMP for remote management – MIB-II + TSE MIB

### Digital I/O

- Six generally programmable alarm/maneuver inputs
- Six generally programmable alarm/maneuver outputs

### Supervision & Alarm

- Alarm
- Command settings log

### Time

- Battery backed RTC (Real Time Clock)
- Time updates from external time source

### Network

- Two serial network interfaces for asynchronous or synchronous communication
- USEP
- TCP/IP over Ethernet or PPP

### DARC

- According to ITU-R BS 1194 "Data Radio Channel (DARC)"
- Injection level control options:
  - dynamic (ITU-R rec. BS 1194)
  - static low 4% (2%-15%)
  - static high 10% (2%-15%)
  - static full 100% (10%-100%)
- Auxiliary subcarrier input for installation in daisy-chain with other subcarrier systems e.g. RDS
- External clock reference input for phase lock of DARC subcarrier to pilot tone
- Frame types: A0, A1, B and C
- Built-in DARC demodulator for supervision of transmitted DARC

### Test

- Test monitor output for internal test points
- Built in self test
- DARC output of test sequences, PRBS and 16-bit pattern

### Physical Dimensions

- Size: H 44 mm (1.73 in) 1 U, W 483 mm (19 in), D 255 mm (10 in)
- Weight: 4 kg (9 lb)

### Environmental

- Operating temperature: 0° to 40°C (32° to 104°F)
- Storage temperature: -20° to 60°C (-4° to 140°F)

### Power

- AC Power: 230/115 VAC 50/60 Hz, 30 VA
- DC Power: 48 VDC (37 to 65 V), 15 W

### Reliability

- MTBF: 45 000 hours (calculated)

### Connectors

- Console: RS-232, max. 115 200 baud
- Com1: RS-232, max. 19 200 baud
- Com2: RS-232, max. 115 200 baud
- NWS: X.21, max 2 Mbit/s
- Ethernet: 10base T
- Digital I/O: D-sub 25-pole male, 6 inputs, 6 outputs
- MPX L&R In: I 2.0-12.0 Vpp, Rin>10kΩ
- RDS In: I 0.04-1.5 Vpp, Rin >10kΩ
- MPX Out: O 0-13.5 Vpp, Rout<10Ω, RloadA500\_
- MPX DARC In: I 2.0-12.0 Vpp, Rin>10kΩ
- Pilot: I/O Input: 0.5-5.0 Vpp, 19 kHz +/- 100ppm  
Output: TTL 16kHz
- Test: O 0-12 Vpp, Rload > 1kΩ

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