

TELERAD

Aeronautical and Maritime Radiocommunication Systems

**SELECTION
DEVICE**

DS9000



OVERVIEW

The DS9000 has been designed for multi-carrier system operation. A single equipment allows the processing of two or three AF transmission and reception channels, connected with the extended range antennas.

In reception, the DS9000 unit processes the AF signal by means of a Digital Signal Processor (DSP).

On reception of one or more calls, it analyses the corresponding channels, then sends to the user either the channel with the best signal to noise ratio, or the AF signal corresponding to the first call, according to the operation mode.

The dynamic selection is performed in less than 5 ms. When no call, no signal is transmitted. In transmission, the AF channels and the P.T.T. are allocated on the three outputs.

The DS9000 unit appears as a drawer unit for 19" standard rack, 1 U high.

The operation is selected by means of the "SELECTION MODE" push-button on the front panel:

- "BEST AF": selection of the AF signal with the best signal/noise ratio,
- "FIRST CALL": selection of the AF signal corresponding to the first call received.

Each of these two modes is associated with a light indicator which is lit up if the mode is active.

On each channel, call and/or P.T.T. can be inhibited.

In the case of an internal failure, or in the absence of Mains, an automatic "BY-PASS" system permits to keep on operating. In reception, the sum of the reception signals is sent to the operator as well as the sum of the new calls; in transmission, the modulation is distributed by the transmitters through a passive coupling.

Should more than three frequencies to be used, two units can be connected in series.

The integration of an optional delay compensation PCB CCTP12126 on each channel allows the signals to be in phase when the delay times are different between the supports used.

NOTA :

Telerad can also provide delay compensation PCB's (CCTP12135-CCTP12135FA) which can be inserted in a separate frame CTP892A.

The equipment has two telemonitoring connectors: one is used to transmit data from the telemonitoring system to the DS9000 unit ; the other is used to transmit the state of the unit to the telemonitoring system.

An optional PCB MICP19099 can be added, thus permitting the control of the DS9000 under JBUS protocol. This option uses the telemonitoring connectors and proposes two RS485 access under JBUS protocol.

RADIOELECTRICAL CHARACTERISTICS

Power supply:

21-31 V_{DC} (24 V typical)

Inputs and outputs:

600 ohms symmetric

Input level:

0 dBm/600 ohms

Bandwidth at 3 dB:

> 300-3000 Hz

Harmonic distortion:

≤ 2 %

Gain:

0 dB ± 1 dB

Propagation delay:

< 5 ms

Signal/Noise ratio:

> 55 dB

Consumption:

- DS9000 (basic architecture): < 150 mA (Typ. 100 mA)
- DS9000 with 1 CCTP12126 PCB: < 200 mA (Typ 150 mA)
- DS9000 with 1 MICP19099 PCB: < 200 mA (Typ 150 mA)

MECHANICAL CHARACTERISTICS

Height:

44 mm

Width:

482 mm

Depth:

500 mm

Weight:

2.7 kg

CLIMATICAL CHARACTERISTICS

Operating temperature:

- -20°C to +55°C
- 95 % relative humidity at 40°C (non-condensing)

Storage temperature:

-40°C to +80°C

OPTIONAL PCB CCTP12126

Power supply:

21-31 V_{DC} (24 V typical)

Inputs and outputs:

600 ohms symmetric

Input level:

0 dBm/600 ohms

Bandwidth at 3 dB:

> 300-3000 Hz

Harmonic distortion:

≤ 2 %

Gain:

0 dB ± 1 dB

Delay compensation:

from 7 to 775 ms

Signal/Noise ratio:

> 55 dB

OPTIONAL PCB MICP19099

Power supply:

through the PCB CTBF12149

Interfaces:

RS485 4 wires

Protocol:

JBUS function Code 3-6-16

Speed:

configurable 1200/4800/9600/19600 bauds

Parity:

without

Data format:

8 bits