



Application

DTS 14A is a robust telephone converter system that converts 2-wire to 4-wire E&M and vice versa. With two LEDs on front panel, DTS 14A can display the status of E&M signaling. There are also two push buttons for testing purposes of Rx and Tx signaling. The quality of voice in receive and transmit paths is well preserved in this equipment by utilizing state of the art digital circuitry. The power on status is shown by means of a LED on front panel.

2-wire port of DTS 14A can be configured as FXS (connecting to subscriber’s telephone set), or FXO (connecting to exchange office – PSTN). This configuration is done by setting relevant jumpers on the PCB of the device, and it is strongly recommended to consult the manufacturer before changing the configuration.

Characteristics

DTS 14A is an external device with rigid Aluminum housing and DIN rail mounting adaptor. This equipment can be used by 48Vdc supply voltage with tolerance of $\pm 20\%$. A central processor is responsible for the main functions, i.e. the conversion between 4-wire and 2-wire.

In FXS mode, the 2-wire port is connected to telephone set as shown in Figure 1. The main functions of DTS box in this mode is ring generation, off-hook detection and hybrid voice conversion. In FXO mode, the public telephone line (PSTN) can be connected to DTS box, and its main functions are ring detection, I and hybrid voice conversion.

Default factory setting is FXS mode.

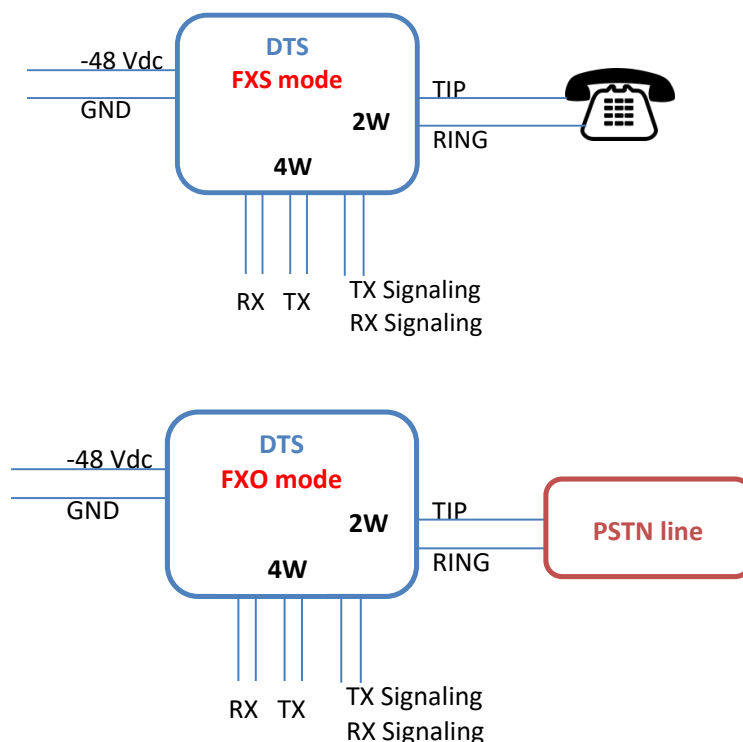


Figure 1. Block diagram of DTS 14A in FXS and FXO modes



FXS Mode

- Telephone set ON hook ⇒ TX signaling= -48 Vdc
- Telephone set OFF hook ⇒ TX signaling= GND
- RX signaling = -48 Vdc ⇒ IDLE
- RX signaling = GND ⇒ telephone set ringing (constant) --- 130 V (peak to peak), 25Hz on TIP and RING

FXO Mode

- Telephone line IDLE ⇒ TX signaling= -48 Vdc
- Telephone line ringing (incoming call) ⇒ TX signaling= GND --- telephone line ringing condition: 40-80 V(rms), 15-30 Hz between TIP and RING
- RX signaling = -48 Vdc ⇒ IDLE
- RX signaling = GND ⇒ telephone line terminated --- telephone line termination means a current loop about 25 mA is flowing through TIP and RING.

Technical Data

The following data is applicable:

Connection Type

4-wire RX and TX connection	Terminal block 4-pin – Screw type
4-wire E&M signaling connection	Terminal block 2-pin – Screw type
2-wire TIP and Ring connection	Terminal block 2-pin – Screw type
Power supply	Terminal block 2-pin – Screw type

Power Supply

Supply input	48V DC ±20%, 200mA max
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Mechanical Layout

Housing	Anodized Aluminum box
Mounting	DIN rail adaptor
Dimensions	107 x 94 x 59 mm
Weight approx.	330 gr

Environmental Conditions

Temperature	0 ... 70 °C
Relative humidity	5 ... 95 % non condensing

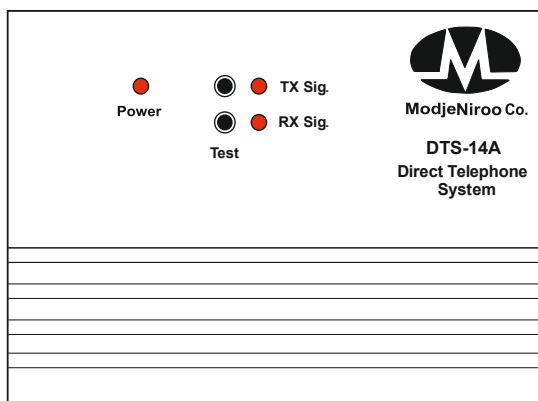


Figure 2. Front panel view of DTS 14A

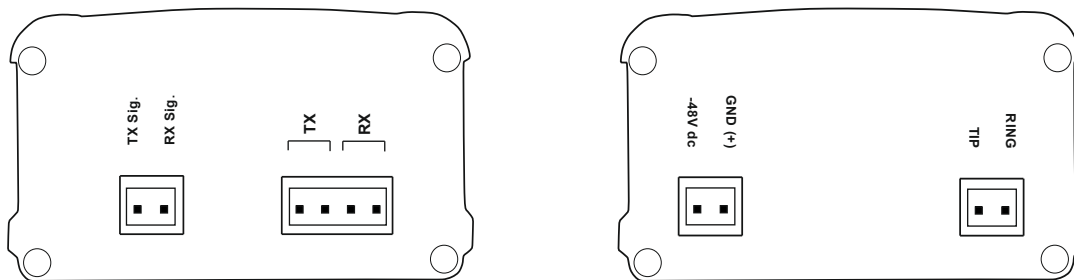


Figure 3. Side views of DTS-14A

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Subject to alteration