

1.4 Technical Description

1.4.1 Power Supply SV 1275

The Power Supply SV 1275 is operated on 24 V DC input voltage or on 110/220 V AC mains input voltage. The green pilot lamp on the front panel lights when the unit is switched on.

When DC input voltage and AC mains input voltage are connected simultaneously, the unit draws its input power from the mains supply as long as the DC voltage at the output of the rectifier circuit is greater than the actual voltage of the DC supply. If the mains voltage fails, or if its actual value drops below the lower limit of the tolerance range, the unit continues to operate on the DC input voltage, without interruption.

Up to three Amplifier-Multicoupler Units VT 1275 H can be connected to the Power Supply Unit SV 1275.

In the case of failure of a transistor in one of the connected Amplifier-Multicoupler Units VT 1275 H, a 24 V DC voltage source (maximum permissible loading 50 mA) is switched on and is available for an external fault signalling device.

The operating state can be supervised externally. A DC voltage source of about 24 V, with 33 Ohms internal impedance, is available for this purpose.

1.4.2 Amplifier-Multicoupler VT 1275 H (See block diagram, Annex 2)

The Amplifier-Multicoupler VT 1275 H consists of a wideband push-pull amplifier stage (3 to 6), the multicoupler network (7) with the output jacks (A1 to A12), the fault signalling connection (9) and the high-pass and low-pass filter (1 and 2).

The high-pass and low-pass filter suppresses unwanted signals in the antenna voltage arriving at the input (E), whose frequencies lie outside the working reception frequency range from 1.5 to 30 MHz.

The filtered antenna signal voltage is amplified by the push-pull amplifier, such that about the same power as originally applied to the input (E) appears at each one of the twelve outputs. The push-pull transformer (6) combines the two amplified antiphase signal voltages, whereby square-law distortion components cancel.

In the case of failure of a transistor, the fault indicator circuit switches-on a red lamp on the front panel and also a DC voltage source for an external fault alarm device (A13).