The DTMF-01 module reproduces on a 0.5 V DC output, DTMF tones corresponding to the digits 1 to 9, *, #, and a, from the supplied keyboard. This function will allow it to generate control sequences on DTMF remote receivers, including also special applications, and can substitute the original DTMF receivers, being completely compatible.

Includes a memory with a capacity for 10 digits or tones, when it is activated, it will store the DTMF tones, it being a predetermined number on each pressed digit. It can be installed on a DIN rail (ref. C756).

**TECHNICAL CHARACTERISTICS**

- **Voltage**: 12 / 24 V DC
- **Max. Consumption**: 0.60 / 50 mA.
- **D.C. DTMF Output**: 0.60 V DC.
- **DTMF Output Impedance**: 4.5 ohms.
- **Memory Capacity/Number of Tones**: 1.100 tones.
- **Memory Life Duration**: 100.000 cycles / 100 years of aging.
- **Protection against overvoltage**: Power supply input.
- **Keyboard dimensions**: 64 x 61 mm.
- **Main board Dimensions**: 63.75 x 15.6 mm.
- **Connection between main board and keyboard**: 190 mm.

**POWER SUPPLY**

The DTMF-1 circuit is composed by 2 independent power supply inputs with a common negative, one at 12 V and one at 24 V DC. For a correct modules operating mode, you have to select a voltage among these two possibilities, and do not use both at the same time. Then, if you select 12 or 24 V, you have to use a power supply correctly filtered. We recommend you to use a short circuit power supply input.

**INSTALLATION**

The module is to be done in a waterproof place, avoiding any contact between circuit and other metallic objects. The module must be installed in place with a high humidity or temperature, or with the possibility to be in contact with liquids. The module PCB, it is recommended for inside applications is not waterproof. For this kind of applications, it will light during sending of a DTMF tone.

**OPERATING MODE**

There are four indicators leds in the circuit, and each one can display several functions.

- **Led Key**: It is maintained lighted when the module is supplied.
- **Led Tone**: It indicates, through its lighting, the correct pulse of any digit from the keyboard.
- **Led Pwr**: It will light during the sending of a DTMF tone. The ground terminal of both clemas has to be also connected between both modules if they are supplied with the same power supply. It is not necessary to connect both grounds.

**DTMF Emitter-Receiver connection**

The DTMF output offers a signal between 0.4 and 0.8 V DC, which is modulated to the frequency corresponding to each DTMF code. The connection between Cebek DTMF receivers includes connecting the OUT output of the emitter to the IN input of the corresponding DTMF Clamp. The ground terminal of both clemas has to be also connected between both modules if they are supplied with the same power supply. It is not necessary to connect both grounds.

**WIRING**

In the wiring you have to respect the polarity of different inputs, and the length of the used cable as to not affect any of the above properties. The maximum allowed length between circuit and other metallic objects is a maximum of 2 m.

**GENERAL WIRING MAP**

All the module’s CEBEK have 3 years of total warranty in technical, manufacturing, and spares from the date of buy. CEBEK receivers can operate with a password. For its security, once the password programmed on the receiver, this one doesn’t accept any operation on it, concerning control or program functions, if you don’t previously insert the mentioned code. Do not forget that you don’t remember or don’t correctly introduce this security code, you could not operate with the receiver, and you can deactivate it. Then you should send back to our distributor for a complete systems reset.

**TECHNICAL SUPPORT AND INFORMATION**

For any questions or more information:

- **By Fax**: +34 934.432.299 95 By Mail: Cr Quetad, 17-21, Envlo. 2º (30814) BARCELONA - SPAIN.
- **By E-Mail**: sal@cbebek.com

Keep your invoice. For any repairing you can send this module. Also, the module will last the warranty.