

**CT12-SD control unit to control 12 resistive zones with with two wires serial transmission for MR12-SD receivers and MST12-SD. With control insertion to rotation. adaptive. Limit of power with transducer. internal 10KW 230V or external transducer X / 5.**



Dimensions CT12-SD  
L.71, P.60, H.90mm.



This system allows the control of loads resistive heating distributed across multiple surfaces by taking electrical energy on site. It is possible put in this way in the most convenient spot for reading electrical user the CT12-SD control unit and connect it to internal transducer from 10KW or T.A. External X / 5.

Via a serial two-wire system, the controller can communicate with MR12-SD relay (mechanical) or MST12-SD (static) which when enable by a thermostat on the spot can be activated or deactivated according to the power level set and helpful.

**SPECIFICATIONS:**

- ACTIVATION OF LOADS WITH SERIAL TWO WIRE. RECEIVER MR12-SD or SD-MST12 ENCODED BY AREA.
- METHOD OF ROTATION CONTROL. WITH INSERTING LOADS POSSIBLE FROM 1 TO 12.
- LIMIT OF MAXIMUM POWER TO USE AND NUMBER OF AREAS USED SELECTABLE.

**SETTING THE POWER LEVEL FOR USE WITH INTERNAL TRANSDUCER FROM 10KW:**

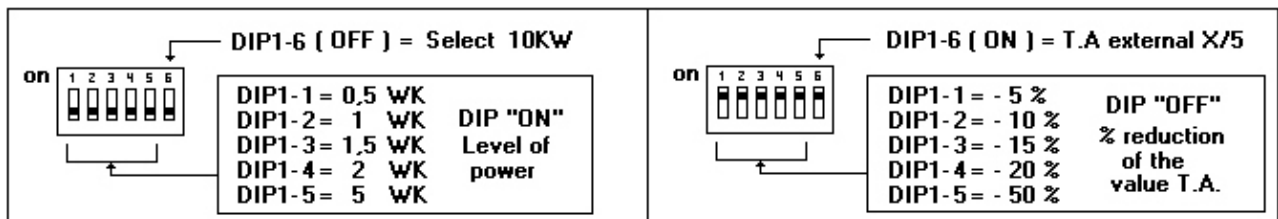
With DIP1-6 (OFF) to set the scale of 10KW. THE highest level of usable power is set by using the remaining DIP1 with the following value: THE dip1-1 worth 0.5kW. The second worth 1KW, 3 1,5KW worth, the worth 2KW 4, and 5 worth 5KW. Are inserted so as to obtain a total value of power that ranges from a minimum of 0.5kW to a maximum of 10KW. (Table 1)

**SETTING THE POWER LEVEL WITH THE USE T.A X / 5 EXTERNAL (Max. 4 mt. From unit with 2.5mm2 cable).**

With DIP1-6 (ON) enables the possibility to connect a T.A. Exterior X / 5 for the control equal to or greater than 10KW .IL T.A. connects in the terminals (LINE IN) and (OUT LINE). With the remaining DIP1 you can set the reduction of the level as a percentage of the current value the T.A. Used.

If it leads to "OFF" the dip1-1 remove the 5%, with 2 remove 10%, with 3 remove 15%, with 4 remove 20%, with 5 remove 50%. The sum of the values of the selected dip determines the total value to be subtracted from T.A. used.

Tab.1



**METHOD OF CONTROL TO ROTATION OF THE LOADS.**

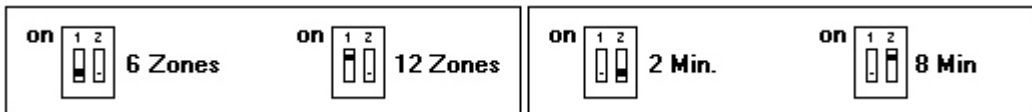
THE CT12-SD device transmits it possible to fit the relay that will be activated only if enabled by the room thermostat on site. Starting with the first will insert all loads enabled possible taking account of the power limit. After that search the inserted loads will remain active for 2 or 8 min. This cycle starts again from the next zone. in perpetuity by generating a rotation of loads to ensure a uniform distribution of energy. THE total load is always measured and adapted to the use of the electric USER needs.

Through DIP2-1 you can set the number of zones used 6 o12. This serves to optimize the control function in the search of the loads. Table 2 shows the combinations.

Through DIP2-2 you can choose the cycle times between 2 to 8 minutes. This choice is linked to the type of relay used for switching ie 8 min. for mechanical mod relay. MR12-SD and 2 min. for static relay mod. MST12-SD.

**NOTE: You can use both types of relays only with 8 minutes time.**

Tab.2

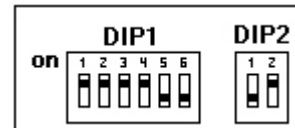


**Technical data:**

- Power supply. 230V AC 5VA
- Maximum managed power (including the 'USERS')  
Internal transducer with 10KW 230V AC.  
Possibility of connecting an external T.A.  
X / 5 for powers equal to or greater. Max. Distance the T.A. 4 mt. with 2.5mm2 cable.
- Serial transmission PX, TX 18V DC 150mA for max. of n ° 12 mod receivers. MR12-SD / SD-MST12.  
Maximum distance from the unit to the last receiver 150mt.
- DIP 1 to 6 for programming positions. Power limit.
- DIP2 2 position for selection of the maximum number of zones to be used and cycle times.
- Cycle time: 2 min. mod static relay. MST12-SD, 8 min. Mechanical mod relay. MR12-SD.
- Led DT for transmission visual performance diagnostics.

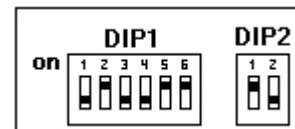
**EXAMPLE OF SETTING:**

Tab.3



ES 1: DIP1 setting with internal transducer of a 5KW power limit. DIP2-1 (off) enables 6 zones DIP2-2 (on) cycle time of 8 min. for MR12-SD mechanical relay

Tab.4



ES 1: DIP1 setting with external transmitter -40% of the power limit of the value T.A. x / 5. DIP2-1 (on) enables 12 zones DIP2-2 (off) cycle time 2 min. Solid state relay MST12-SD