

OPEN DRIVE

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Remote Keypad

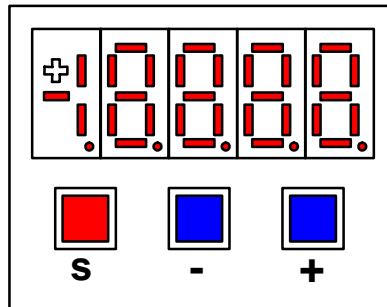
OPERATIONS OF THE REMOTE KEYPAD

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1. Physical disposition

The keypad has three buttons, ' S ' (selection), ' - ' (reduce), ' + ' (increase) and a four numbers and half display, with the decimal points and the sign ' - '.



2. Layout of the internal dimensions

The converter is a full digital, then other hardware settings are not necessary, if not made in factory, and the setups, settings and visualizations, all digital, they go effect through the keypad and the display, or by serial line or by fieldbus.

For easy access of formulations and mnemonics all the accessible greatnesses have been grouped in the following menu:

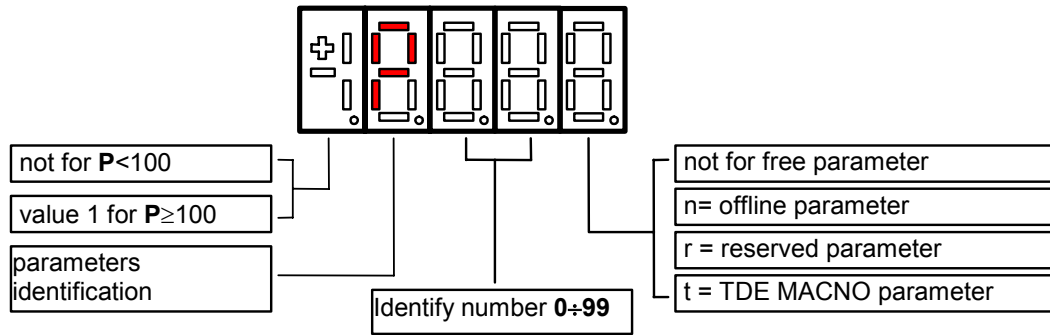
- Parameters (PAR),
- Connections (CON),
- Internal dimensions (INT),
- Alarms (ALL),
- Digital input (INP),
- Digital output (OUT).

in each group the dimensions are orderly in progressive order and they are visualized only that indeed use.

2.1. Parameters (PAR)

They are definite parameters of dimension of setting whose numerical value has an absolute meaning (for example: P63 = nominal frequency motor = 50 Hz) or they are of proportional value to the limit range (for example: P61 = motor nominal current = 100 % of the drive nominal current). They are distinguished in **free** parameters, some modifiable always (On-line), other only to converter not in run (off-line), **reserved**, modifiable only off-line and after access code to the reserved parameters (P60), or reserved for the TDE MACNO, visible after having written the access code TDE MACNO parameters (P99) and modifiable only off-line.

The characteristics of each parameter are recognizable from the code of identification as under:

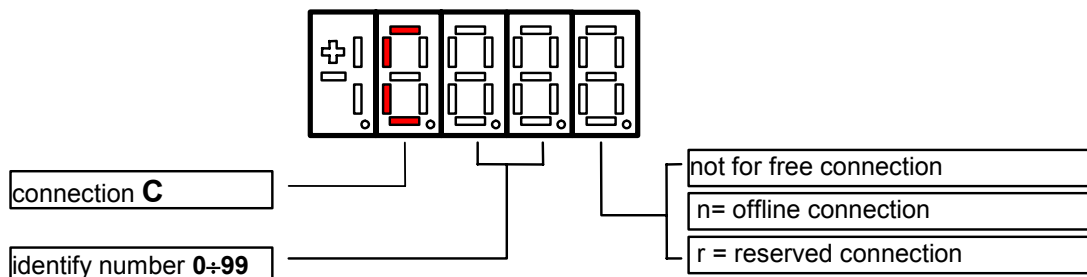


For example: P60 r = parameter 60: reserved
1P00 t = parameter 100: TDE MACNO reserved

2.2. Connections (CON)

They are certain connections that dimensions approach that are of numerical value comes connected to a function or a clear command { for example: ramp insertion, C26 = 1; or no ramp, C26 = 0; or save parameters on EEPROM memory, C63 = 1 }. They are in free connections, some of the like modifiable always (On-line), other with converter in stop (off-line) and **reserved**, modifiable only off-line and after access code to the reserved parameters (P60)

The characteristics of each connection are individually recognizable of identification code as under report.



2.3. Alarms (ALL)

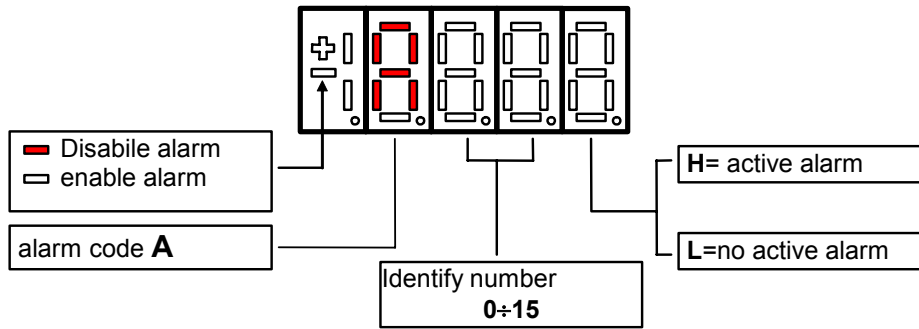
Overall functions of protection of the converter, of the motor or in the application whose status to active alarm or non active alarm it may be visualized in the display.

The actived protection, stops the converter and does flash the display, excepted if it is disabled.

With a single visualization is possible have all the indications with the following:

For example A03.1 = power fault doesn't activate

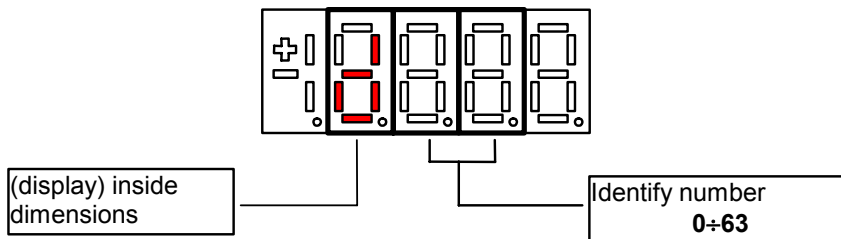
The alarms are all memorized and so they remain till that is not missing the cause of the alarm and have been resetted (input of resetting alarms activate) or (C30 = 1).



2.4. Internal values (INT)

Overall of working values of regulation (for example: voltage, speed, torque, ect...) showed in absolute unit or percent (for example: motor tension in volt or current in percent of the maximum value).

Code of identification:

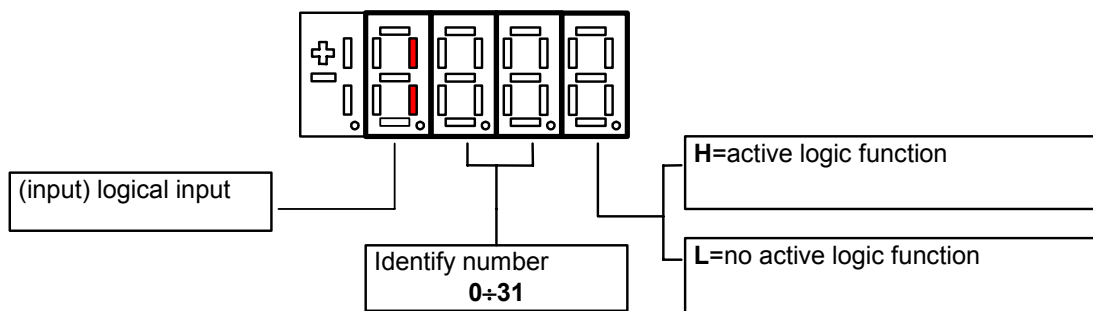


2.5. Logics functions of input (INP)

The visualization between I00 and I28 is the status of the logical functions of sequence or protection that is assigned in the all digital input of the regulation.

From I29 to I31 is the visualization of the status of the input from the power.

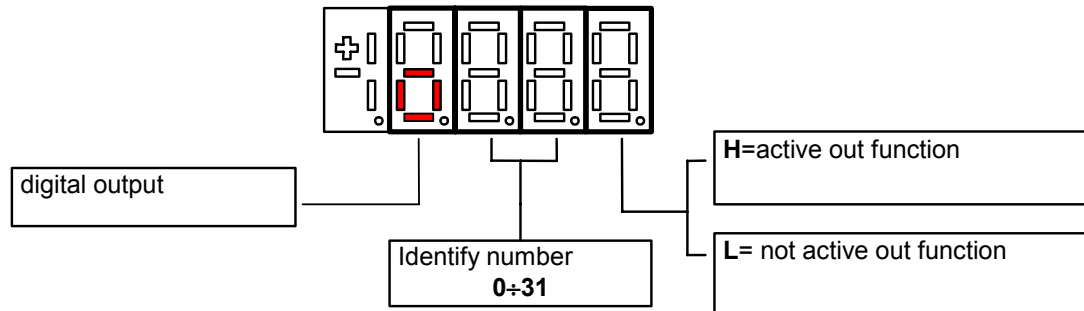
Code of identification (input) logical input.



2.6. Logics functions of output (OUT)

Visualization of the status, of the logical functions, of protection or sequence (for example: drive ready, converter in run) scheduled in the control, that may or may not be assigned of predicted digital output.

Code of identification:



3. Status of rest

It is the status that the display assumes right after the lighting or when none is programming (P112 seconds, 10 of default, after the last movement, except that is not is visualizing an internal dimensions, or an input, or a digital output).

When the keypad is on tat the status rest, if the converter is not in run comes visualized “STOP”; if the converter is in run comes visualized the internal dimension selected with C00 connection or the status run.

If the converter finds the status alarm, for intervention of an or more protections, the written on the keypad start to flash and they come visualized all the active alarms (one by one).

4. Main menu

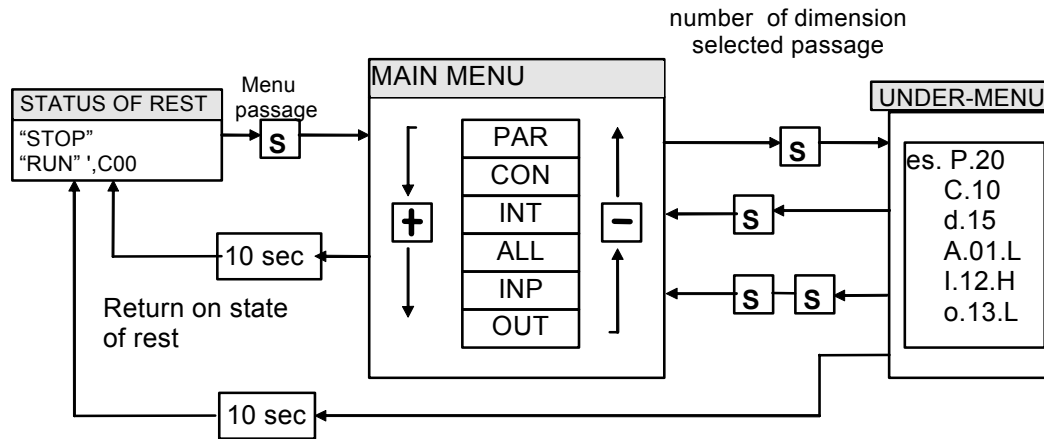
Leaving from the status of rest pressing the s key the principal menu is gone into of circular type that contains the indication of the type of visualizable dimensions:

PAR = parameters	CON = internal connections	INT = internal dimensions
ALL = alarm	INP = digital input	OUT= digital output

To change from a list to another enough is necessary to use the ' + ' or ' - ' keys and the passage will happen in the order of figure.

Once select the list you pass on the relative under-menu pressing ' s ' ; the re-entry to the main menu from the following visualizations will be able future through the pressure of the key ' s ' simple or double in brief succession (less in a second), like showed after.

The return to the status of rest comes instead automatically after 10 (P112) seconds of inactivity is from some under-menu that goes by the main menu.



4.1. Under-menu of parameters and connections management (PAR and CON)

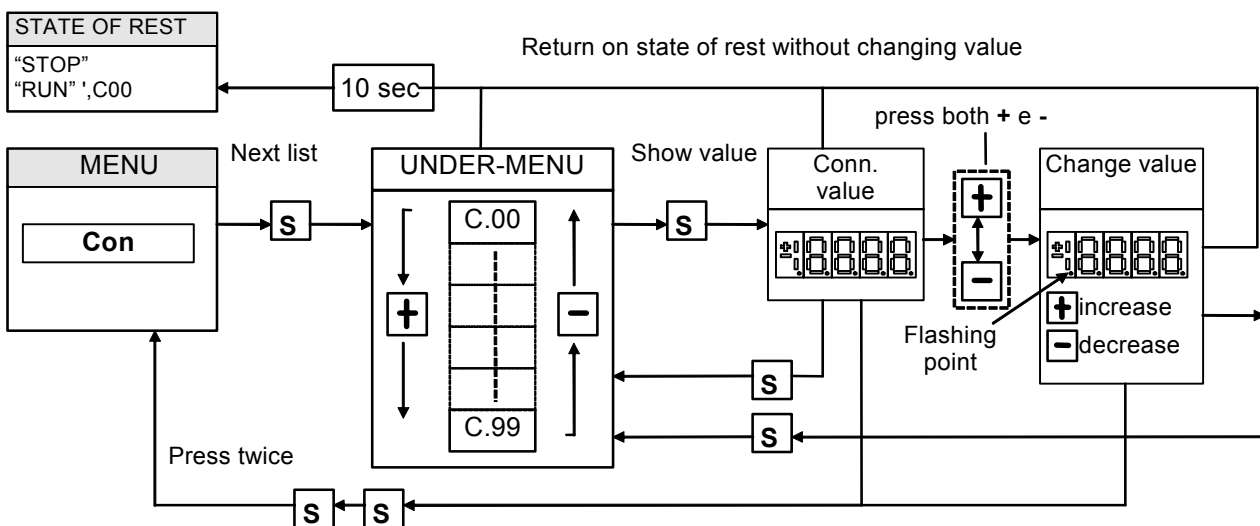
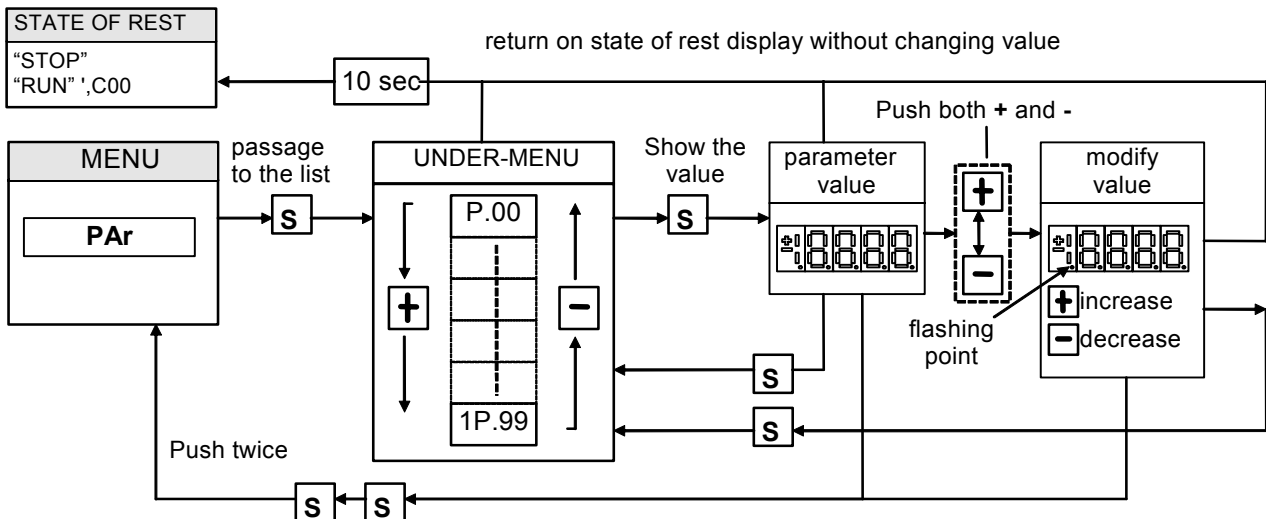
From ' PAR ' or ' CON ' You enter into the under-menu list pressing ' S ' ; once entered into the list is able look through the parameters or the existing connections by pressing the keys ' + ' or ' - ' to move in increase or in decrement; even in this case the list is circular.

At the number corresponding to the various parameters or connections appear the letter ' r ' if they are reserved, ' t ' if reserved in the TDE MACNO and the letter ' n ' if it modification requires that the converter in not in run (off-line); all the reserved parameters are of type ' n ' modifiable only by stop (off-line).

If You pressed the key ' S ' comes visualized the value of the parameter or of the connection that may be read; at this point re- press ' S ' once You return to the under-menu list, press twice ' S ' in fast succession (less 1 seconds), return to the main menu.

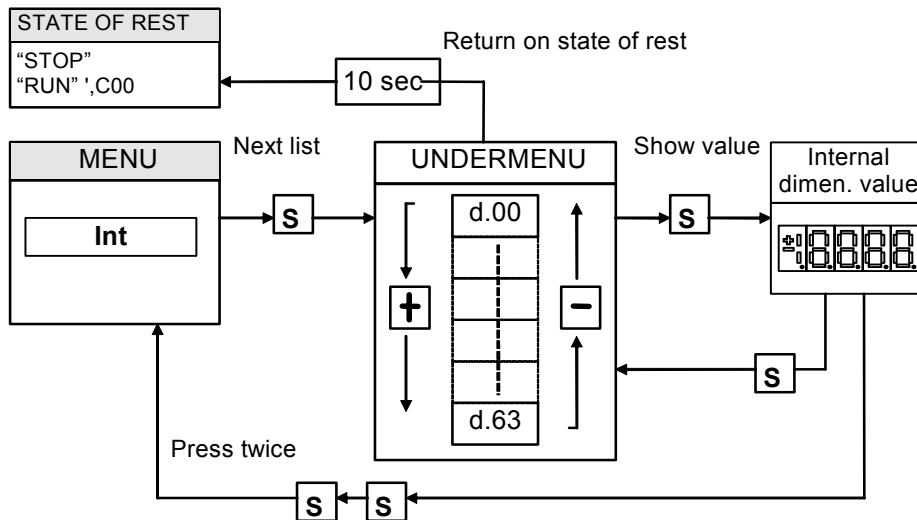
The system returns automatically to the status of rest and after 10 seconds of have past inactivity. To modify the value of the parameter or of connection once entered into visualization it necessary press both keys ' + ' and ' - ' ; in that moment it starts to flash the decimal point of the first figure to the left warning that from that moment the movement of the keys and '+' modifies the value; the change of value may only by stop if the parameter is of kind ' n ' and only after having set up the code of access P60, if the parameter is of the kind ' r ', only after having set up the code of P99 (access for the reserved parameters TDE MACNO), kind ' t '.

The parameters and the reserved connections TDE MACNO doesn't appear in the list if doesn't call the code of P99. Once the value is corrected You press the key ' S ' return to the under menu list making operational the parameter or the corrected connection ; if after correct the value want go out without change the values wait 10 seconds; if the value is no touched for the exit press again the "S" key (it is operative the same original value). About parameters and connections, the return to the status of rest display is in automatically way after 10 seconds from any kind of visualization.



4.2. Visualization of the internal dimensions (INT)

From INT You enter into the list of under-menu of the internal dimensions pressing ' S '. In the list you are moving with the keys ' + ' or ' - ' till that appearing address of dimensions wanted visualize “dxx” ; pressing ' S ' disappears the address and appear the value of the dimension. From this status You go back to under-menu list, repressing ' S ', and go again to the main menu repressing “S” twice in fast succession; from the menu and from the under-menu. You return automatically to the status of rest after a time of 10 seconds.



4.3. Alarms (ALL)

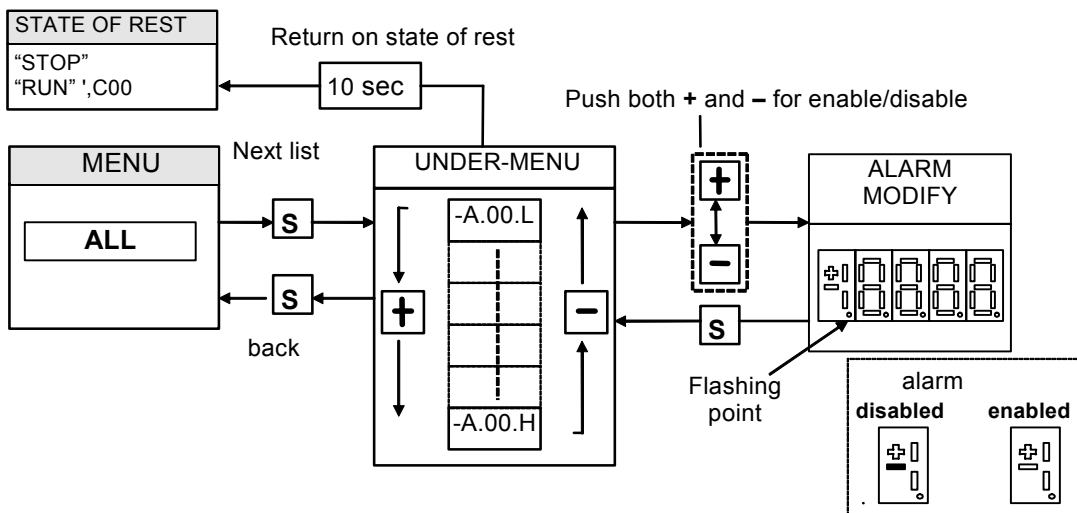
From ALL You enter into of under-menu list of the alarms pressing ' S '.

From the corresponding under-menu with the keys ' + ' and ' - ' move all addresses desired for the alarms; with this, in the box to the right, appears the status of the alarm ' H ' if active, ' L ' if don't.

If the alarm has been disabled ; in this case too with the active status doesn't appear any stop of the regulation, the address of the alarm is preceded by the sign ' - '.

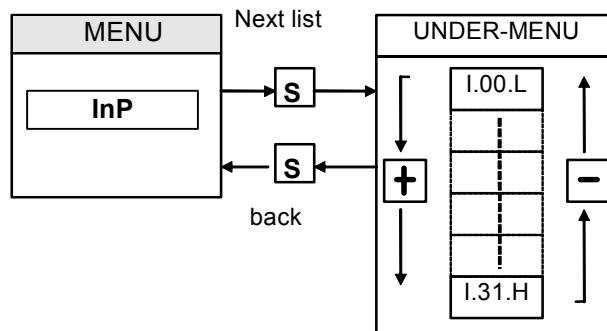
To exclude the event of an alarm You must enter into the menu to modify both the keys ' + ' and ' - ' and when the flashing point appears of the first number You can enable or disable the alarm with the keys ' + ' or ' - ' ; if the alarm is disabled appears the sign the ' - ' to the left of the writing "A.XX.Y".

From the status of modification returns to the list of under-menu and You return operative the select made pressing ' S ', from the menu and from the under-menu You turn automatically to the status of rest after a time closed to 10 seconds.



4.4. Visualization of the input and output (INP and OUT)

From the INP or from the OUT You enter into corresponding list of under-menu pressing ' S '.
 From the corresponding list of under-menu with the keys ' + ' and ' - ' move to the address desired for the digital input (I) and the output (O); together to this, in the box, appear the status: “H” if activate, L if not active.
 From this status You returns to the main menu pressing ' S '.



To note the last three digital input are about the power logical input:

POWER LOGICAL INPUT		STATUS(H=ON L=OFF)
I	29 / PTM	H = OK; I = active alarm
I	30 / MAXV	H = OK; I = active alarm
I	31 / MAINS SUPPLY OFF	H = OK; I = active alarm

