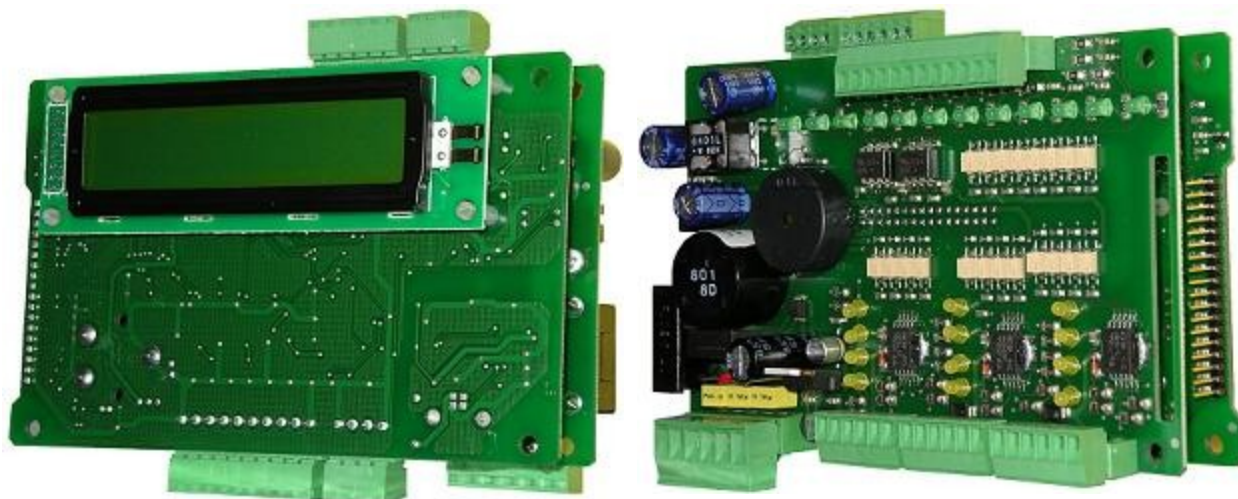




# KS 405



## Operator panel with integrated PLC

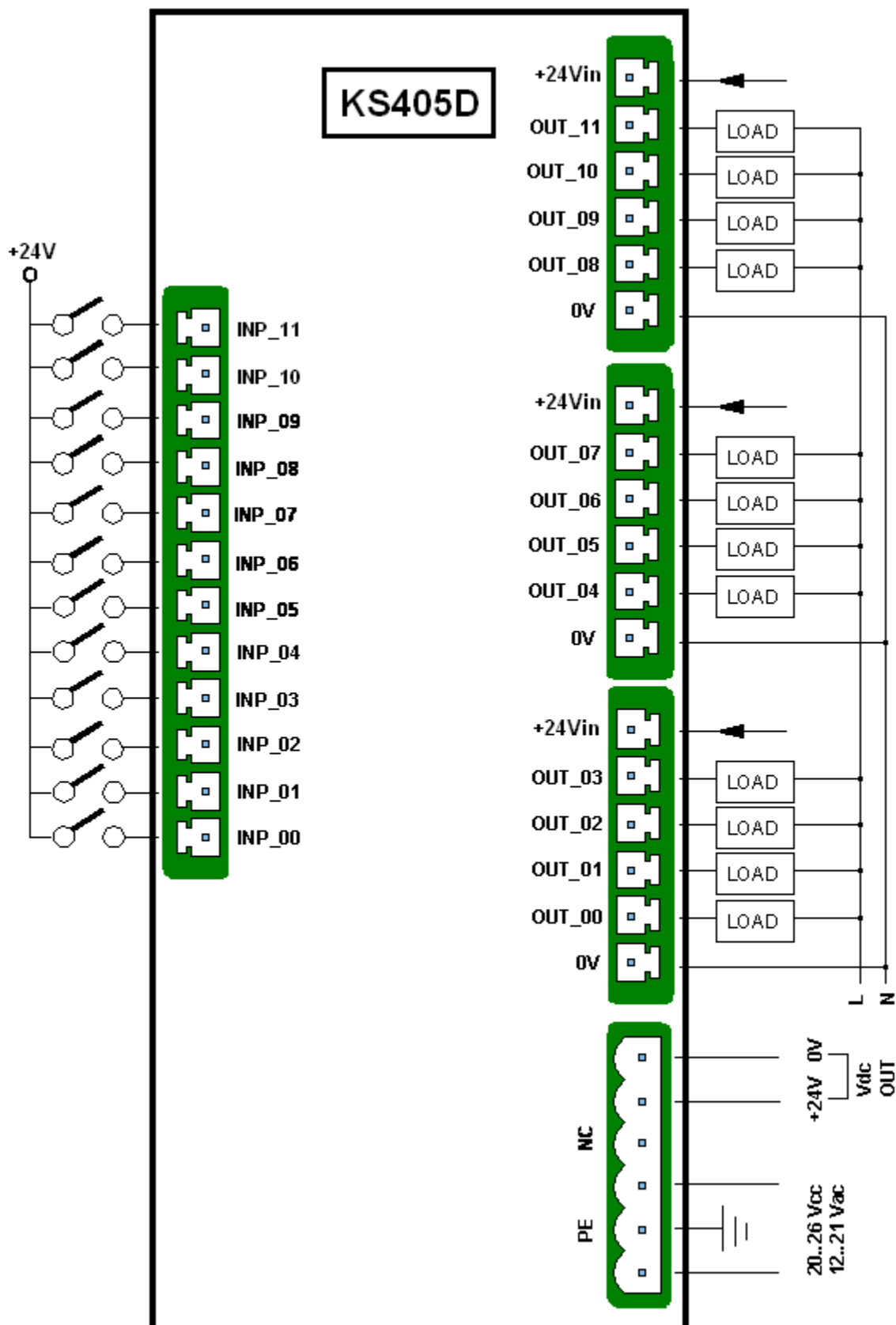
- Customizable keyboard
- High speed (5msec. standard cycle time)
- Contact programming with Ladder language
- Function for Recipe management, P.I.D. Regulator, etc ...

### ELECTRIC CHARACTERISTICS

<b>Power supply voltage</b>	<b>Min 20Vcc ; Max 26 Vcc Min 15 Vac ; Max 21 Vac</b>
<b>Current Consumption</b>	<b>Under 200mA without loads</b>
<b>Microprocessor</b>	<b>Hitachi H8S/2145B @ 20MHz</b>
<b>Program Memory</b>	<b>64 KB</b>
<b>Pages Memory</b>	<b>64 KB</b>
<b>E<sup>2</sup>PROM</b>	<b>64 KB</b>
<b>Cycle Time</b>	<b>Programmable (min 5 msec.)</b>
<b>Digital Inputs</b>	<b>12 digital inputs PNP at 24 Volts with programmable anti-noise filter ( 4 fast inputs for encoder connection untill 10KHz)</b>

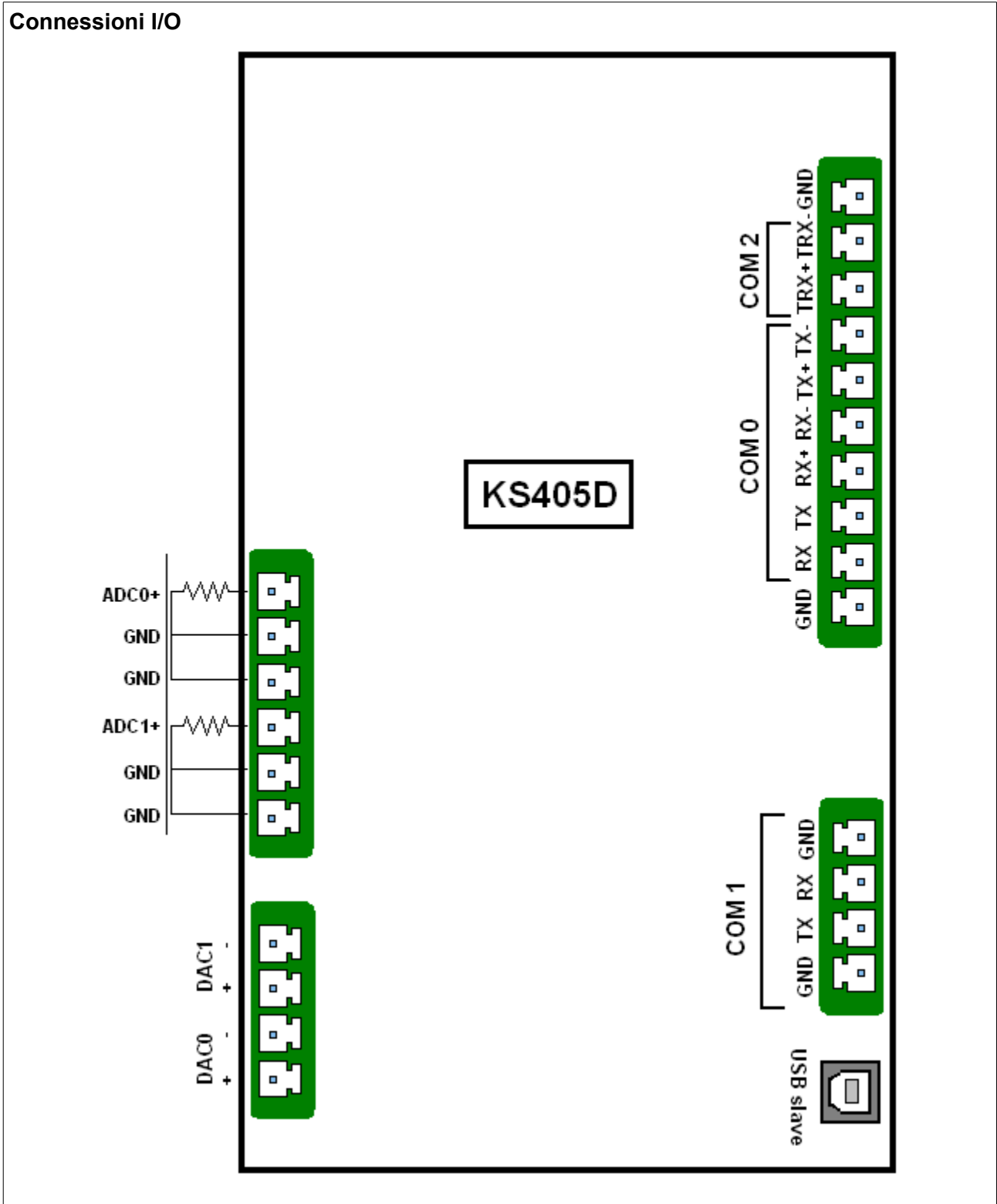


I/O Connections



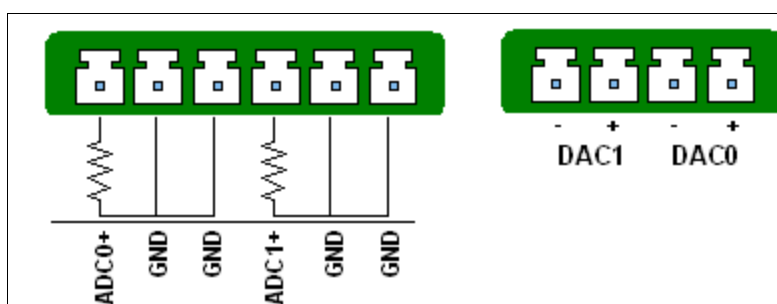


Connessioni I/O

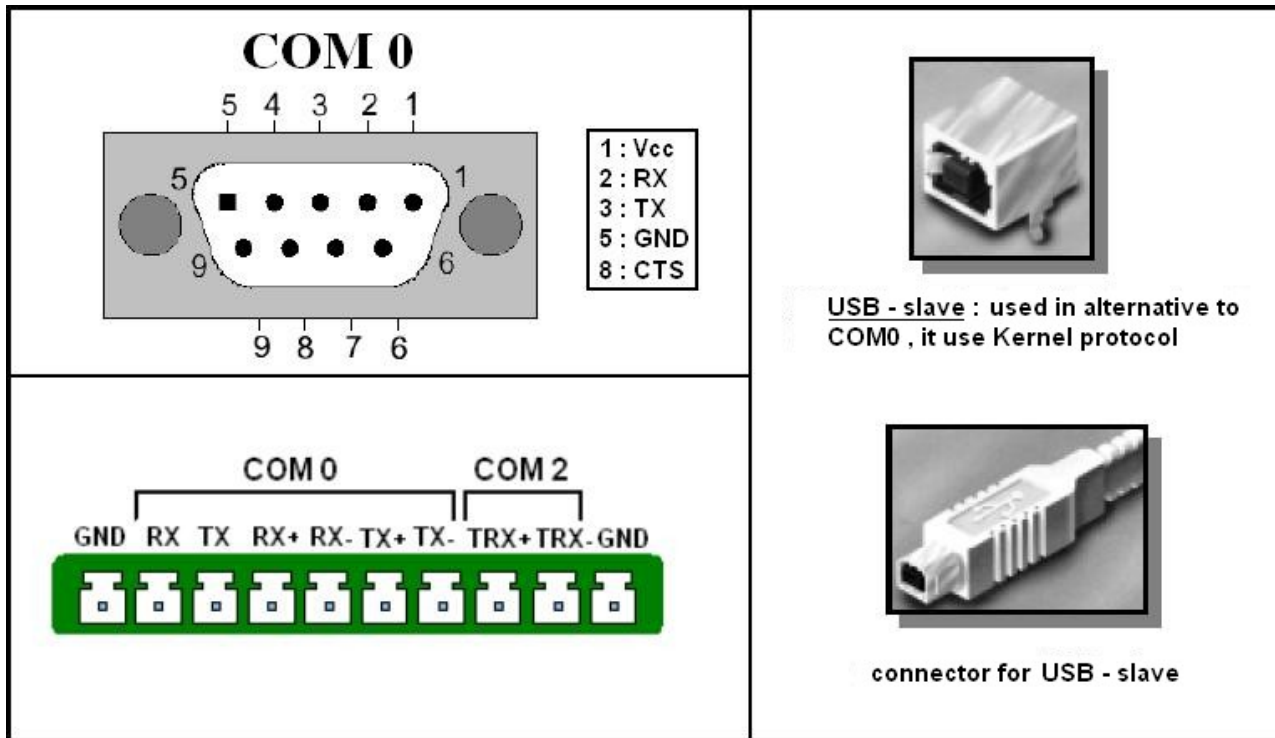




<b>Analog Inputs</b>	<b>2 configurable analog inputs for voltage, current , PT100 or TMC a 10 bits</b>
<b>Digital Outputs</b>	<b>12 static outputs PNP 24V at 500mA</b>
<b>Analog Outputs</b>	<b>2 analog outputs 0/10 V at 8 bits</b>
<b>Buffer RAM</b>	<b>96 words any 100 msec automatically copy into plugged RAM (for a term of 1 year)</b>
<b>RTC</b>	<b>Extern real time clock with plugged calendar and clock with rechargeable battery . (for a term of 1 year)</b>



<b>Communication Ports</b>	<p><b>3 serial lines (COM 0,COM 1,COM 2) and USB slave.</b></p> <p><b><u>COM 0</u></b> : Used in RS422 mode, might support many different communication protocols and it's normally used like interface with other devices (I/O expansions , termoregulators , inverters or for network connection) .</p> <p><b><u>COM 1</u></b> : Available only in RS232 mode , in alternative to this can be used the USB salve port . This port might support many different communication protocols . It's used also for upload the application program or the operative system.</p> <p><b><u>COM 2</u></b> : Used only in RS485 mode , might support many different communication protocols and it's normally used like interface with other devices (I/O expansions , termoregulators , inverters or for network connection).</p>
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MECHANICS CHARACTERISTICS	
Temperature Range	from -10 °C to +70 °C
Humidity Range	From 10 to 90% (non-condensing)
Operating Atmosphere	Without corrosive gas
Noise Immunity	According to rules in force
Fixing System	Four M4 pegs
Weight	370 gr
Keyboard	Membrane keyboard on anodized aluminium front part with 20 buttons which 6 dedicated
Display	Alphanumeric display 20 characters on 2 rows , with led's backlight. Possibility of 8 leds.
Size	Front 144x90 mm, Depth 74 mm

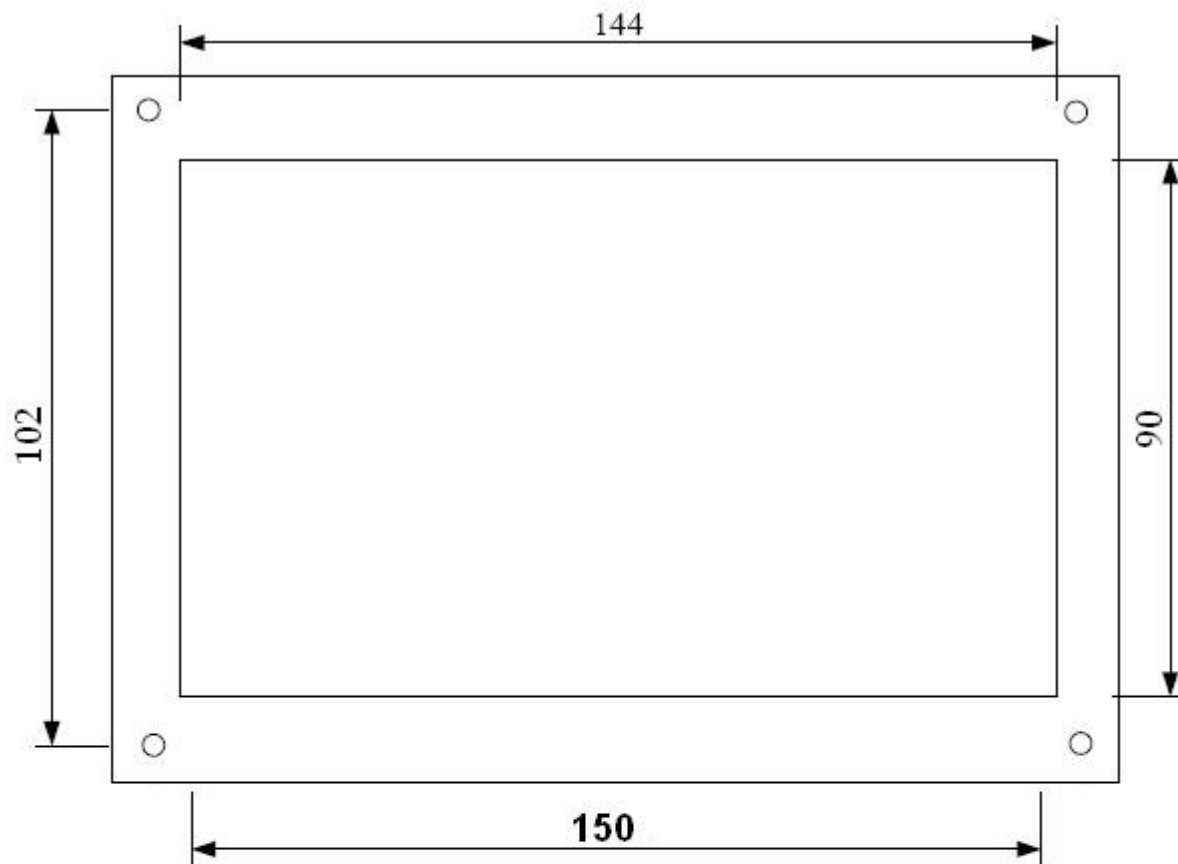


**MECHANICS CHARACTERISTICS**

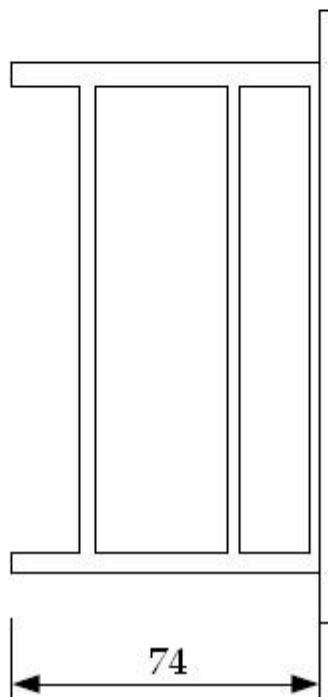
Temperature Range

from -10 °C to +70 °C

**BACK VIEW**



**SIDE VIEW**





SOFTWARE CHARACTERISTICS	
Programming Languages	AWL / Ladder
Timers	256 timers at 16 bit with 1/100 sec resolution. Timers are configurables like excitation delay or disexcitation delay.
Counters	256 counters at 16 bit configurables like increase or decrease.
Data Memory	2048
Developed Functions	<ul style="list-style-type: none"> <li>- Week programming</li> <li>- Recipes management</li> <li>- Encoders management</li> <li>- P.I.D. temperature regulation</li> </ul>
Memory area check in real time mode on data table ( Debug )	●
Ladder's subroutines Import/Export	●
Contact and variable check in real time mode on ladder ( Debug Online )	●