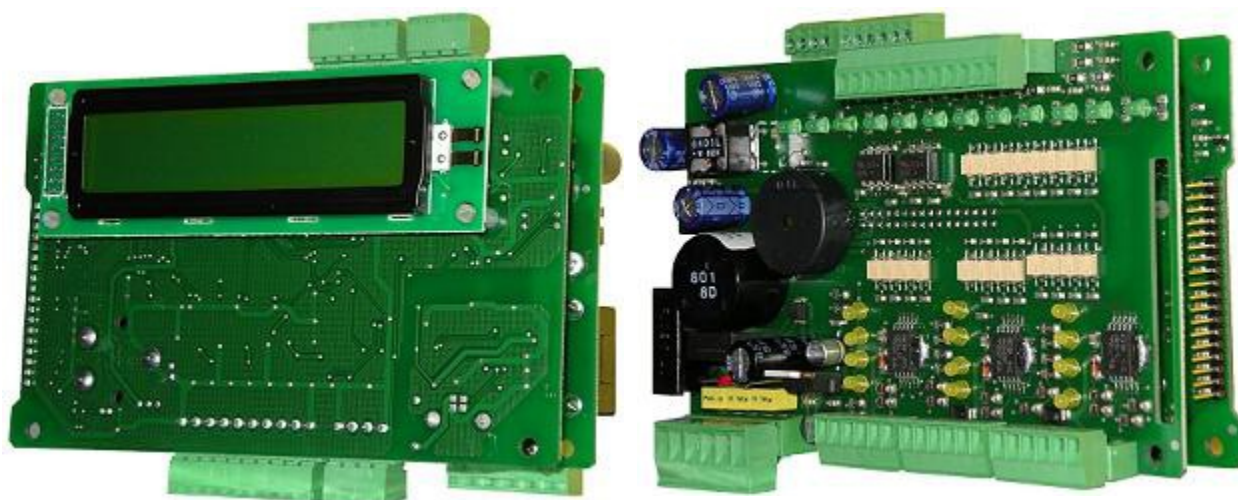




KS 456



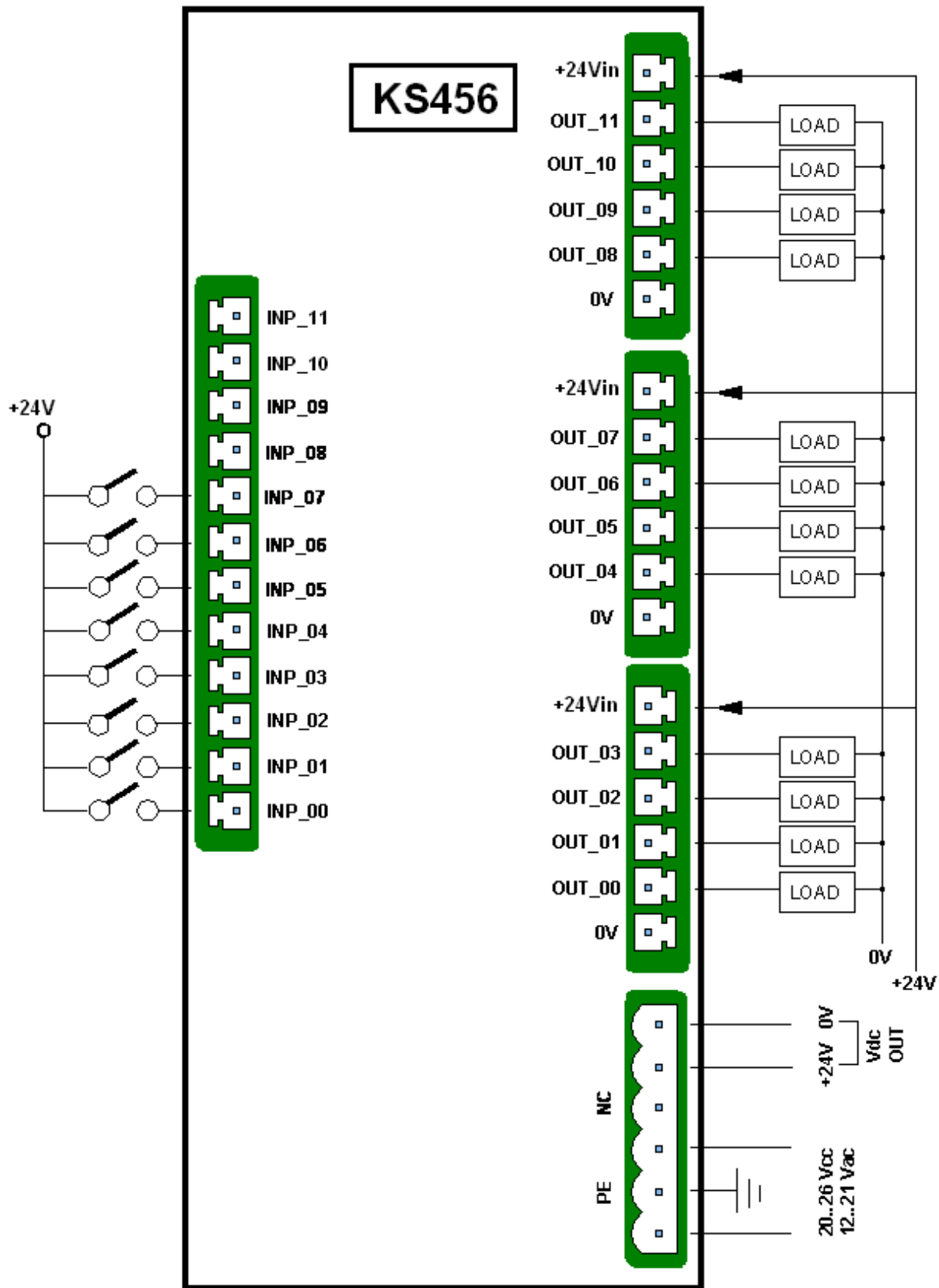
Operator panel with integrated PLC

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

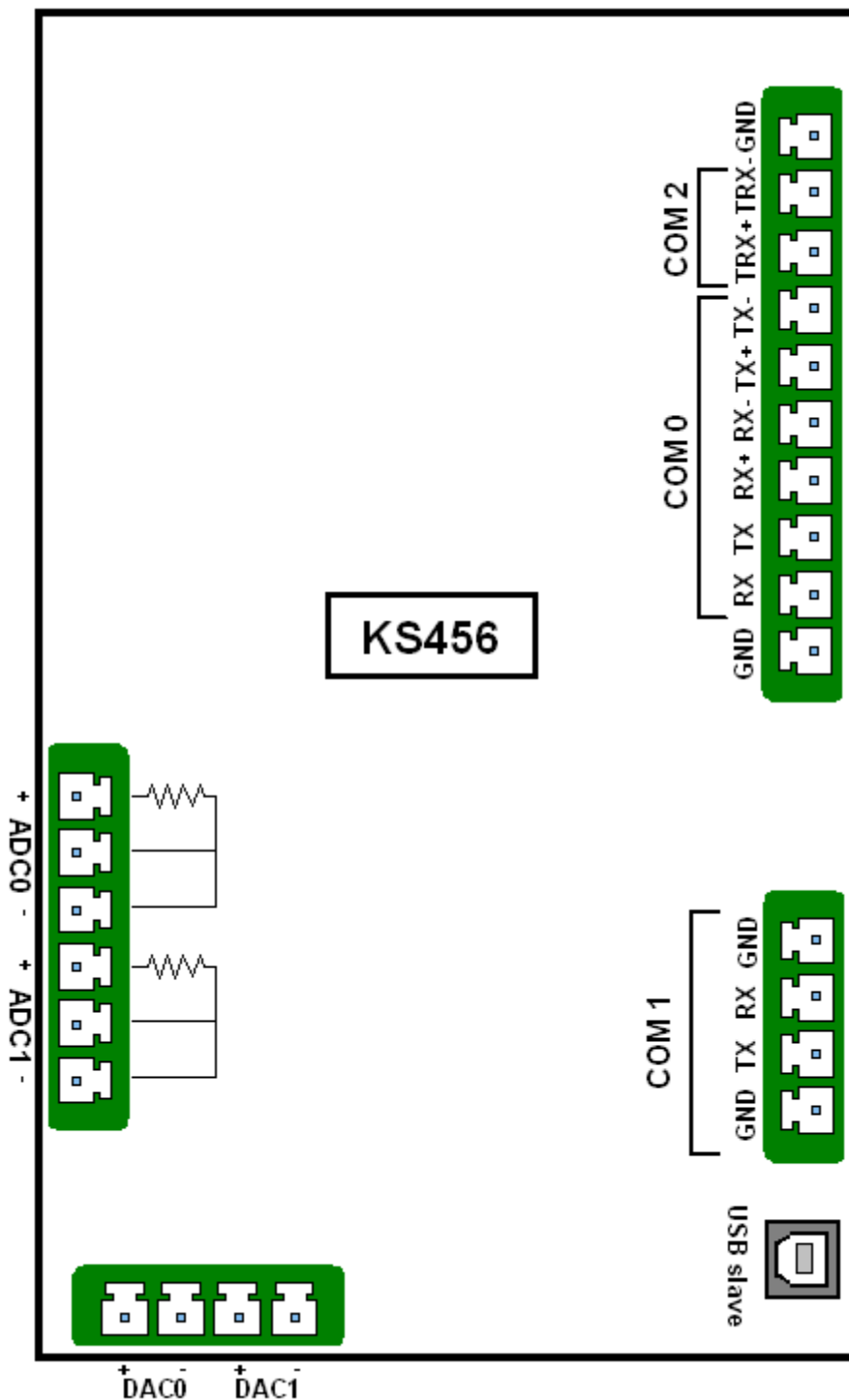
ELECTRIC CHARACTERISTICS

Power supply voltage	Min 20Vcc ; Max 26 Vcc Min 15 Vac ; Max 21 Vac
Current Consumption	Under 200mA without loads
Microprocessor	Hitachi H8S/2145B @ 20MHz
Program Memory	64K
Pages Memory	64K
E²PROM	64K
Cycle Time	Programmable (min 5msec)
Digital Inputs	12 digital inputs PNP at 24 Volts with programmable anti-noise filter (4 fast inputs for encoder connection until 10KHz)

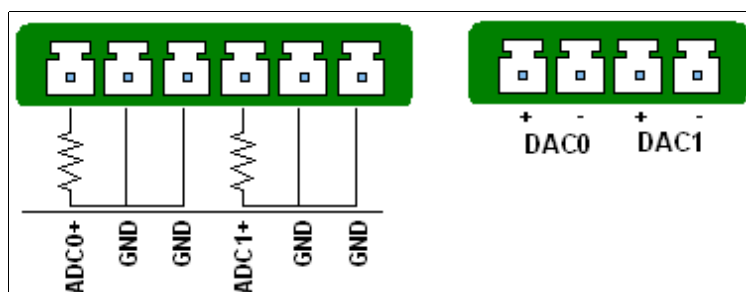
I/O connections



I/O connections



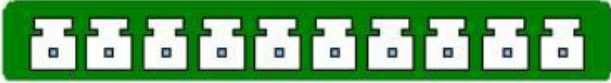
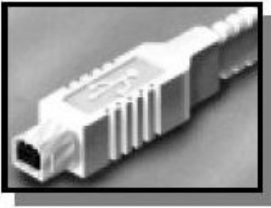


Analog Inputs	2 configurable analog inputs for voltage, current , PT100 or TMC a 10 bits
Digital Outputs	12 static outputs PNP 24V at 500mA
Analog Outputs	2 analog outputs 0/10 V at 8 bits
Buffer RAM	96 words any 100 msec automatically copy into plugged RAM (for a term of 1 year)
RTC	Extern real time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

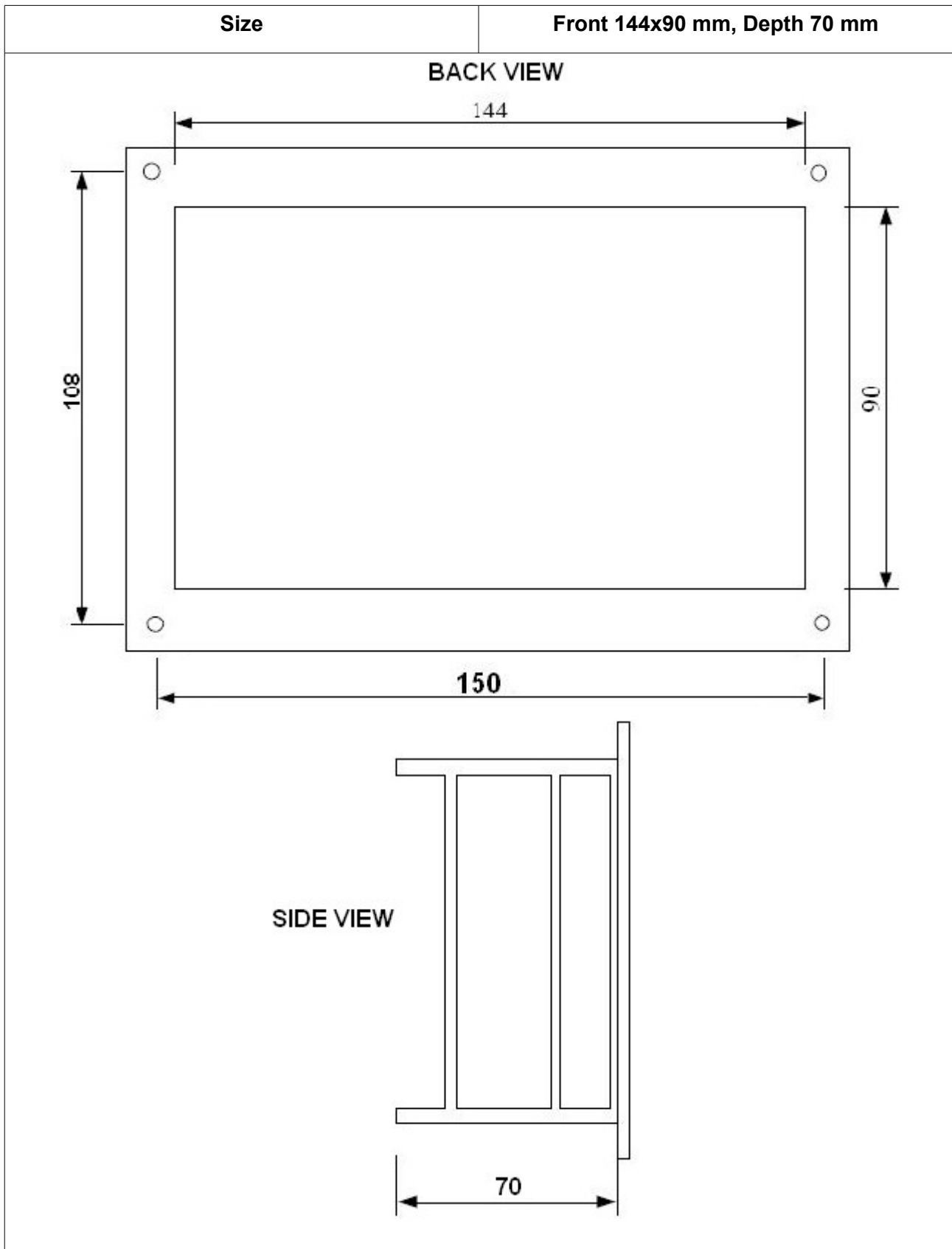


Communication Ports	<p>3 serial lines (COM 0,COM 1,COM 2) and USB slave.</p> <p><u>COM 0</u> : Used in RS422 mode, might support many different communication protocols and it's normally used like interface with other devices (I/O expansions, termoregulators, inverters or for network connection).</p> <p><u>COM 1</u> : Available only in RS232 mode, in alternative to this can be used the USB slave port . This port might support many different communication protocols. It's used also for upload the application program or the operative system.</p> <p>COM 2 : 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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<p style="text-align: center;">COM 1</p> <p style="text-align: center;">GND TX RX GND</p> 	 <p>USB - slave : used in alternative to COM0 , it use Kernel protocol</p>
<p style="text-align: center;">COM 0 COM 2</p> <p style="text-align: center;">GND RX TX RX+ RX- TX+ TX- TRX+ TRX- GND</p> 	 <p style="text-align: center;">connector for USB - slave</p>

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	700 gr
Keyboard	Membrane keyboard on anodized aluminium front part with 20 buttons which 6 dedicated
Display	Alphanumeric display 20 characters on 4 rows, with led's backlight. Possibility of 8 leds.





CARATTERISTICHE SOFTWARE	
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"> - Week programming - Recipes management - Encoders management - P.I.D. temperature regulation
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)	●