



VTP 322N



DATA SHEET



rev. 1.4
01 March 2024

PLC with integrated operator panel

- LCD monochromatic alphanumeric 16x2
- Compact PLC compatible with the standard serial communication protocol Modbus RTU
- Contact programming with Ladder language
- Four serial communication ports
- USB master port for connecting USB pendrive

Kernel Sistemi
Kernel Sistemi s.r.l. , via Vignolese n. 1138
41126 Modena - ITALY
Tel. 059 469 978 - Fax 059 468 874
www.kernelgroup.it

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1 HARDWARE CHARACTERISTICS

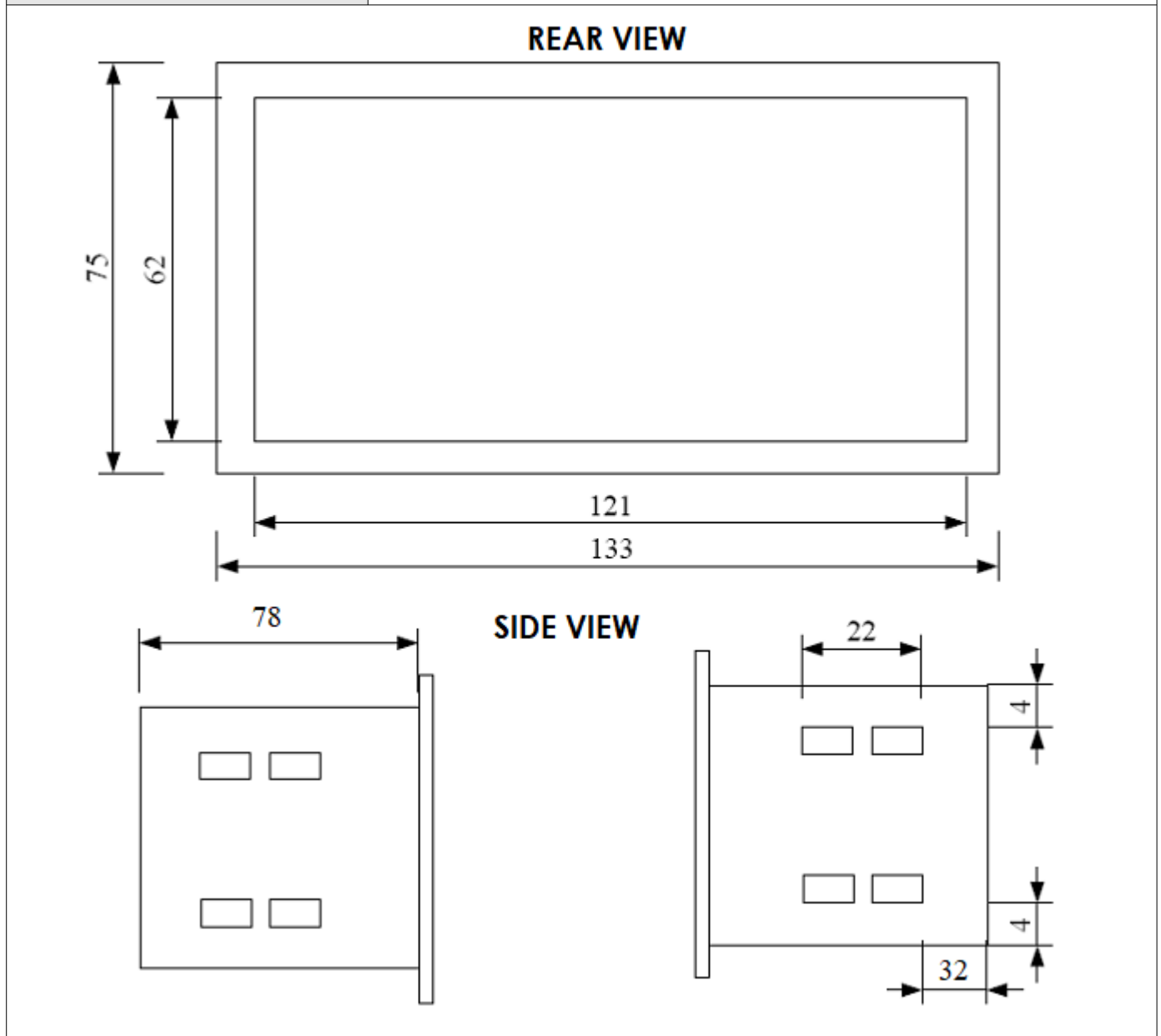
This chapter describes the hardware characteristics of VTP_322N :

1.1 Electric Characteristics

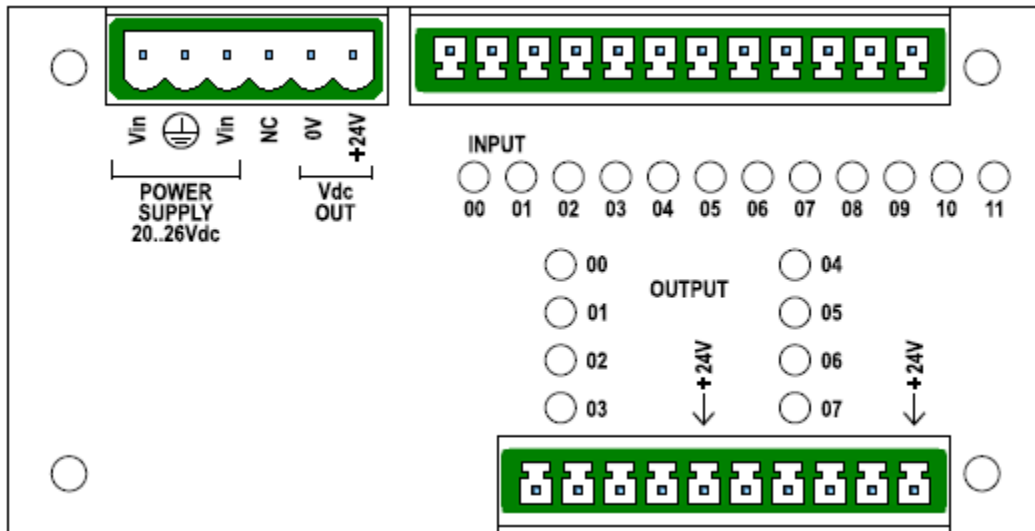
ELECTRIC CHARACTERISTICS	
Power supply voltage	24 Vdc +/- 10 %
Maximum Permitted Power Supply	27 Vdc
Current Consumption	Under 150 mA without loads [Power Supply = 24 Vdc]
Microprocessor	ARM STM 200
Program Memory	128 KByte
Pages Memory	256 KByte
EEprom	64 KByte
Cycle Time	Programmable (min 1 msec.)
Digital Inputs	12 digital inputs PNP 24 Volts including 4 fast (until 20 KHz for encoder reading) with programmable anti-noise filter (value 1 ... 16)
Analog Inputs	1 analog inputs with 12 bits resolution [0 ... 4095] ; for PT100, PT1000, thermocouple (J or K) otherwise voltage (0 ... 10 V) or current (0 ... 20 mA)
Digital Outputs	8 static outputs 24 Vdc 500 mA
Analog Outputs	2 analog outputs 0 ... 10 V with 12 bit resolution [0 ... 4095]
Plugged RAM	2048 words copied automatically into plugged RAM any 100 msec
RTC	Internal Real time clock buffered by a rechargeable battery
Current analog input Impedance	250 Ohm
Voltage analog input Impedance	10 KOhm
Serial Lines	<p>4 serial lines (COM 0, COM 1, COM 2, COM 3) :</p> <p>COM 0 : It's in RS 232 mode and can be used with many different standard communication protocols for connect other devices (thermoregulators, inverters or network connection)</p> <p>COM 1 : It's in RS 232 mode and can be used with many different standard communication protocols for connect other devices (thermoregulators, inverters or network connection)</p> <p>COM 2 : It's in RS 485 mode and can be used with many different standard communication protocols for connect other devices (thermoregulators, inverters or network connection)</p> <p>COM 3 : It's in RS 485 mode and can be used with many different standard communication protocols for connect other devices (thermoregulators, inverters or network connection)</p>
ETH	No
Mini USB	No
USB Pendrive	Yes

1.2 Mechanics Characteristics

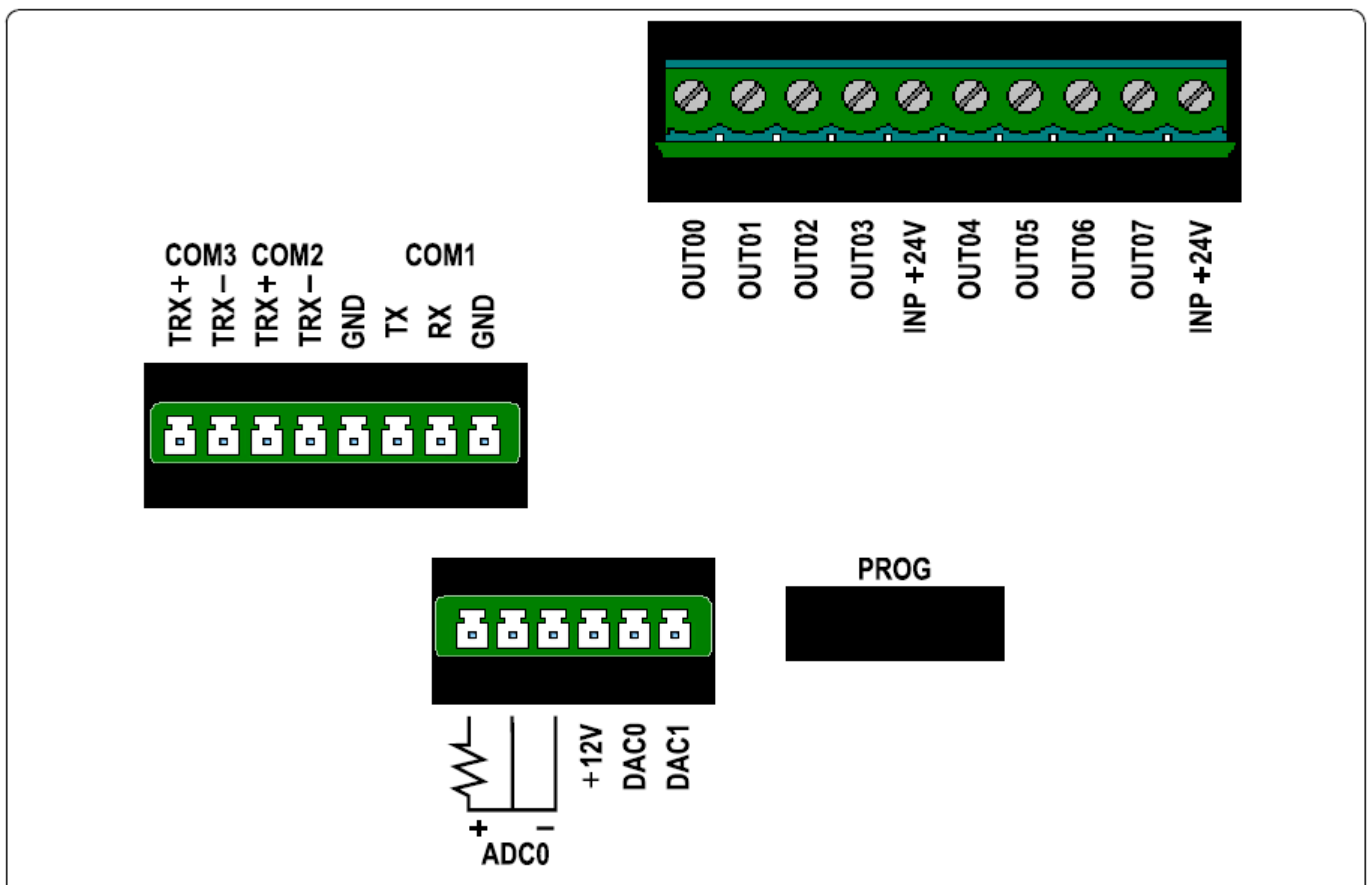
MECHANICS CHARACTERISTICS	
Temperature Range	From -10 °C to +70°C
Humidity Range	From 10 % to 90 % (non-condensing)
Operating Atmosphere	Without corrosive gas
Noise Immunity	According to rules in force
Fixing System	On din rail
Weight	550 gr
Keyboard	Keyboard with 6 system keys + 5 function keys located on the front
Display	Monochrome alphanumeric display 16 characters per 2 lines backlit LED + 1 alarm LED + 5 LED on function keys
Size	Front View 133x75; Depth 78 mm



1.3 Rear View



1.4 Side View 1



1.5 Side View 2

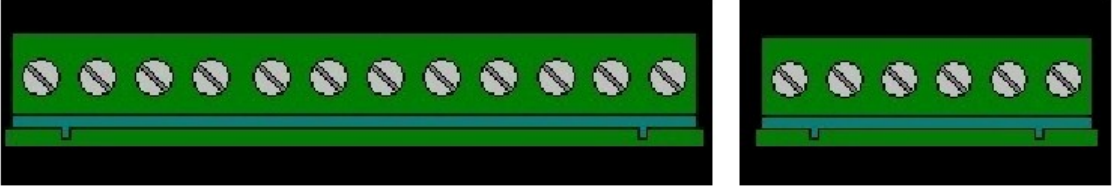



Diagram showing the side view of the VTP 322N module. The top left shows a row of 12 input pins labeled INP11 through INP00. The top right shows a row of 4 pins labeled COM 0, GND, TX, RX, GND. Below these is a USB connector. A label box contains the following information:

 Kernel sistemi ingegneria elettronica	KERNEL sistemi s.r.l. Via Vignolese, 1138 41126 MODENA-ITALY www.kernelgroup.it	CE RoHS
Model:	VTP 322N	
Supply:	20..26 Vdc	



2 SOFTWARE CHARACTERISTICS

SOFTWARE CHARACTERISTICS	
Programming Languages	AWL / Ladder
Timers	<ul style="list-style-type: none"> • 256 timers at 16 bit with 1/100 sec resolution. Timers are configurable like : excitation delay, disexcitation delay or one pulse <ul style="list-style-type: none"> • 8 timers "free running" with a resolution of 1 msec, individually activated with system flag
Counters	256 counters at 16 bit configurable like increase or decrease
Memory	8192 DATA MEMORY 16 bit general purpose, some with special meaning, numbered from DATA.00 to DATA.8191
FLAG	2048
SYS	233
RTF	1536 Retentive Flags
NVDATA	2048 Non-Volatile DATA
Developed Functions	<ul style="list-style-type: none"> • Weekly Programmer • Recipes Management • Encoders Management • P.I.D. Temperature Regulator ...
Memory area check in real time mode on data table (Debug)	Yes
Ladder's subroutines Import / Export	Yes
Contact and variable check in real time mode on ladder (Debug Online)	Yes



3 CONTACTS

GENERAL

Tel: 059 469978
website: www.kernelgroup.it
e-mail: info@kernelgroup.it

COMMERCIAL

Sig.ra Linda Mammi
Tel: 059 469978 Int. 207
e-mail: sales@kernelgroup.it
Skype: mammi.kernel

ADMINISTRATION

Sig.ra Paola Morandi
Tel: 059 469978 Int. 201
e-mail: amministrazione@kernelgroup.it
Skype: morandi.kernel

PURCHASING and PRODUCTION

Sig. Stefano Catuogno
Tel: 059 469978 Int. 204
e-mail: produzione@kernelgroup.it
Skype: catuogno.kernel

TECHNICAL OFFICE

Sig. Alessandro Muratori
Tel: 059 469978 Int. 205
e-mail: alessandro.muratori@kernelgroup.it
Skype: muratori.kernel

Support
Tel: 059 469978 Int. 209
e-mail: support@kernelgroup.it
Skype: support.kernel

Sig. Morisi Luca
e-mail: luca.morisi@kernelgroup.it
Skype: morisi.kernel

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