



VP 116



DATA SHEET



rev. 1.6
11 February 2021

PLC with integrated operator panel

- Case DIN 43700 96x48
- LCD monochromatic alphanumeric 16x2
- Mini-USB programming port
- Five system keys
- Contact programming with Ladder language
- Compact PLC compatible with serial communication standard Modbus RTU

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INDEX

1	HARDWARE CHARACTERISTICS.....	3
1.1	Electric Characteristics.....	3
1.2	Mechanics Characteristics.....	4
1.3	Front View.....	4
1.4	Rear View.....	5
2	SOFTWARE CHARACTERISTICS.....	5
3	CONTACTS.....	6

1 HARDWARE CHARACTERISTICS

This chapter describes the hardware characteristics of VP_116 :

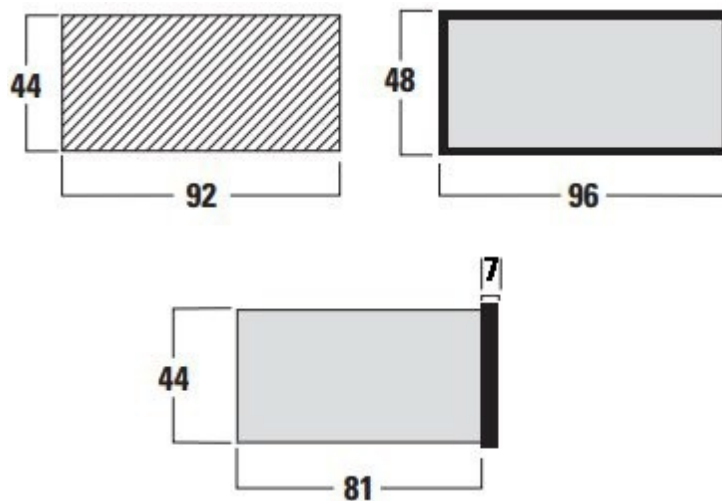
1.1 Electric Characteristics

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 100
Program Memory	64 KByte
Pages Memory	64 KByte
EEprom	64 KByte
Cycle Time	Programmable (min 1 msec.)
Digital Inputs	6 digital inputs PNP 24 Volts including 4 fast (until 20 KHz for encoder reading) with programmable anti-noise filter (value 1 ... 16)
Analog Inputs	2 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	6 static outputs 24 Vdc 500 mA
Analog Outputs	2 analog outputs 0 ... 10 V with 12 bit resolution [0 ... 4095]
Plugged RAM	42 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>2 serial lines (COM 1, COM 2) :</p> <p>COM 1 : It's in RS 232 or in RS 485; it can be used with many different standard communication protocols for connect other devices (thermoregulators, inverters or network connection) besides it's used for upload applications or operative system</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>
ETH	No
Mini USB	Yes
USB Pendrive	No



1.2 Mechanics Characteristics

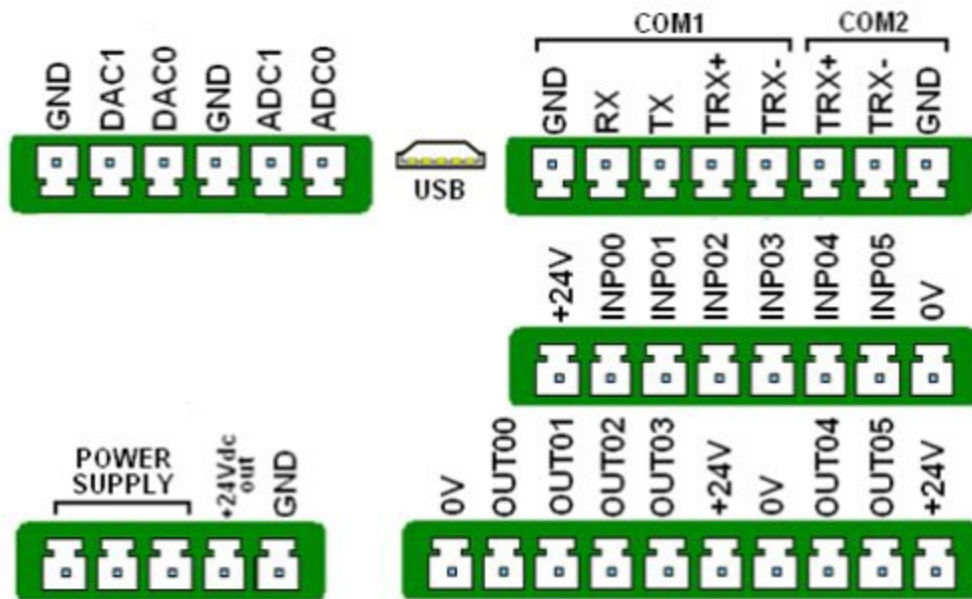
MECHANICS CHARACTERISTICS	
Temperature Range	From -10 ^C to +70^C
Humidity Range	From 10 % to 90 % (non-condensing)
Operating Atmosphere	Without corrosive gas
Noise Immunity	According to rules in force
Fixing System	Fixing Bracket
Weight	n.d.
Keyboard	Keyboard with 5 function keys located on the front
Display	Monochrome alphanumeric display 16 characters per 2 lines backlit LED + 1 alarm LED
Break Size	96x48 mm ; Depth 81 mm
Front Size	96x48 mm



1.3 Front View



1.4 Rear View



2 SOFTWARE CHARACTERISTICS

SOFTWARE CHARACTERISTICS	
Programming Languages	AWL / Ladder
Timers	<ul style="list-style-type: none"> 64 timers at 16 bit with 1/100 sec resolution. Timers are configurable like : excitation delay, disexcitation delay or one pulse 8 timers “free running” with a resolution of 1 msec, individually activated with system flag
Counters	64 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	256
SYS	233
RTF	1536 Retentive Flags
NVDATA	42 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

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