

# USB Panel



The product USB PANEL LB / ZZ / 24901 is a general purpose PLC built around the Renesas SH7085 32-bit microcontroller.

The realization of the USB PANEL took place with latest generation electronic components that allow us to have high performance and very small overall dimensions.

## Technical Data

Supply			
Supply voltage	24	Vdc	± 20 % (Vmin = 19.2V >= Vmin of relays = 16.8V) Protected against polarity inversion and overvoltage.
Maximum absorption on the 24Vdc power supply (with 500mA / 5V USB)	360	mA	With 24Vdc
	460	mA	With 19.2Vdc
Fusible F1	750	mA	5x20 T ritardato in vetro
Inputs			
Number of inputs	8		optoinsulated
High level voltage	19.2 ÷ 28.8	Vdc	Vinmax = 24+20% = 28.8
Low level voltage	0 ÷ 11	Vdc	
Absorption on each entrance	12	mA	Vin = 24Vdc
Max. Cable section	1.5	mm <sup>2</sup>	
Relay outputs (Omron G6D-1A-ASI 24VDC relay)			
Number of outputs	8		optoinsulated
Contact type	NO		Clean contact
Maximum voltage on the contact	30	Vdc	

Maximum current on contact	2	A	Limited by 1mm track width
Max. Cable section	1.5	mm <sup>2</sup>	
<b>Serials RS232/485/FO</b>			
Number of serials	2	RS232	
1 RS232/485			
1 Optic Fiber	Opto-isolated and protected by electrostatic charges		
Speed	300, 115k	Bit/s	
<b>Connection distance</b>			
	< 10	m	RS232
	> 300	m	RS485
	< 30	m	FO
Absorption up 5V- 232	100	mA	For each serial. Typical FO foul module
Cable impedance 485	100	ohm	Typical shielded cable
Termination resistance on the board	330	ohm	It should be 100ohm like the cable. This limits the connection distance to be checked
<b>USB</b>			
Speed	12	Mbit/s	2.0 full speed
Type	Host		Device selectable by jumper
Absorption max (5V)	500	mA	Connect only one device, no HUB
<b>CAN</b>			
Speed	1	Mbit/s	Optoisolated and protected from electrostatic charges (ESD)
Transmission distance	< 40	m	1 Mbit/s.
Cable impedance	120	ohm	Use shielded CAN cable with twisted pairs.
Termination resistance on the board	60+60	ohm	
Supply	24	Vdc	± 20 %
Absorption	25	mA	V power supply = 24Vdc. Only the CAN part of this device. When calculating the power supply, use all the devices that will be connected.
<b>NON-VOIDABLE MEMORIES</b>			
<b>EEPROM (4 x 24AA512)</b>			
Dimension	64	Kbyte	
Number of writing cycles	1.000.00		
Data retention	200	Years	
<b>FRAM (FM25L256)</b>			
Dimension	32	Kbyte	
Number of writing cycles	unlimited		
Data retention	10	Years	

<b>FLASH (AT45DB161D)</b>			
Dimensions	2	Mbyte	
Num of writing cycles	100.000		
Data retention	20	anni	
<b>Smart Card Reader (Amphenol C707)</b>			
Communication protocol	Seriale I2C		Protetto da cariche elettrostatiche (ESD)
Connection distance	< 30	cm	Cavo flat
<b>DISPLAY (AMPIRE AG240128BSTQW-59-HNR)</b>			
Resolution	240 x 128	dot	STN, Negative Type,
Visual at 6:00			
white text			
blu led			
backlight			
Measurement of points	dot	0.47 x 0.47	mm
Step of the points	dot	0.50 x 0.50	mm
Visible Area		132 x 76	mm
Contrast ratio	6	CR	CR = Contrast Ratio = brightness off / brightness on
Viewing angle	35	°	25°C
Refresh rate	70	Hz	25°C
Operating temperature	-20 ÷ +70	°C	Temperatura estesa
<b>BATTERY (GP2800A-AH 1.2V AA NiMh)</b>			
Fast charge current (fast)	14	mA	
Maintenance charge current (trickle)	1.4	mA	
Gold-log backup time (does not depend on the capacity of the battery, you can use any capacity)	3	Month	25°C
	1.5	Month	40°C. We recommend using batteries a extended range
Average life time battery	6	Years	25°C. We recommend changing it every 2-3 Years
<b>Mechanical characteristics</b>			
Fixing holes	297 x 167	mm	

Dimensions (Width x height x depth)	310 x 180 x 33	mm	
Maximum bearable vibration	13-73	Hz / mm	Tested for 30min, for each axis x-y-z
Display specs			
Shock		m/s <sup>2</sup>	
Weight	1310	g	
Environmental characteristics			
Operating temperature	-20 ÷ 60	°C	Replace LM1086CS 3.3V regulator with LM1086IS Extended Range
Relative humidity of operation	30 ÷ 80	%	
Storage temperature	-20 ÷ +35	°C	From specific batteries
Relative humidity of storage	< 60	%	From specific batteries
Degree protection	IP00		
Maximum altitude	1000	m	