LUMEL

CONVERTER OF USB/RS232 (TTL) INTERFACE
PD24

USER MANUAL

$C\epsilon$
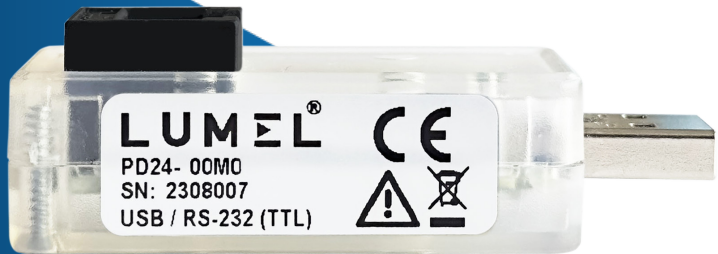
SPIS TREŚCI

1. APPLICATION.

The PD24 converter is a device designed to transfer data between a computer and a device equipped with an RS-232 interface with TTL voltage levels.
The converter provides standard transmission speeds up to 115.2 kb/s, where the speed depends on the length of the cables used.

2. CONVERTER SET.

The PD24 converter set includes:

• PD24 converter	1 pc
• 1.5 m data transmission cable with RJ12 plugs	1 pc

3. REQUIREMENTS.

*   computer with an USB 2.0 port
*   operating system: Windows 2000/XP/VISTA/7/8/8.1/10/11 or Windows Server 2003/2008/2012/2016/2019/2022 - 32/64bit

4. CONVERTER INSTALLATION.

4.1. Assembling the converter.

The converter is a portable device powered from two sources: from the computer's USB bus and from a device connected via the RS-232 interface with TTL voltage levels. In order to use this interface, connect the PD24 to the target device using a cable with an RJ12 plug to the socket marked in Fig. 1.
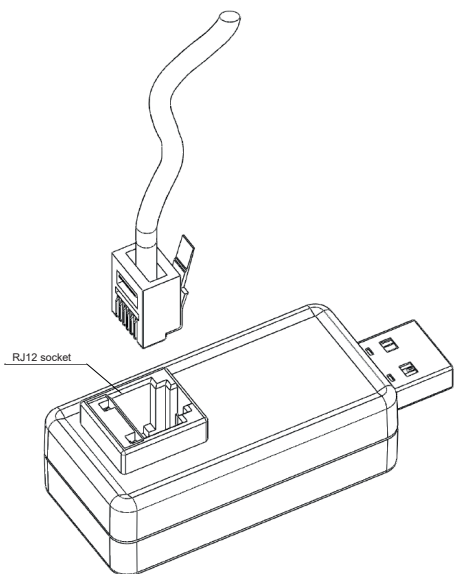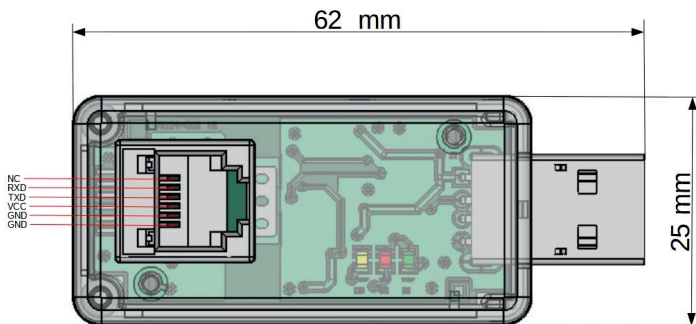
Fig. 1. RJ12 socket with RS232 (TTL) interface in the PD24 converter.

4.2. Description of converter pins

The description of the PD24 converter terminals is described in Fig. 2.

There are three signaling LEDs in the converter (in order from the USB connector):

Green (RDY) – indicates the readiness of the device for data transfer

Red (RXD) – indicates receiving data in the RS-232 TTL interface port

Yellow (TXD) – indicates data transmission to the device connected to the RS-232 interface
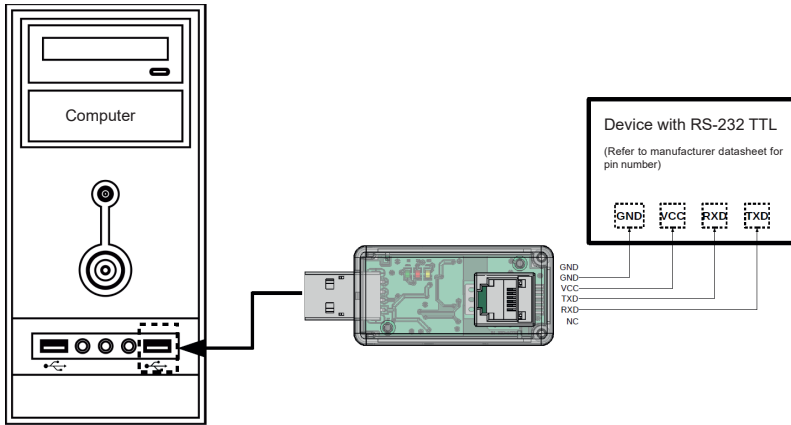

Fig. 3. Example connection with Computer and Device.

4.3. Installing a COM port for Windows.

The PD24 converter uses licensed by Nanjing Qinheng Microelectronics Co. CH343.SER controllers (available at www.wch.cn). This software creates a virtual COM port in the system called **USB-Enhanced-SERIAL CH343**. Installing the driver in Windows adds another COM serial port to the list of ports supported by the operating system.

4.4. Installing the COM port drivers on the computer.

After connecting the converter to the USB port, the operating system should inform about the automatic process of installing the converter drivers. The drivers are compatible with the following systems: Windows XP/Vista/7/8/8.1/10/11 and Windows Server 2003/2008/2012/2016/2019/2022 (32/64-bit). This process may vary in duration depending on the operating system you are using. It is also possible to manually install/uninstall the device driver - the installer software can be downloaded together with the driver from www.lumel.com.pl.
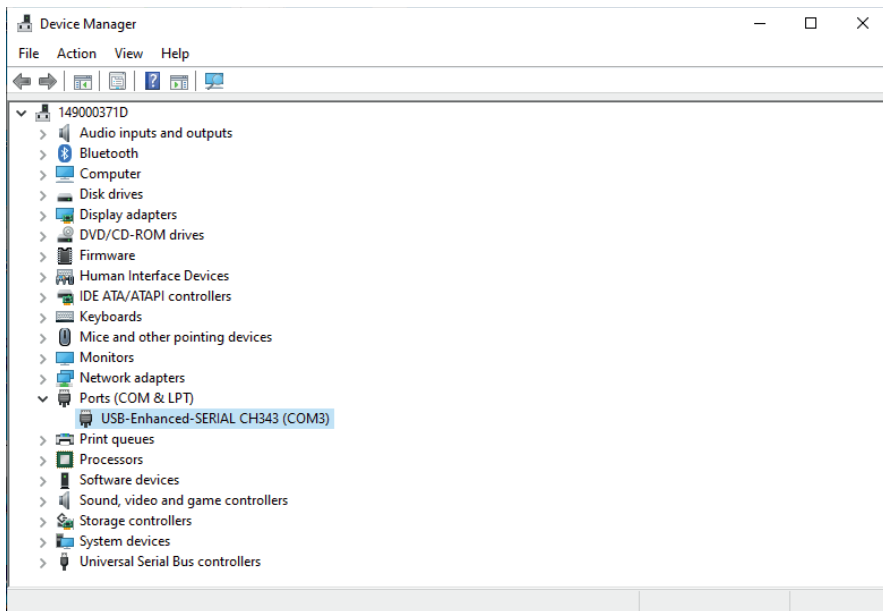
Fig. 3. Correct installation of PD24 in Windows.

5.   DANE TECHNICZNE.

Communication parameters:

– baud rate	Up to 115,2 kbps
– controlling the direction of data flow	Automatic
– drivers	Windows XP/Vista/7/8/8.1/10/11, Windows Server 2003/2008/2012/2016/2019/2022 (32/64bit)
– USB standard	USB 2.0 (Full Speed)
Galvanic isolation	2,2 kV
Operation rated conditions	
– supply voltage	5V DC from the USB port and 5V DC on the RS-232 TTL side
– ambient teperature	0...40 °C
– air relative humidity	< 85 % (condensation inadmissible)
– operating position	any

Storage and transport conditions:

– ambient temperature	0..70 °C
– air relative humidity	< 85 % (condensation inadmissible)

Ensured protection degrees (PN-EN 60529):

– from the housing side	IP40
– from the socket output	IP20
Dimensions	62 x 25 x 20 mm
Weight	20 g (approx.)

Electromagnetic compatibility:

– immunity	acc. PN-EN 61000-6-2
– emission PN-EN 61000-6-4	acc. PN-EN 61000-6-4

6.   VARIANT CODE.

Table 1. Variant code of PD24.

Converter PD24	XX	X	X
Version			
standard	00		
custom-made *	XX		
Language			
multilanguage (Polish/English)		M	
other		X	
Acceptance tests			
without extra quality requirements			0
with an extra quality inspection certificate			1
with calibration certificate			2
acc. to customer's requirements			X

* - after consultation with the manufacturer

Example of coding:
PD24-00M0 code means a converter in a standard version, without additional requirements, in the Polish-English language version

7.   MAINTENANCE AND SERVICING.

The PD24 converter does not require periodic maintenance. In case of damage, the converter should be sent for repair to the manufacturer's service.

LUMEL

LUMEL S.A.
ul. Słubicka 4, 65-127 Zielona Góra, Poland
tel.: +48 68 45 75 100, fax +48 68 45 75 508
www.lumel.com.pl

Technical support:
tel.: (+48 68) 45 75 143, 45 75 141, 45 75 144, 45 75 140
e-mail: export@lumel.com.pl

Export department:
tel.: (+48 68) 45 75 130, 45 75 131, 45 75 132
e-mail: export@lumel.com.pl

Calibration & Attestation:
e-mail: laboratorium@lumel.com.pl