

Basic Installation Guide

(Rev.1.04)

RS-232 adapter for cash drawers VIRTUOS / EKN9002

• Warnings and Cautions

⚠	<ol style="list-style-type: none"> Avoid metal contact with device connectors Use the device outside the environment with flammable gases
⚠	<p>If the following situations occur, immediately shut down the host computer, unplug the device, and consult your nearest dealer.</p> <ol style="list-style-type: none"> Smoke, unusual odor or sounds coming from the device Dropping the device with visible damage to the cover <p>Never do the following:</p> <ol style="list-style-type: none"> Do not use the device in extremely humid places, or expose it to excessive temperature changes. Do not use the device in extremely humid places, or expose it to excessive temperature changes. Do not place the device in an oily or steamy environment such as kitchen, etc. Do not leave the device without adequate ventilation, under the cloth, in any cover or package. Do not insert foreign objects or pour water into the device openings. Do not touch or carry this device with your hands wet. Do not use anti-slip gloves containing plasticizers when working with this device. Never use organic solvents such as gasoline, thinners, insecticides, etc. for cleaning. This could result in fire or electric shock. Do not pull or unnecessarily bend the connecting cables or place heavy objects on them. Do not look into the light sources of the device and do not point the light source at the eyes of others. This may cause irreversible eye damage.
⚠	<p>Do not leave the device in unstable locations where there is a risk of falling and consequent danger of injuring people.</p> <p>Once damage to the power cord is detected, such as damage to the insulation, stop using the device immediately and contact your dealer. Fire or electric shock could occur.</p>

• Specification

Interface	RS-232
Power supply	From USB connector 5V, max. 200 mA
Dimensions	68 (W) × 25 (H) × 44 (D) mm
Weight	10 g (including the cable)
Color	Black
Cash drawer connection	Connector RJ12, 6p6c; 24V; repeating opening max. 1x per 5 s (capacitor charge)
Environment	Working temperature: 0-55°C Storage temperature: 10-55°C Relative humidity: 10-90%

• Package Content



1,2 m RS-232 cable Adapter itself Basic Instal. Guide

The package includes adapter itself and connecting RS 232 (USB) cable Canon 9M + USB type A-B, length 1,2m for connection to POS system (terminal) or computer.

• Basic Information

This guide provides a brief overview of the information necessary to install the product. More detailed information about the product can be found at www.virtuos.cz/download.

• Features

- Compact simple design
- Controlling the cash drawer via RS-232 port
- Possibility of opening and monitoring cash drawer state
- Opening of 24V cash drawers
- Power supply from free USB port of connected device, it does not need any additional adapter

• Cable connector specifications



Cannon DB9 Female USB type A USB type B

Cannon DB9 – serial port connection

USB type A – power supplying connector USB 5V/max. 200mA

USB type B – connector for connection to the adapter

The adapter uses USB connectors for power and connection only, and is not otherwise active on the USB bus, i.e. it does not require any drivers.

• Optional Accessories

- Cable RJ12 24V (10P10C-6P6C) for cash drawer, black (EKA0518)
- USB power supplying adaptor (HDB0018)
- For another connection and extension cable, please, check current offer at www.virtuos.cz

• Connection

1. Select the cable for cash drawer connection – in case you use cash drawer VIRTUOS the cable RJ12 24V (code EKA0518) is highly recommended.
2. Insert the RJ12 connector (6P6C) into the side opening of the adapter labeled **DRAWER** on the underside, make sure that connector positioning is right – with the lock facing down.
3. Plug the RS-232 (USB) cable to the second side opening marked on the bottom like **USB** (type B).
4. Insert the other side of the USB cable (Type A) into your computer or other POS system. If you do not have a device with a USB port, you need to purchase an additional USB power adapter – see accessories – and plug the connector into it. Alternatively, use a similar 5V / min USB adapter. 500mA.
5. Connect the Canon 9F connector to the computer serial port or POS system.

• Description of adapter connectors



Side view: USB connector – **USB**



Side view: RJ12 connector (6P6C) – **DRAWER**



Bottom view: adapter with description
USB/DRAWER

USB connector

Adapter is connected to the computer via RS-232 (USB) cable, which is included in the package.

USB connectors are only used for power supplying and DO NOT connect any other cable to this port (only the supplied one). The connection to the system is done by the Canon 9F connector from the cable.

The adapter uses RS-232 for communication and basically does not matter as it is set. The recommended port setting is 9,600 bd, 8 data bits, none parity, 1 stop bit.

RJ12 connector (6P6C) for cash drawer connection

The cash drawer is connected via this connector. Due to the versatility of the adapter and the variety of connectors among the cash drawers, the connecting cable is not included. The cable must be purchased for a specific type of drawer, if it is not already included.

A 24V/1A current pulse is generated on this connector to open the drawer, so it is necessary to use the correct cable for connection. If the cable is not connected properly cash drawer or adapter may be damaged due to high current usage!

• Programming* – opening the drawer

The drawer is opened after sending any ASCII character to the appropriate virtual COM port.

Example of opening from the Windows OS Command Line:

1. Start Command Line – **with right mouse button - Start > Command line.**

2. Set the serial port connected to the adapter (for example: COM1) by this command:

mode com1 9600,n,8,1

3. Open the drawer by sending a character to the port with a simple command: **echo>com1**

4. The drawer should open now. If not, please, check the cable connections.

• Programming* – status detection

Detection of cash drawer status is indicated by state of the signal **Data Carrier Detect – DCD**, sometimes is called just **CD** or **RLSD**. Logical one means switch turned on (in case of Virtuos drawers = closed), and vice versa – zero means disconnected (Virtuos = opened drawer).

* More about programming, plugging in, etc. in **Programming and Construction Guide** at www.virtuos.cz