



# UC232

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Complete isolator of all RS232 signals

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# UC232

## Datasheet

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## BASIC INFORMATION

### Description

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The UC232 module is used for isolation of the RS232 or improvement of output levels of the line's signals. The isolation ensures that grounding loops are cut off.

### Application

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- Protection against ground loops – device protection.
- Improvement of output signals for both notebooks and PCs.
- Output levels correction – for devices equipped with non-standard RS232 line.

### Features

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- Complete isolation for RS232 line.
- Spike protection (static electricity) <sup>1</sup>
- Transmits all RS232 signals in compliance with specification.  
(DCD, DSR, RXD, RTS, TXD, CTS, DTR, RI, GND)
- Communication speed up to 460 kBd.
- D-SUB 9 (Cannon 9) Connectors.
- Power supply voltage 5V DC, 7V – 17V optional.

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<sup>1</sup> See technical parameters.

## TECHNICAL PARAMETERS

### RS232 drivers

Maximum communication speed .....	460 kBd
Transmitted signals.....	All RS232 signals in compliance with specification. (DCD, DSR, RXD, RTS, TXD, CTS, DTR, RI, GND)
Output signal amplitude .....	min. $\pm 5$ V, typ. $\pm 7$ V
Output line shortage protection .....	$\pm 25$ mA (indefinitely)
Input voltage range .....	max. $\pm 15$ V
Spike protection (static electricity) .....	+15kV for human body model +15kV IEC1000-4-2 for air discharge +8kV IEC1000-4-2 for contact
RS232 PC connector .....	D-SUB 9 F (Cannon 9, Female)
Isolated RS232 line connector .....	D-SUB 9 M (Cannon 9, Male)

### Supply

Supply Voltage.....	7 – 17 V DC OR 5 V $\pm 10\%$ DC <sup>2</sup>
Polarity protection (5 V DC) .....	yes (reverse polarized diode, parallel to PSU)
Polarity protection (7 – 17 V DC) .....	yes (forward polarized diode, serial to PSU)
Current.....	typically 35 mA, max. 90 mA (12 V supply)
Connector .....	coaxial 3.8 × 1.3 mm (+ inside; - outside)



Fig. 1 – Supply connector 3,8 x 1,3 mm

### Other

Isolation voltage .....	1 kV DC (60 sec)
Temperature range .....	0 to 70 °C
Weight.....	75 g
Design.....	Aluminum alloy anodized box
Dimensions .....	116 × 32.2 × 16 mm
IP covering degree.....	IP 40

<sup>2</sup> Supply voltage is to be specified in order.

## Possible makes

### Supply voltage:

- 7 – 17 V DC (Optional)
- 5 V DC  $\pm 10\%$  (Standard make)

Please, do not hesitate to contact us, if you had any specific custom requirements for this module.

## CONNECTION

### RS232 line connection

The UC232 isolator is connected directly to a serial PC connector, or by an uncrossed 1:1 cable. The transmitted signals and their directions – see Fig. 2.

Isolated connector (ISOLATED) is D-SUB 9 M. It is identical to PC's Serial connector.

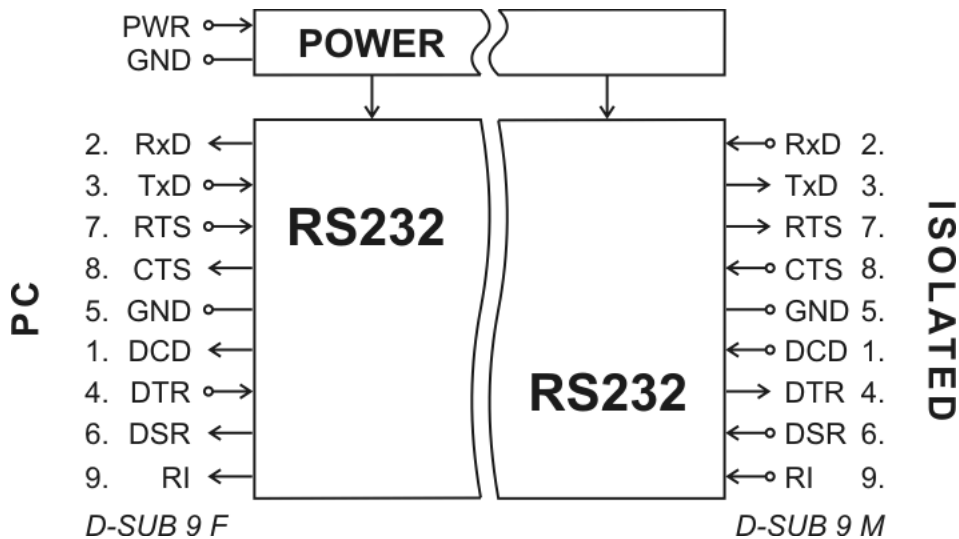


Fig. 2 – Block diagram

## Supply

The power supply (stabilised 5V, 7 – 17V optional) is connected via a 3.8 × 1.3 mm connector on the module's side. The positive pole (+) is inside, negative pole (–) outside.

## Power Supply

UC232 is to be supplied by external PSU (not included in standard delivery; you can order it along with the device) or USB supply adapter. (In case of USB supply adapter it is necessary to order 5V version of UC232.)

## INDICATIONS

There are three LED indicators on UC232 module:

PWR .....supply connected

DATA → .....data transmission from PC to ISOLATED (UC232 port labels)

DATA ← .....data transmission from ISOLATED to PC (UC232 port labels)

# Papouch s.r.o.

Data transmission in industry, line and protocol conversions, RS232/485/422/USB/Ethernet/GPRS/WiFi, measurement modules, intelligent temperature sensors, I/O modules, and custom-made electronic applications.

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