## Datasheet

# ADA-1040PC9

### Kyma* KDU-110 to MODBUS-RTU protocol converter


## APPLICATION

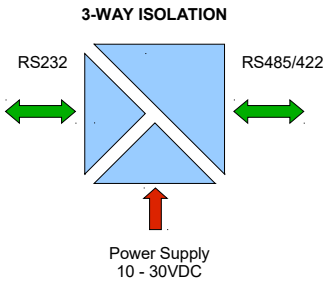
**Protocol converter Kyma* KDU-110 to MODBUS-RTU ADA-1040PC9** is a device solves a problem of connection Kyma Shaft Power Meter KDU-110 device, equipped with RS232 interface and communicate by **KDU-110 protocol** to multipoint RS-485 bus with devices communicate by MODBUS-ASCII protocol. Simultaneously, the converter convert RS232 to RS485/422 standards, with setting of data format. Depending on configurations, can be set baud rate, data bits, parity, number of stop bits. The setting can be different for RS232 and RS485/RS422 port. The converter does not require power supply from RS232 port and support the asynchronous transmission data with baud rate 230,4 kbps.
ADA-1040PC9 has DB-9F connector for connection RS232 interface of Kyma* KDU-110 and screw terminal block for connection of
RS485/422 network and power supply. The DB-9F connector is DCE type to connecting RS232 interface. ADA-1040PC9 use Tx, Rx and GND for communication with RS232 interface.
Overvoltage protection was made on base safety diodes and fuses on each RS485/RS422 lines.

## TECHNICAL DATA

| Transmission Parameters | | |
|---|---|---|
| **Interface** | **RS-232** | **RS-485/RS-422** |
| **Connector** | DSUB-9 socket, female | Screw terminal, wire max. Ø 2,5mm$^2$ |
| **Max. Line length** | up to 15m | 1200m |
| **Max. number of connected device** | 1 | 32 |
| **Transmission line** | DB9F/DB9M cable, multicore 9x0,34 shielded (up to 15m) | Twisted cable 1-pair or 2-pair , UTP Nx2x0,5 (24AWG), shield inside large interferences STP Nx2x0,5(24AWG) |
| **Standards** | EIA-232, CCITT V.24, | EIA-485, CCITT V.11 |

| **Protocol** | **Kyma* KDU-110** | **Modbus-RTU** |
|---|---|---|
| **Baud rate** | Up to 230,4 kbps | Up to 230,4 kbps |
| **Transmission type** | Asynchronism full duplex, half duplex. | |
| **Optical Signalization** | • PWR – green LED power supply,<br>• RX - red LED data receiving from RS485/RS422 interface,<br>• TX - yellow LED data transmission through RS485/RS422 interface. | |
| **Electrical Parameters** | | |
| **Power requirements** | 10 - 24 – 30 V DC | |
| **Power Cable** | Recommended length of power cable – up to 3m. | |
| **Power** | < 2W | |
| **Protection from reverse power polarization** | Yes | |
| **Galvanic Isolation** | 1kVDC or 3kVDC, between power circuit and RS232 and RS485/422 signal line, | |
| **Optoisolation** | ~3kV - between signal line RS-232 and RS485/422. | |
| **Electromagnetic compatibility** | Resistance to disruptions according to the standard PN-EN 55024.<br>Emission of disruptions according to the standard PN-EN 55022. | |
| **Safety requiring** | According to the PN-EN60950 norm. | |
| **Environment** | Commercial and light industrial. | |
| **Environmental Parameters** | | |
| **Operating temperature** | -30 ÷ 60°C | |
| **Humidity** | 5 ÷ 95% - non-condensing | |
| **Storage temperature** | -40 ÷ 70°C | |
| **Casing** | | |
| **Dimensions (W x D x H)** | 53mm x 90mm x 62 mm | |
| **Material** | Noryl UL. 94 V-O | |
| **Degree of casing protection** | IP40 | |
| **Degree of terminal protection** | IP20 | |
| **Weight** | 0,10 kg | |
| **According to standards** | DIN EN50022, DIN EN43880 | |
| **Location during work** | Free | |
| **Mounting method** | On the rail compliant with DIN35 / TS35 standard. | |

## GALVANIC ISOLATION

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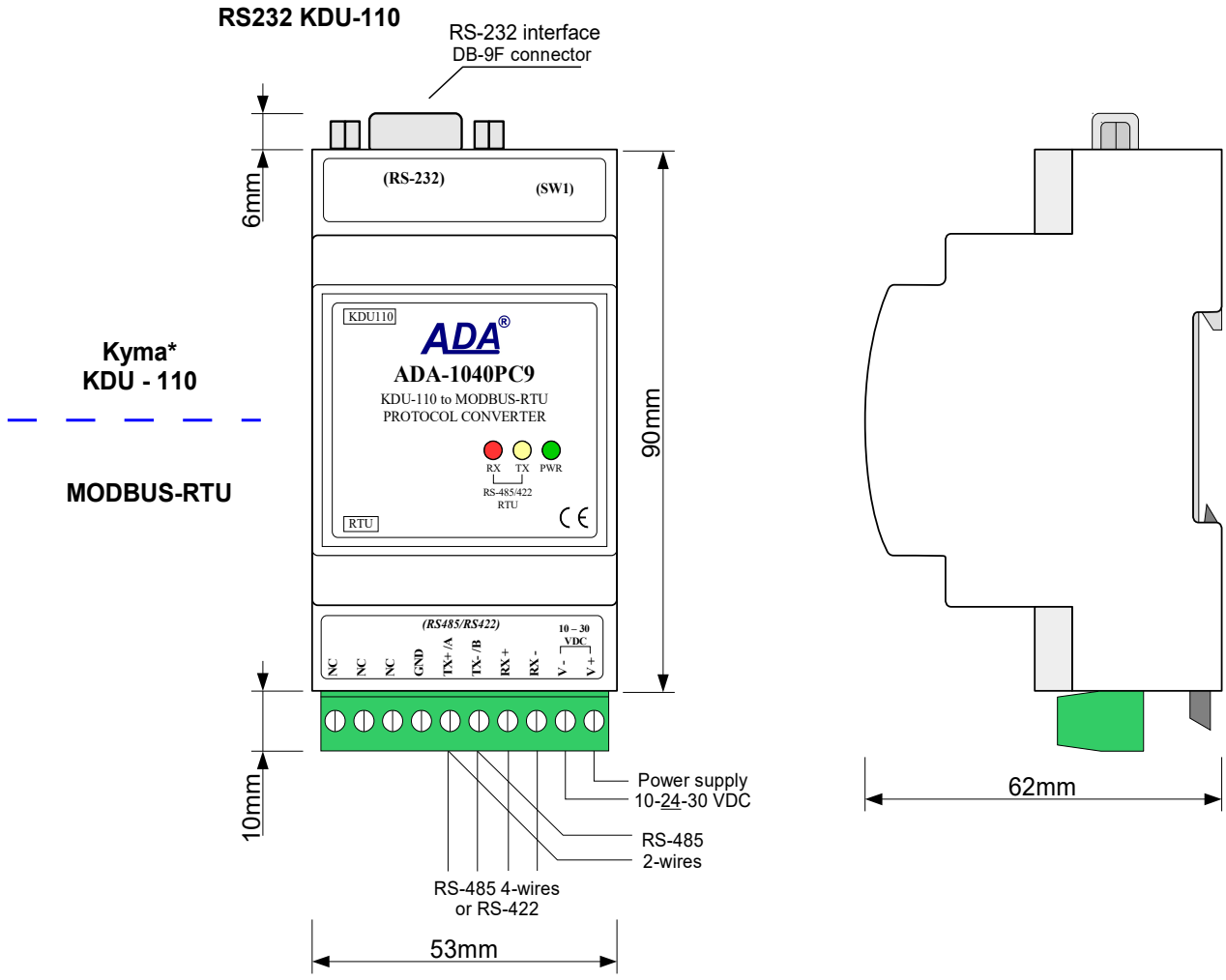
## DIMENSIONS AND CONNECTION




**RS485/RS422 MODBUS-RTU**

## VERSIONS

**ADA-1040PC9 - [ ] - [ ]**

| | |
|---|---|
| **Version:** | |
| Standard | **1** |
| **3-way galvanic isolation:** | |
| reserved | **1** |
| 1kV= | **23** |
| 3kV= | **33** |

Order example:

Product Symbol: **ADA-1040PC9-1-23**

**1** – standard version,

**23** – 1kV=, 3-way galvanic isolation,

* - *Names of companies and logotypes have been used only for informational purposes.*

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