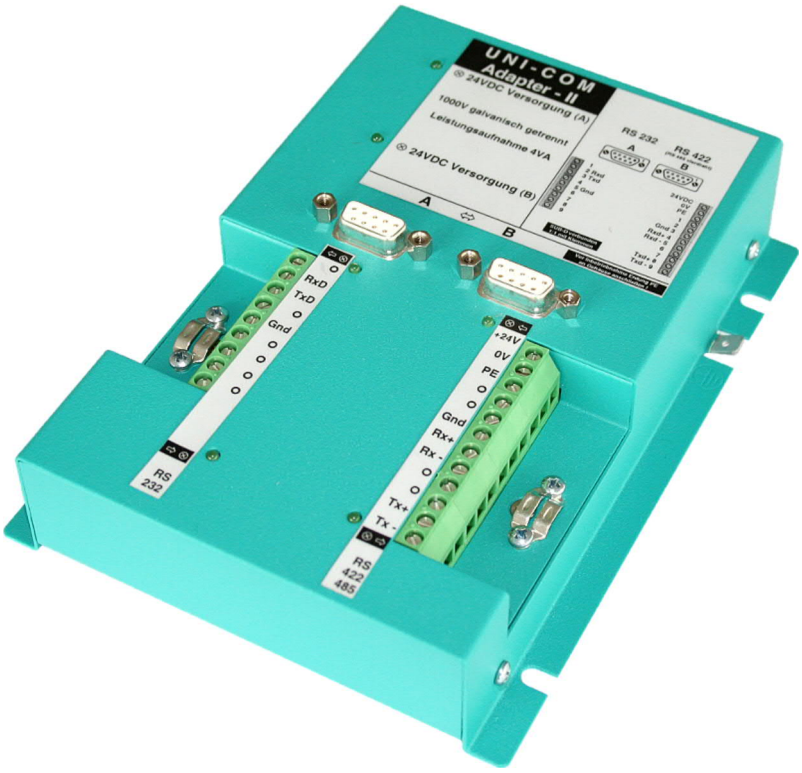
UNI-COM user manual

(english)



Art.Nr. 9505-3
Art.Nr. 9505-1
Art.Nr. 9505-2
Art.Nr. 9505-4

11.02.2021

© PI 2021

index of contents

UNI-COM

1 Description

2 Connecting options

2.1 UNI-COM II to the PC

2.2 UNI-COM II (RS422) to UNI-COM II (RS422)

2.3 UNI-COM II (TTY) to SIMATIC S5

2.4 UNI-COM II (L1) to iBx clamp

3 Installation

3.1 Hardware

4 Control elements

4.1 Status LEDs

5 Technical data

5.1 Pinbelegung RS232

5.2 Pin assignment RS422

5.3 Pin assignment TTY

5.4 Pin assignment Sinec-L1

6 Troubleshooting

UNI-COM

1 Description

The UNI-COM-II adapter is an interface converter for connecting together computer systems with different types of interfaces.

To ensure the use in an industrial environment, a 100% galvanic isolation is present between the port A and B and the input voltage.

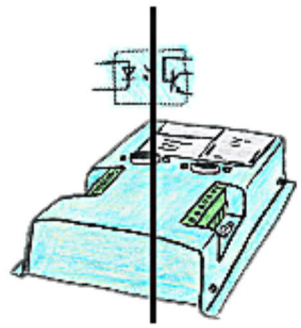
All the electronics are accommodated in an industrial metal case which is prepared for the cabinet or panel mounting.

The UNI-COM-II is available in 6 different versions for electrical conversion:
• between RS232 and RS232 for galvanic separation
• between RS232 and SINEC-L1
• between RS232 and RS422/RS485 (four wire)
• between TTY and RS232
• between TTY and SINEC-L1
• between TTY and RS422/RS485 (four wire)
which are each galvanically separated at 100% between the interfaces.

For checking the data transfer, four LED's are present which indicate the corresponding signal direction.

2 Connecting options

Interface accommodation with galvanic isolation



Sinec L1<=> RS232
TTY<=> RS232
RS422<=> RS232
RS232<=> RS422

2.1 UNI-COM II to the PC

PC (9 pole)		**UNI-COM II (RS232)**
Pin 3 (TXD)	----------	Pin 2 (RXD)

Pin 2 (RXD)	----------	Pin 3 (TXD)
Pin 5 (GND)	----------	Pin 5 (GND)
case shield	----------	case shield

2.2 UNI-COM II (RS422) to UNI-COM II (RS422)

UNI-COM II (RS422)		**UNI-COM II (RS422)**
Pin 3 (GND)	----------	Pin 3 (GND)
Pin 4 (RXD+)	----------	Pin 8 (TXD+)
Pin 5 (RXD-)	----------	Pin 9 (TXD-)
Pin 8 (TXD+)	----------	Pin 4 (RXD+)
Pin 9 (TXD-)	----------	Pin 5 (RXD-)
case shield	----------	case shield

2.3 UNI-COM II (TTY) to SIMATIC S5

UNI-COM II (TTY)		**SIMATIC S5**
Pin 5 (20mA)	---|	
Pin 1 (TXD+)	---|	
Pin 2 (TXD-)	----------	Pin 9 (RXD+)
Pin 6 (GND)	----------	Pin 2 (RXD-)
Pin 7 (20mA)	---|	
Pin 3 (RXD+)	---|	
Pin 4 (RXD-)	----------	Pin 6 (TXD+)
Pin 8 (GND)	----------	Pin 7 (TXD-)
case shield	----------	case shield

2.4 UNI-COM II (L1) to iBx clamp

for channel A:

UNI-COM II (L1)		**iBx clamp**
Pin 1 (RXD+) 1A	----------	1B (TXD+)
Pin 2 (RXD-) 2A	----------	2B (TXD-)
Pin 3 (TXD+) 3A	----------	3B (RXD+)

Pin 4 (TXD-) 4A	----------	4B (RXD-)
Pin 5 (GND) 0A/B	----------	0B (GND)
case shield	----------	case shield

for channel B

UNI-COM II (L1)		**iBx clamp**
Pin 6 (TXD+) 1B	----------	1A (RXD+)
Pin 7 (TXD-) 2B	----------	2A (RXD-)
Pin 8 (RXD+) 3B	----------	3A (TXD+)
Pin 9 (RXD-) 4B	----------	4A (TXD-)
Pin 5 (GND) 0A/B	----------	0A (GND)
case shield	----------	case shield

3 Installation

3.1 Hardware

To guarantee a trouble-free operation with the UNI-COM-II adapter, these devices should be placed on the specially provided ground lug to ground potential.

To put the UNI-COM-II adapter into operation, the device must be connected first to the power supply of 24V DC. The polarity of the voltage is printed on the front with-label.

The corresponding interface assignments are also indicated on the label.

The interface lines to the UNI-COM-II adapter should be shielded at least.

Attention!

When connecting the UNI-COM-II adapter's (RS232) to a PC
must be used a 2 to 3-rotated cables (2 to 3 and 3 to 2).

4 Control elements

4.1 Status LEDs

green LED: channel A is supplied with 24V DC

green LED: channel B is supplied with 24V DC

Green LED flashes: data is transmitted on channel A (TxD)

Green LED flashes: data is received on channel B (RxD)

Green LED flashes: data is received on channel A (RxD)

Green LED flashes: data is transmitted on channel B (TxD)

5 Technical data

Supply voltage:	24V DC +/- 20%
Power consumption:	4 watt
Display:	4 status-LEDs
Handling/Configuration:	-
Interfaces:	**others:** 2 x D-Sub-female 9pol 3 x screw type terminal for 24V/DC power supply 18 x screw type terminal for bus connection A and B
Operating temperature:	-30 - +55°C
Case:	EMC-dense powder coated metal case with mounting flange
Dimensions:	170 x 125 x 40 mm
Scope of delivery:	
	UNI-COM-device

5.1 Pinbelegung RS232

Pin Nr.	Kurzform	Bezeichnung	Richtung
1	NC	nicht belegt	
2	RXD	Empfangsdaten	Eingang
3	TXD	Sendedaten	Ausgang
4	NC	nicht belegt	
5	GND	Signalmasse	
6	NC	nicht belegt	
7	NC	nicht belegt	
8	NC	nicht belegt	
9	NC	nicht belegt	

5.2 Pin assignment RS422

Pin number	Short form	Designation	Direction
1	NC	not used	
2	NC	not used	
3	GND	signal mass	input
4	RXD +	receive data +	input
5	RXD -	receive data-	input
6	NC	not used	
7	NC	not used	
8	TXD +	transmit data +	output
9	TXD -	transmit data -	output

5.3 Pin assignment TTY

Pin number	Short form	Designation	Direction
1	TTY-OUT +	transmit data+	output
2	TTY-OUT -	transmit data -	output
3	TTY-IN +	receive data +	input
4	TTY-IN -	receive data-	input
5	I-RX	20mA power source	output
6	GND	signal mass	input
7	I-TX	20mA power source	output
8	GND	signal mass	input
9	NC	not used	

5.4 Pin assignment Sinec-L1

Pin number	Short form	Designation	Direction
1	1A[RXD+]	channel A: receive data +	Eingang
2	2A[RXD-]	channel A: receive data -	input
3	3A[TXD+]	channel A: transmit data +	input
4	4A[TXD-]	channel A: transmit data -	input
5	0A/B[GND]	0A/B signal mass	
6	1B[TXD+]	channel B: receive data +	output
7	2B[TXD-]	channel B: receive data -	output
8	3B[RXD+]	channel B: transmit data +	output
9	4B[RXD-]	channel B: transmit data -	output

6 Troubleshooting

All LEDs are dark

Is the supply voltage applied correctly or with reversed polarity?

A UNI-COM II works with disturbances

Is the earthing cable connected?
Are all the connected cables according to the assignment?

No transmission possible

Are the cables connected correctly?