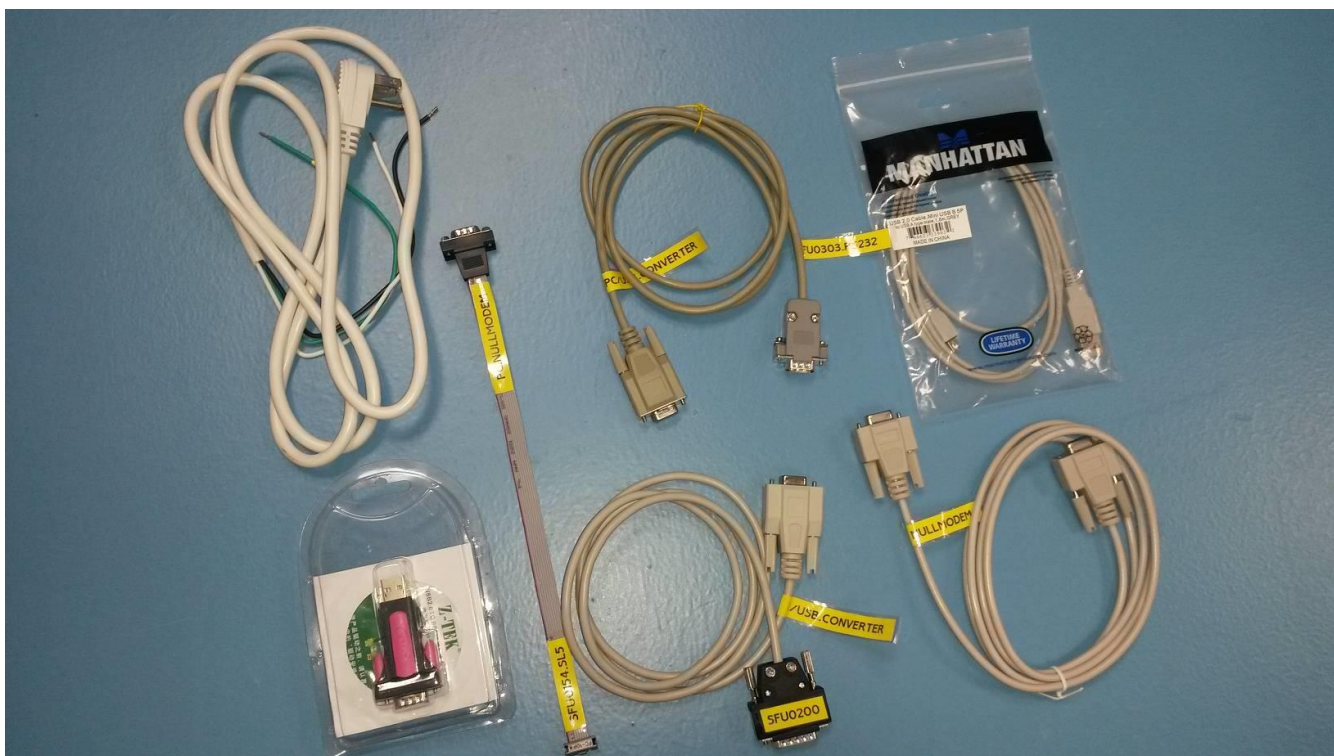# SFU Connection Cables

Which cable or which cable configuration set has to be used for the connection of a certain SFU with the PC or a PLC controller ?

1.1　　SFU0154 → PC at COM-Port RS232

First of all, a **PinHeader-Dsub Adapter** is required. This is a flat ribbon cable with a Pin-connector at one side and a D-Sub9 male at the other side.
On this side it has the standard RS232 PC COM-port pinout, so a **Nullmodem** can be used with a PC.

Please verify, that the Pin-connector is plugged at the SFU at connector SL5, only. And verify the appropriate orientation.


The side which is labeled with "Nullmodem" it has the standard RS232 PC COM-port pinout, so a Nullmodem can be used in conjunction with a PC
A so called "Null-Modem cable", has a crossing of TxD and RxD data lines The Null-Modem cable has no specific orientation, it can be connected with either side to the adapter.

1.2　　SFU0154 → PC at USB Port

In case the PC is not equipped with a COM-port, which is standard at Laptops, a **RS232-USB Converter** is required.
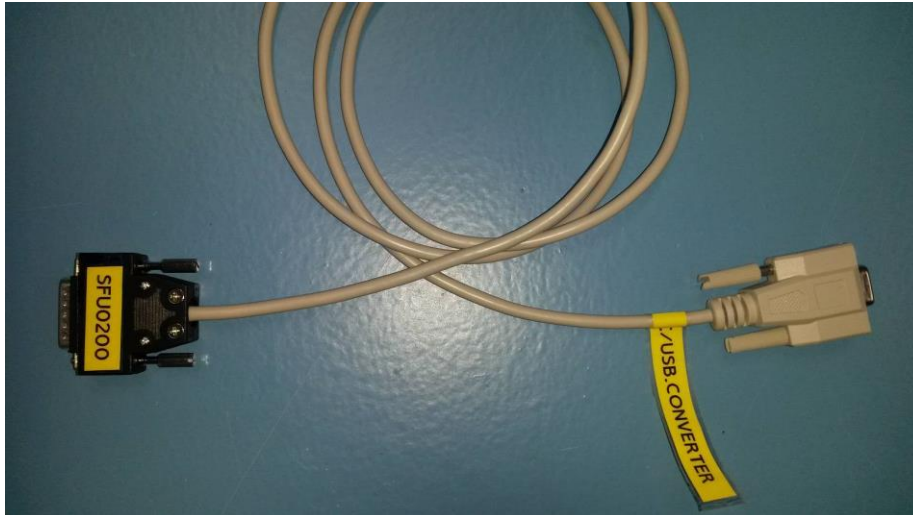You have: SFU0154 Adapter + Null-Modem + RS232-USB-Adapter
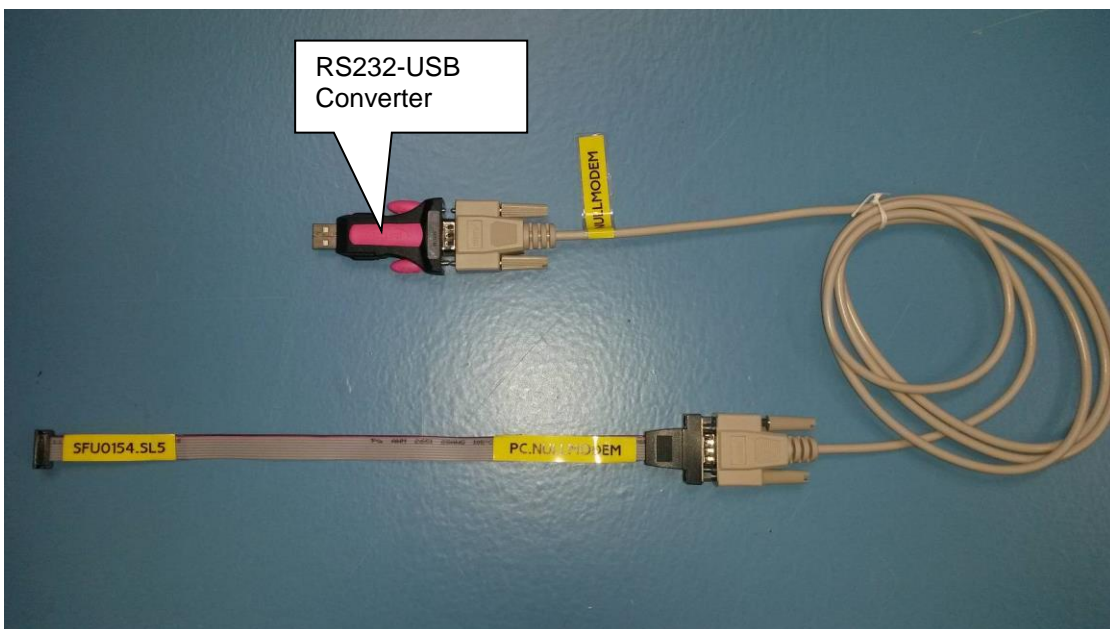
Now it looks like this.

> Before the first use, the driver for this converter has to be installed at the PC, once!
> Please follow the instructions of the driver manual. Some drivers are installed automatically, and some drivers have to be installed with a CD.
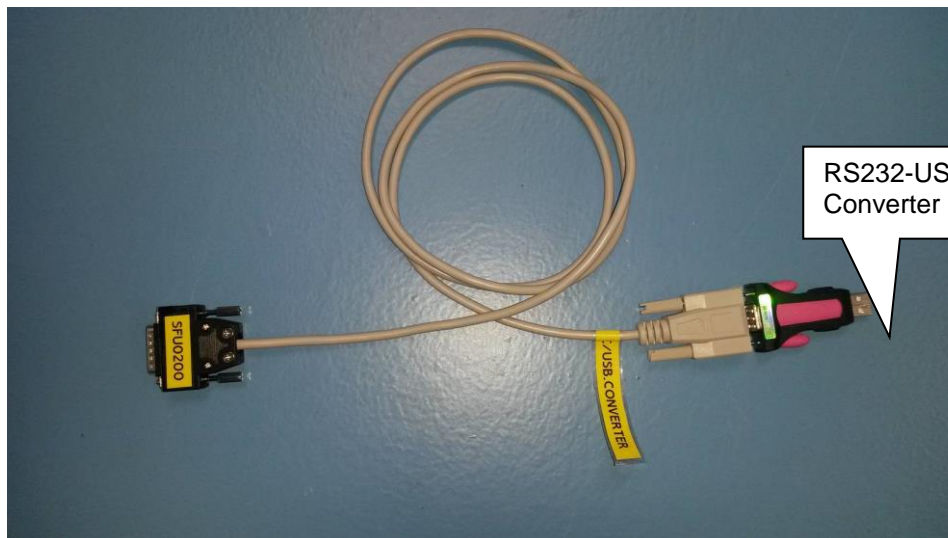
2.1   SFU0200 / SFU0300 / SFU0102 / SFU0202 → PC at Com Port RS232

The side which is labeled with "PC/USB Converter" is directly compatible with the Com-Port at a PC

2.2   SFU0200 / SFU0300 / SFU0102 / SFU0202 → PC at USB Port

If the PC is not equipped with a com-port, which is standard at Laptops,
a RS232-USB Converter is required.

RS232-USB Converter

> Before the first use, the driver for this converter has to be installed at the PC, once!
> Please follow the instructions of the driver manual. Some drivers are installed
> automatically, and some drivers have to be installed with a CD.

On option it is possible, to order a Dongle to be mounted on the 15Pin D-Sub connector where it establishes a USB interface. By this standard USB cables can be used for communication.

2.3 SFU0200 / SFU0300 / SFU0102 / SFU0202 → PC at USB Port

If the PC is not equipped with a com-port, which is standard at Laptops, it is possible to use a specific **BMR RS232-USB Converter** which can be plugged directly onto the 15Pin Dsub Interface on the rear side. From there on, only a standard USB-Micro cable can be used to connect it with a PC. With installing SFU-Terminal, a driver for this will be installed automatically.

So this is *the most convenient solution*.

This RS232-USB-Converter can be ordered at BMR.

Standard USB-Micro cable

BMR RS232-USB Converter
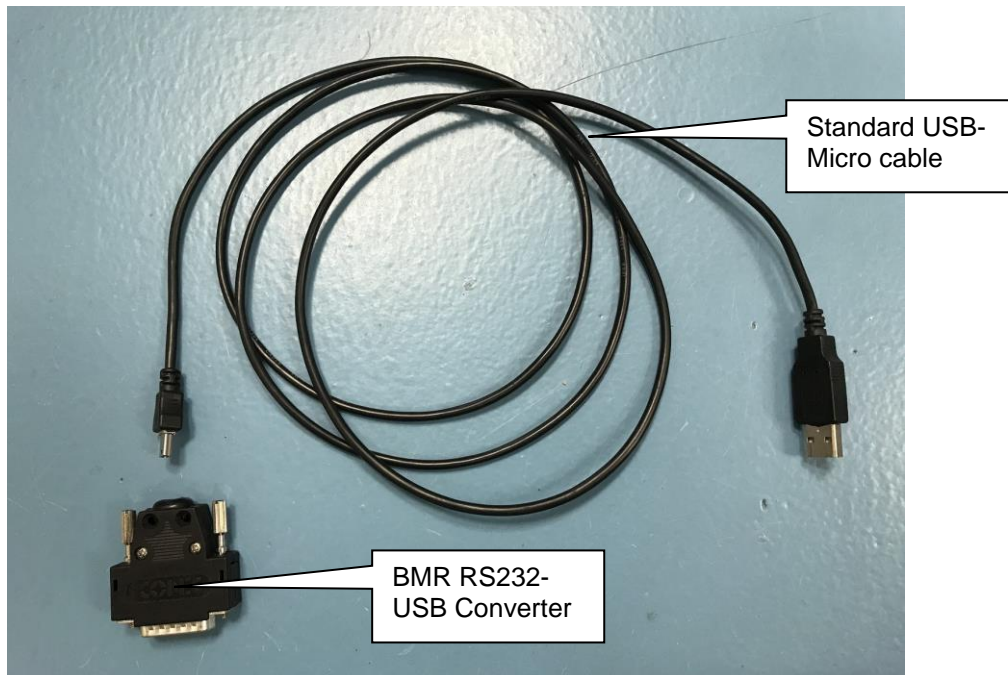
3.1 SFU0303SSE → PC at Com Port RS232

In general the communication is carried out with the USB Interface of the PC.
For this standard USB – USBmini cables can be used.

In case a connection to the Com-port of the PC or a RS232 Interface at a controller has to be established, the SFU0303-Interface **behind** the Operating panel may be utilized. This **D-Sub connector IS NOT** compatible with standard cables, so a specific BMR-Cable is required!

The side labeled with "SFU0303.RS232" mates to the connector of the SFU and the other one is directly compatible with the Com-Port at a PC.

3.2 SFU0303SSE → PC at USB Port

If the PC is not equipped with a com-port, which is standard at Laptops,
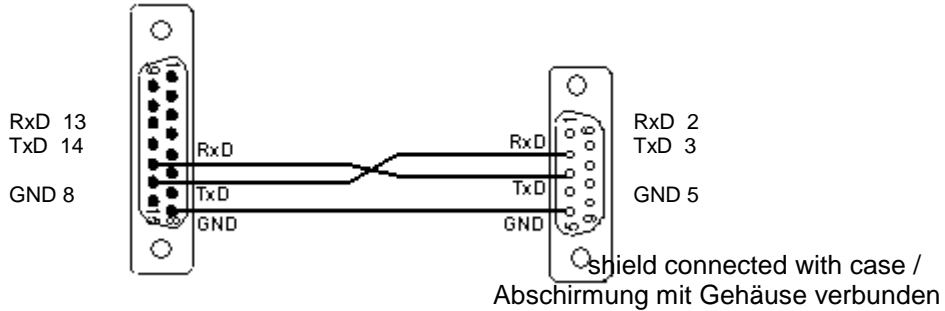a RS232-USB Converter is required.

Before the first use, the driver for this converter has to be installed at the PC, once!
Please follow the instructions of the driver manual. Some drivers are installed automatically, and some drivers have to be installed with a CD.

On option it is possible, to order all SFU0303 with a RS232, which can be used alternatively with the USB on the operating panel

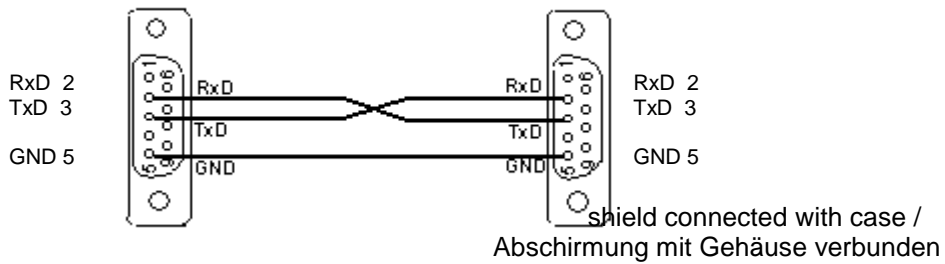## Drawings   RS232 Interface cables for BMR SFU frequency converters

1.   Frequency Converter: SFU0200, 0102, 0202, 0300

SFU: DSUB-15 Stift / male   PC: DSUB-9 Buchse / female
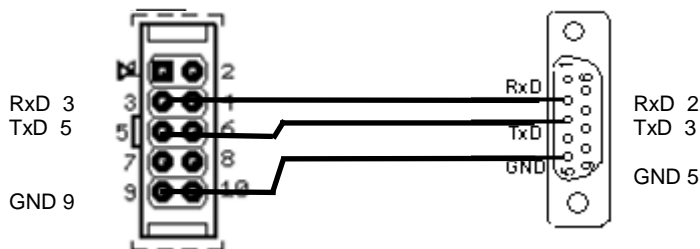
RxD 13
TxD 14

GND 8

RxD

TxD

GND

RxD

TxD

GND

RxD 2
TxD 3

GND 5

shield connected with case /
Abschirmung mit Gehäuse verbunden

2. Frequency Converter: SFU0302

SFU: DSUB-9 Buchse / female   PC: DSUB-9 Buchse / female

RxD 2
TxD 3

GND 5

RxD

TxD

GND

RxD

TxD

GND

RxD 2
TxD 3

GND 5

shield connected with case /
Abschirmung mit Gehäuse verbunden

3. Frequency Converter: SFU0154

SFU: 10Pin Buchsenleiste /   PC: DSUB-9 Buchse / female
             Header female

RxD 3
TxD 5

GND 9

RxD

TxD

GND

RxD 2
TxD 3

GND 5

4. Frequency Converter: SFU0303SSE - RS232 Interface

<u>DSub-9-female on SSE front panel</u>

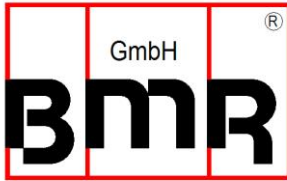|		
1	Unlock-RS232	
2	NC	
3	reserved	
4	RXD	
5	GND	
6	reserved	
7	NC	
8	reserved	
9	TXD	
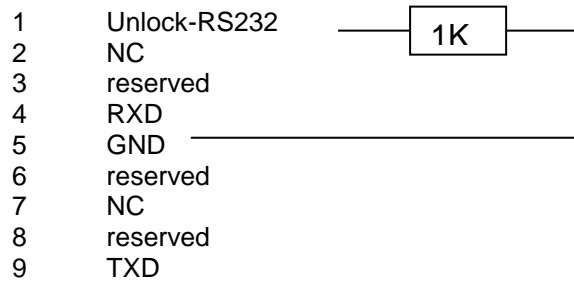
The resistor 1K from Pin1 to Pin 5 is required to unlock the interface
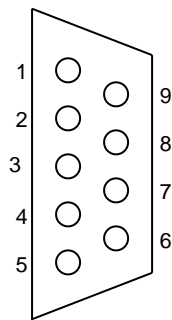
view on the pins at frontpanel of SFU0303

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Issue : 04.09.2013