

# Module bus power supply and plug

Overview and notes



## Overview eBus / module bus

The proven and robust **eBus** interface is usually used to connect the KBR devices to the higher-level software. A bus master ensures that all connected devices measure and record synchronously in terms of time and period. In contrast, the **KBR module bus** is used to expand modular device combinations. The module bus usually also assumes the function of supplying power to the connected modules. The relevant installation guidelines must be observed to ensure proper functioning.

### KBR eBus

Almost all stand-alone measuring and recording devices have a serial eBus interface in accordance with the RS 485 standard. It represents the communication basis in the field bus sector. Compared to other bus systems, such as Modbus or Profibus, it offers special advantages for energy management, such as time and period synchronization. The physical structure is formed by serial RS 485 segments, which are connected directly or via TCP/IP gateways to the local system centers (**bus masters**). The bus masters not only synchronize the individual bus segments and participants but are also the link between the bus devices and the **visual energy** web.

The KBR eBus is based on the EIA RS-485 standard. It consists of a 2-wire line and works according to the master-slave method. This means that there is only one master on the eBus, which independently sends requests to the other bus participants (slaves) and evaluates their responses. All devices with the KBR eBus interface are available as slaves.

Please observe the eBus installation guidelines.

### KBR module bus

The KBR module bus was designed as a connection between KBR eBus devices and their expansion modules. By plugging in configured cable jumpers, the user can simultaneously establish both the data and power supply between the modules. Wiring errors, the number one cause of faults, are therefore largely eliminated. A six-pin RJ12 (6P6C) plug connection was selected as the physical interface. This cable connection, which is common in the telephone sector, can also be easily made by the customer using the appropriate crimping tool.

Please observe the module bus installation guidelines.

## Module bus power supply

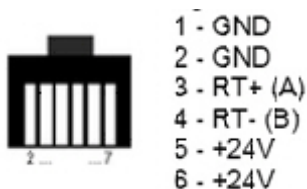
The modules are supplied with power via the module bus. The power supply unit of the supplying device must provide this additional power to supply the connected devices. Depending on the supplying device, the number of participants is therefore limited. The power consumption of the individual module devices varies and can even depend on the respective input status. The following table shows the power consumption and output in the worst case:

### Power consumption of module bus devices:

Type	Recording	Delivery
multicomp ..D6		9,0W
multisio ..D6		9,0W
multimax ..D6		9,0W
multisys ..D4-PS24V		10,0W
multisys ..D2-BSBS		5,0W
multisys ..D2-ESBS		5,0W
multisys ..D2-BSET		4,0W
multisio ..D2-4DI	2,0W	
multisio ..D2-4AI	1,0W	
multisio ..D2-4CI	1,2W	
multisio ..D2-1TI2RO	1,0W	
multisio ..D2-4RO	1,3W	
multisio ..D2-4RO-ISO	1,3W	
multisio ..D2-4TI	1,0W	
multimes ..D4-BS	0,0W	
Display ..-DS	1,0W	

## Module bus connector

A six-pin RJ12 (6P6C) plug connection was selected as the physical interface. This cable connection, which is commonly used in the telephone sector, can also be easily made by the customer using the appropriate crimping tool. The assignment is a 6-pin one-to-one connection and is as follows:



### Note:

For extensions, it is particularly important to ensure that only one active device is connected to the power supply of the module bus devices at any one time. If several devices with an active power supply are connected, the power supply units may be damaged. The applicable VDE regulations must be observed for installation and cable routing!