

FAQ about the Single SES / SVL / SC / SBC with integrated profibus

Devices with a profibus connection via a gateway have not been considered.

Where is the current bus status of the controller indicated?	
	<p>SES/SVL/SBC: The LED "BUS" indicates the bus status. The LED corresponds to the decimal place of the parameter "address" at the working level (SES: "Adr" (A.13) / SVL: "Adr" (A.13) / SVL: "Adr").</p> <p>SC: "Setting interface/baud rate" menu: Display in plain text.</p>
SES/SVL/SBC: What does the LED "BUS" indicate?	
	<p>Off :Master is not active or bus is not connected</p> <p>Flashing (1Hz) : Controller is waiting for parameterization / configuration</p> <p>On : Data exchange mode</p>
The LED "BUS" is off (SC:Status=?) even though the bus is connected	
	<p>SES/SVL: The parameter "Pro" (SES:C.39 / SVL: C38) must be set to "Pbd".</p> <p>SC: The parameter "setting interface/protocol" must be set to Profibus-DP. The message "module not available" indicates that no profibus interface module has been installed.</p>
	Check whether the master is active.
	Check whether the bus lines are connected and if the connection is <u>not reversed</u> .
	Check whether the terminating resistors at the top and the end of the bus are connected.
	<p>SES/SVL/SBC: The parameter "baud rate" (SES:"b" (C.40) / SVL: "b"(C39) / SBC: "b") must display a baud rate. The display "ndt" means that no baud rate (and thus no bus connection/master) has been detected.</p> <p>SC: The parameter "setting interface/baud rate" must indicate a baud rate.</p>
SES/SVL/SBC: The LED "BUS" is flashing.	
SC: The status indicates Wait_Prm or Wait_Cfg.	
The master can't connect or can't parameterize / configure the controller.	
	Check whether the terminating resistors at the top and the end of the bus are connected.
	Check whether the voltage connections of the bus lines are <u>not reversed</u> .
	Is the selected module of the GSD file compatible with the controller? Only the modules "SES-process data....." or "SVL/SC-process data....." or "SBC-process data....." and the "Parameter channel" are possible.
SES/SVL/SBC: All decimal points are flashing at the parameter "Address"	
	Internal error of the profibus hardware. Reset the device. Please contact the manufacturer.
SC: "Error..." is indicated for the parameter "setting interface/baud rate"	
	Internal error of the profibus hardware. Reset the device. Please contact the manufacturer.

**SES/SVL/SBC: The LED "BUS" is flashing or permanent light appears alternately.
 SC: The status display alternates between Wait_Prm or Wail_Cfg and data exchange.**

The slave address in the master (S7) has been assigned twice.

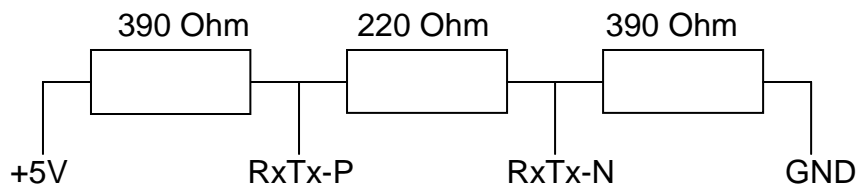
How do you connect the profibus sub D plug to the controller?

Connections between the connector of the controller and the sub D socket:

Signal	Sub-D	SES	SC SVL	SBC	Connector M12	Colour of cable
Screen	1	-				
RxTx-P	3	B	71	86	4	red
Control signal	4	F	72	-		
GND	5	A	74	85	3	
+5V	6	G	73	88	1	
RxTx-N	8	C	70	87	2	green

In case of connection problems it is recommended to use an adapter between controller and sub D socket according to the above table and to use a standard profibus connector for the connection.

How does the terminating resistor for the profibus look like?



These resistors are integrated into the standard profibus connectors as an add-on unit and should be used if possible.

The controller is in the data exchange mode, the parameters can be read. The written parameters are not accepted by the controller.

The parameter channel registers a procedure error (03) during the writing.

The controller is not in the REMOTE mode.

SVL: Switch to REMOTE (LED "F" is on) using the "F" key. If the key is blocked, it has to be enabled via the parameter "E-F"(C.29) = "on" at the configuration level.

SES: Switch to REMOTE (LED is on) using the "F1" key. If the key is blocked, it has to be enabled via the parameter "F1" (C.7) = "on" at the configuration level.

SC: Use the "F3" key in the basic configuration to switch to REMOTE (REMOTE field will turn dark).

SBC: The parameter "REMO" at the working level must be "on".

The controller is switched to REMOTE and turns off immediately.

The master is active and transmits in Byte3 of the process image (control word) a "0" and also switches off the device. Check the data of the master!

The parameter channel does not work.	
	8 byte must be consistently transmitted for the parameter channel. However, the S7 can only process 4 bytes when operating via the battery. As a result only 0-values are transmitted. In this case, the writing must take place via operating system routines (FSC).
If the parameter channel is added to the process image, it will return error messages (e.g.: 03 = invalid command). The process image itself will work.	
	In the memory of the SPS, the data of the process image and parameter channel must be arranged in successive order. If necessary, they must be copied accordingly.
The read parameter values do not seem to be right.	
	The master software (S7) has sorted the individual receiving blocks in an order that is different from the description in the manual. The order as shown in the manual corresponds to the order of the bytes transmitted to the bus.
	In case of S7 systems it may be possible to arrange the data bytes in the memory starting at address 0 while the words can be found starting at address 256.
	In case large or negative numbers are shown, it may be possible that high byte and low byte have been interchanged. The controller first transmits high byte, then low byte (Siemens/Motorola format). Some systems use the reverse order in case of data words but will provide the option to interchange the bytes.
	An error has occurred when assigning the received bytes to the individual parameters (e.g.: Addressoffset ...) The entire receive string should be analysed byte by byte based on the example in the manual.
	During the further processing of the received data, a byte with a word command was accessed. Or the other way round.
At irregular intervals, the master will STOP. Otherwise, the communication works perfectly.	
	The transmission is temporarily disrupted by EMC interferences (switching peaks from contactors, motors etc...). If this is the reason why the master will repeat a transmission more often than set for the parameter "Max Retry Limit", the process will be aborted. Try to increase the "Max Retry Limit" and check if the failures decrease in frequency. The reason may be an insufficient shielding of the bus cabling. The shield must be run all the way to the controller terminal but will not be connected to it. When entering the switch cabinet, the shield must be connected to the ground with low impedance. It is recommended to provide a separate ground connection of all bus users among each other with a cross-section of at least 16mm ² .
The S7 has included the GSD file but the modules can not be found.	
	You will find the controller modules at: "Other FIELD DEVICES/Controller/Controller Type R"