General information:

Serial interfaces enable digital communication with computers or higher ranking control systems.
An RS 232 (optional USB) interface permits connection of one controller per computer interface. The RS485 interfaces enables the connection of max. 32 participants in one data bus. Here, the controllers must be set to different addresses for differentiation.(Controller configuration level). Further Interfaces upon request.

Technical data:

Interface:	direct connection - RS232, USB	bus connection - RS485
Connection:	serial, asynchronous 2 wire (+GND)	serial, asynchronous 2 wire (+GND)
Transfer medium:	twisted and screened cable	twisted and screened cable
Bus line length:	-	1000m
Branch connection length:	15m	2m
Max. number of controllers:	1	31
Transmission direction:	-	data flow control
Transfer rate:	9600, 19200, 38400 Bit / s	9600, 19200, 38400 Bit / s

Connection lines:

Cable junction for KFM devices is done by adapters which are linked to the service interface.
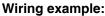By direct connection: 99szks2(RS232), alternatively 99szksu(USB)
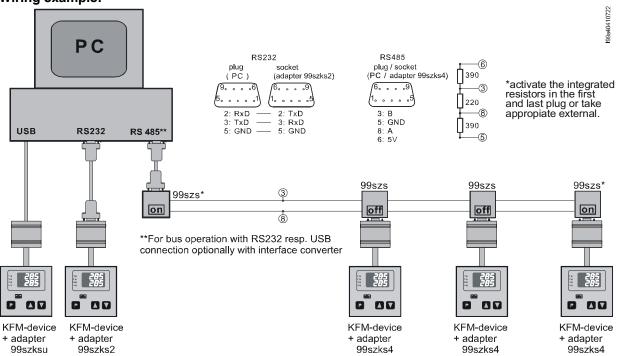By bus connection: 99szks4(RS485)
To establish the bus connection, providing that there is no interface RS485 on PC resp. at the PLC existing, an interface converter RS232 resp. USB to RS485 is necessary.
Use screened lines to connect the interfaces (e.g. KFM 99szl.).
Place the screening on the controller earthing terminal.
Connect the RS485 line at the beginning (PC or interface converter) and the end (last controller) with d- sub - plugs with integrated resistors (f.e. type 99szs) or appropriate external resistors.

Wiring example: