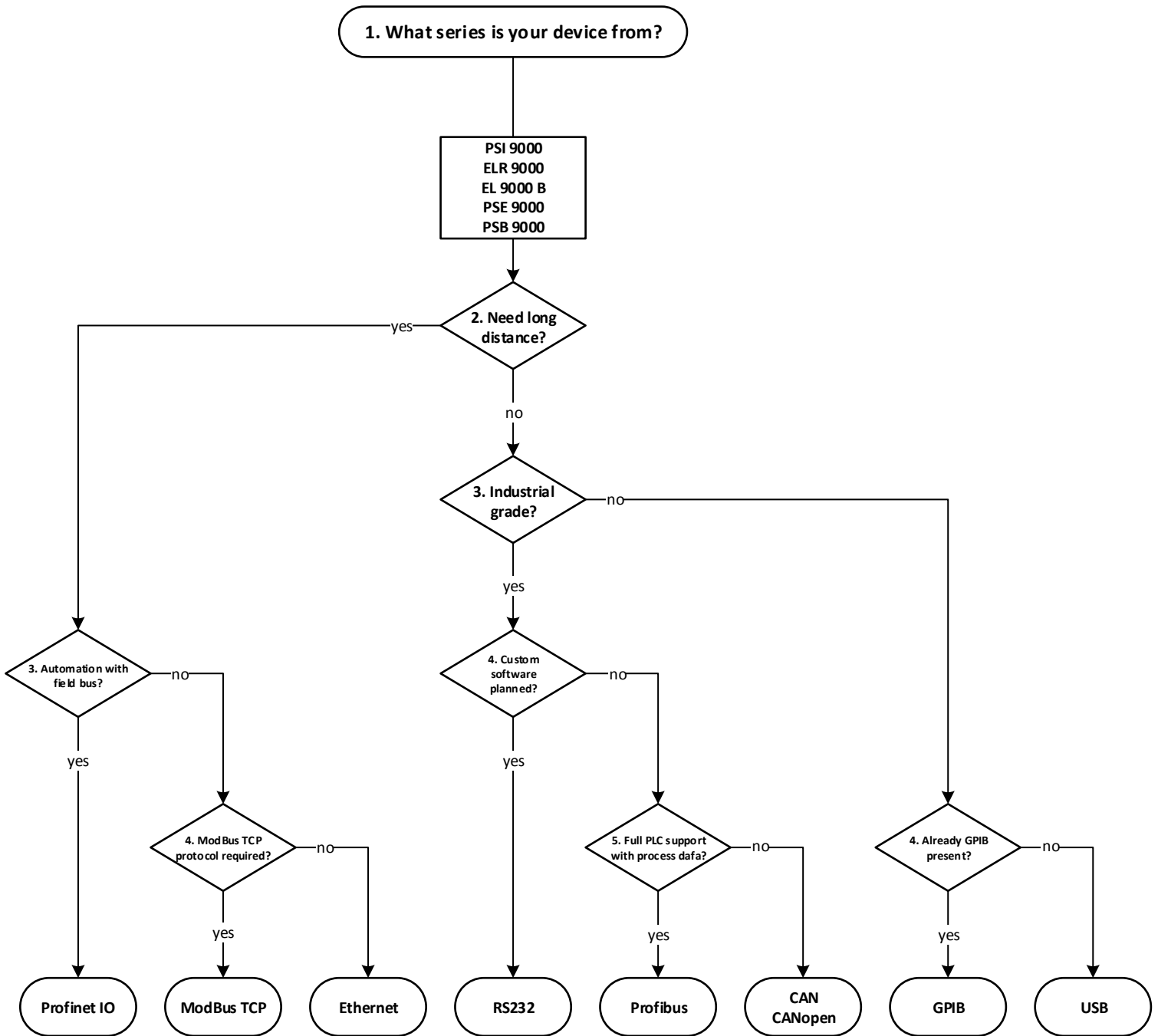






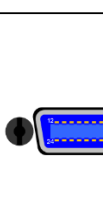


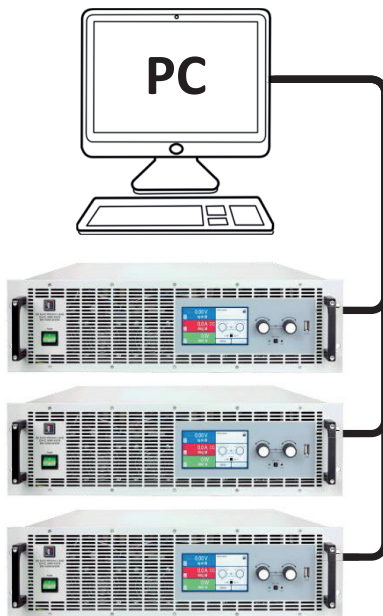
How to find the best remote control interface for your application?



	CAN	CANopen	Ethernet	ModBus TCP	Profibus Profinet IO	RS232	GPIO
Face							
Specs	<ul style="list-style-type: none"> Type: Bus 10 kBit – 1 MBit CAN 2.0 A & 2.0 B Integrated bus termination DBC files Cyclic data 	<ul style="list-style-type: none"> Type: Bus 10 kBit – 1 MBit CANopen standard EDS/XDD file Customisable database 	<ul style="list-style-type: none"> Type: Network 10/100 MBit TCP/IP, HTTP, ICMP Website with control functions 1 or 2 port version Integrated switch (2 port version) 	<ul style="list-style-type: none"> Type: Network 10/100 MBit TCP/IP, HTTP, ICMP Website with control functions Supports ModBus TCP frame 1 or 2 port version Integrated switch (2 port version) 	<p>Profinet:</p> <ul style="list-style-type: none"> Type: Network 1 or 2 port version Integrated switch (2 port version) <p>Profibus:</p> <ul style="list-style-type: none"> Type: Bus Up to 12 Mbit 	<ul style="list-style-type: none"> Type: P2P 9600 – 115200 Bd No handshaking 	<ul style="list-style-type: none"> Type: P2P Parallel bus IEE 488 standard Built-in
Pro	<ul style="list-style-type: none"> Industrial grade High data speed Medium distance Bus topology Exchangeable with other interfaces 	<ul style="list-style-type: none"> Industrial grade High data speed Medium distance Bus topology Exchangeable with other interfaces 	<ul style="list-style-type: none"> High data speed Long distance Network topology Exchangeable with other interfaces SCPI supported LabView supported Plug 'n play 	<ul style="list-style-type: none"> High data speed Long distance Network topology Exchangeable with other interfaces Easy ModBus network integration Plug 'n play 	<ul style="list-style-type: none"> Industrial grade High data speed Medium distance Bus topology Exchangeable with other interfaces PLC compatible 	<ul style="list-style-type: none"> Medium distance Exchangeable with other interfaces SCPI supported LabView supported Low costs 	<ul style="list-style-type: none"> SCPI supported Very easy setup and integration Unified support of different devices
Contra	<ul style="list-style-type: none"> No plug 'n play on PC side CAN software required High overall costs 	<ul style="list-style-type: none"> No plug 'n play on PC side CANopen software required High overall costs 	<ul style="list-style-type: none"> Typical network issues Complicated setup 	<ul style="list-style-type: none"> ModBus TCP software required Typical network issues Complicated setup 	<ul style="list-style-type: none"> No plug 'n play on PC side Extra software required High overall costs 	<ul style="list-style-type: none"> Low data speed One RS232 port required per device No bus, no network 	<ul style="list-style-type: none"> Short distance Very high costs Built-in Complicated cable system

Digital communication topologies

Bus



Pro:

- Separate communication channels realisable
- Short cables
- Broadcast messages (one command to all bus members) possible

Contra:

- If the connection from the PC to the first units is interrupted, all other units are offline as well

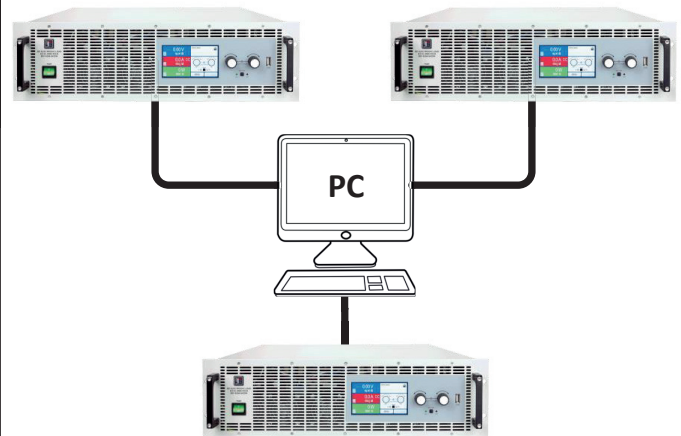
Typical area of use:

- Parallel connection of multiple identical models

Which of our interfaces use a bus connection:

- CAN, CANopen, Profibus, GPIB

Point-to-point



Pro:

- Every target device has its separate communication line

Contra:

- Much cabling required, one line for every device
-

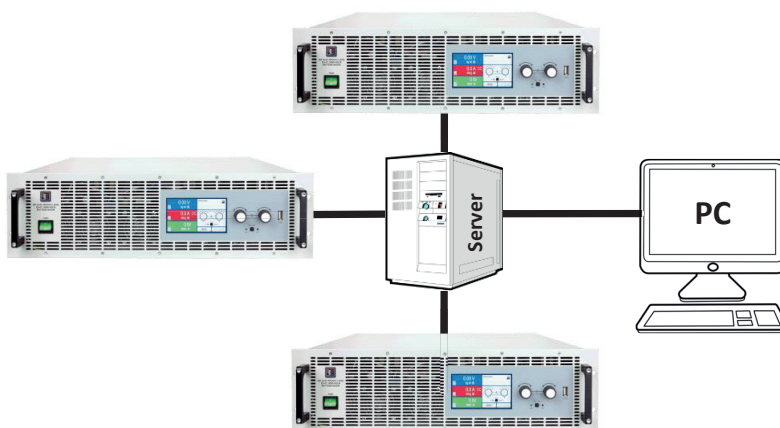
Typical area of use:

- Connection to only one device or a few devices or situations where it is required to change the setup very often
- Laboratory and on-desk test applications

Which of our interfaces use a point-to-point connection:

- USB, RS232

Network



Pro:

- Very long distances
- Many devices easily integrateable
- Low costs

Contra:

- Very much cabling
- Communication and reliability is very much depending on network hardware like switches or patch panels

Typical area of use:

- Parallel connection of multiple identical models or test applications of single devices with direct connection to PC or local network switch

Which of our interfaces use a network connection:

- Ethernet, Profinet IO, ModBus TCP

Note: Ethernet interfaces with 2 port incorporate a network switch and can turn a network line into a bus with open end or, for higher dropout safety, into a ring. No matter how many devices are connected in that bus/ring, at the point where they are connected to the network, it requires a max. of two ports on a higher level switch.