

The modular interface system PROBUS V allows the digital control of functions like voltage setting, current setting, as well as OUTPUT ON/OFF and, depending on the unit type, special functions.

All digital interfaces provide full galvanic isolation through internal fibre optic connectors. There is one digital interface per device (some units can have more) and it can be combined with an analog programming interface.

For most models, the digital programming can be changed as a service request. Interface boards are interchangeable.

## Interface specific data

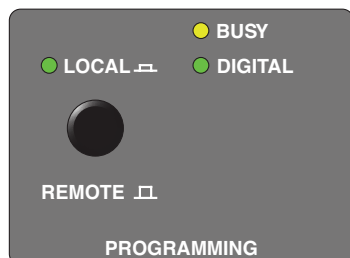
Digital interface	RS-232 RS-422 RS-485	USB	LAN	Profibus DP	IEEE 488
Default baud rate	9600Bd	115200Bd	230400Bd	38400Bd	625000Bd
Typical command response times	40ms	20ms	10ms	35ms	10ms
Software support	xpterm	xpterm, FTDIVCP Driver	xpterm	xpterm, GSD file	xpterm, National Instruments MAX
Code example	C Java Powershell Python	C Java Powershell Python	Python	-	-
Interface	Sub-D S9	USB	RJ45	Sub-D S9	IEEE 488

## General interface data

Main board	Typical values
Resolution of monitors	17 bit + sign bit (default) Profibus 16 bit + sign bit
Update interval of monitors	20ms (default)
Resolution of set values	16 bit including sign bit (default) Max. 22 bit (option, 128ms setting time)
Internal command processing time (without transmission time)	1ms
Temperature coefficient of monitors (interface ADC drift)	3ppm/K (max. 10ppm/K)
Temperature coefficient of set values (interface DAC drift)	3ppm/K (max. 10ppm/K)

## Front panel

Control unit with two selectable operating modes:  
LOCAL / DIGITAL programming.



Control unit with three selectable operating modes:  
LOCAL / ANALOG / DIGITAL programming.



# Digital interface options

## Rear panel

We provide seven different variants of digital interfaces.

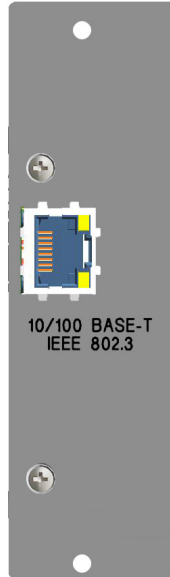
RS485, RS422, RS232



USB



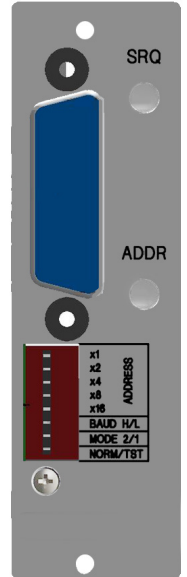
Ethernet



Profibus



IEEE 488



## Rear panel (continued)

Additional option: Fibre optic with converter to RS232



### Notes:

1. Maximum possible fibre optic length is 20m.
2. A RS232 1 channel data line powered / RPocto-clamp DTE and fibre optic cable are included.

## Probus V overview

Probus V is a proprietary command language from XP Power. It has readable ASCII string commands, contains error codes and is easy to implement. CRC is optional.

### Example commands for I-Set, I-Mon and BON:

► Set-Commands:

- ">S1 10"
- ">BON 1"

► Queries

- ">S1 ?"
- ">M1 ?"
- ">BON ?"

### Example for Ramp up-down:

>bon 1	switch output on
>s0r 1	set slew rate to 1V
>s0b 1	set ramp mode to up/down
>s0 200	set target set-value
>m0 ?	get m0 monitor value
- pause / hold value	
>s0 100	set new target set-value
- pause / hold value	
>bon 0	switch output off

## Software

### XP Power Terminal (Demo software)

XP Power Terminal provides an easy way to communicate with our power supplies via RS232, USB, Ethernet, Profibus and IEEE488 without having to develop your own software. It is primarily intended to provide a quicker way to get started, to test the command set of our devices or to use their full range of functions.

More details or resources on request. Please consult [XP Power Sales](#) directly.