

1.1 IF766

1.1.1 General information

The IF766 interface module is an aPCI module and can be installed in all corresponding interface module slots e. g. in the CP360.

The IF766 is equipped with a RS232 interface and a Profibus DP master interface and can be used as a master in a Profibus DP network.

The RS232 interface can be used as a diagnostics and configuration interface or as a standard RS232 interface. An operating mode switch switches between the two.

1.1.2 Order data

Model number	Short description	Image
	Interface module	
3IF766.9	aPCI interface module, 1 Profibus DP master interface, electrically isolated and network capable, 1 RS232 interface	
	Required accessories	
1A0550.03	B&R Fieldbus Configurator for Automation Studio version \geq V 2.5.2	
	Optional Accessory	
0G0001.00-090	Cable PC <-> PLC/PW, RS232, online cable	
0G1000.00-090	Bus connector, RS485, for Profibus networks, remote I/O	
0AC916.9	Bus Termination, RS485, active, for Profibus networks, remote I/O, standard mounting rail installation, supply voltage: 120 / 230 VAC	

Table 1: IF766 - order data

1.1.3 Technical data

Product ID	IF766
Short description	
Communication module	1 x RS232, 1 x Profibus DP master
Interfaces	
Interface IF1 Type Design Maximum transfer rate	RS232 9-pin DSUB connector 115.2 kBit/s
Interface IF2 Fieldbus Number of slaves Type Design Maximum transfer rate	Profibus DP master 125 RS485 9-pin DSUB socket 12 MBit/s
General information	
Status displays	2 LEDs for sending/receiving data for IF1 4 LEDs for IF2 bus function
Diagnostics RS232 data transfer Profibus DP bus function	Yes, with status LEDs Yes, with status LEDs
Electrical isolation PLC - IF1 PLC - IF2 IF1 - IF2	No Yes Yes
Power consumption 3.3 V 5 V Total	0.8 W 0.5 W 1.3 W
Certification	CE, C-UL-US in development, GOST-R in development
Mechanical characteristics	
Slot	Insert e. g. in CP360
Protection	IP20
Operating / Storage temperature	0 °C to +60 °C / -25 °C to +70 °C
Humidity	5 to 95% (non-condensing)
Note	Fieldbus Configurator sold separately

Table 2: IF766 - technical data

1.1.4 Additional technical data

Product ID	IF766
IF1 interface, RS232	
Controller	UART type 16C550 compatible
FIFO	16 bytes in send and receive direction
Input filter / Protective circuit	Yes

Table 3: IF766 - additional technical data

Product ID	IF766
Maximum distance	15 m / 19,200 Bit/s
Handshake lines	RTS, CTS
Network capable	No
Data formats	
Data bits	5 to 8
Parity	Yes / No / Even / Odd
Stop bits	1 / 2
IF2 interface, Profibus DP master	
Controller	EC1
RAM	8 KB
Maximum distance	1,000 m
Maximum transfer rate	
Bus length <100 m	12 MBit/s
Bus length <200 m	1.5 MBit/s
Bus length <400 m	500 kBit/s
Bus length <1,000 m	187.5 kBit/s
Network capable	Yes
Bus termination resistor	External T-connector (0G1000.00-090)

Table 3: IF766 - additional technical data (cont.)

1.1.5 Operational and connection elements

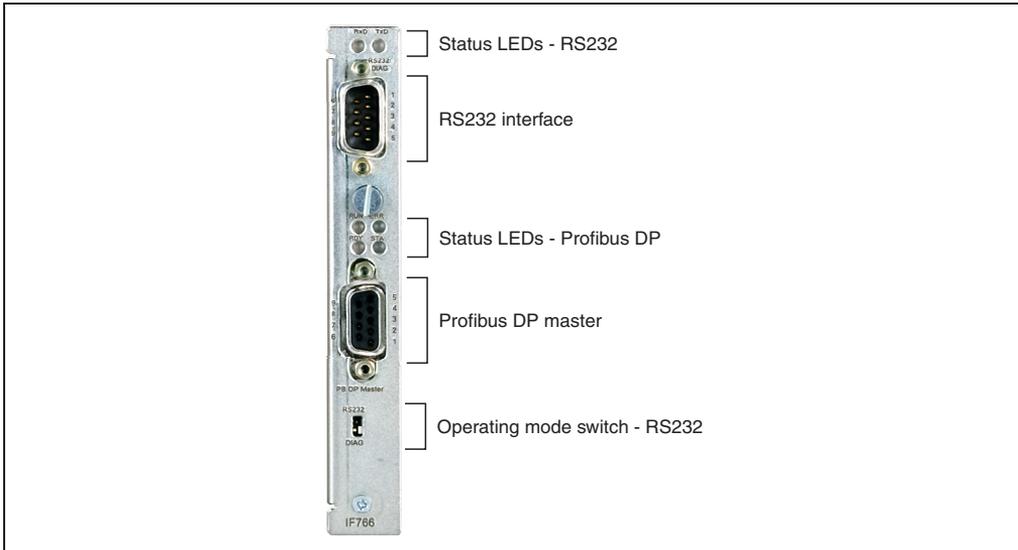


Figure 1: IF766 - operational and connection elements

1.1.6 Status indicator - RS232 interface

Image	LED	Color	Description
	RxD	Orange	The module receives data via the RS232 interface.
	TxD	Orange	The module sends data via the RS232 interface.

Table 4: IF766 - status indicator - RS232 interface

1.1.7 Status indicator - Profibus DP master interface

Image	LED	Color	Status	Description
	RUN	Green	On	Communication running
			Cyclic blinking	Communication stopped
			Irregular blinking	Missing or faulty configuration
			Off	No communication
	ERR	Red	On	PROFIBUS error
			Off	No error
	RDY	Orange	On	Module ready
			Cyclic blinking	Bootstrap loader active
			Irregular blinking	Hardware or system error
			Off	Hardware defect
	STA	Orange	On	Sending data or token
			Off	No token

Table 5: IF766 - status indicator - Profibus DP master interface

1.1.8 Operating mode switch - RS232 interface



Figure 2: IF766 - operating mode switch - RS232 interface

The operating mode switch sets the operating mode of the RS232 interface:

Switch position	Operating mode
RS232	Standard RS232 interface
DIAG	Diagnostic and configuration interface

Table 6: IF766 - operating modes - RS232 interface

1.1.9 RS232 interface (IF1)

Interface	Description	Pin assignments		
		Pin	RS232	
<p>Application interface RS232</p>  <p>9-pin DSUB connector</p>	<p>The standard RS232 interface is not electrically isolated.</p> <p>LEDs show on the interface whether data is being received (RxD) or sent (TxD).</p> <p>The shield is connected to the DSUB connectors housing.</p> <p>Maximum transfer rate: 115.2 kBit/s Max. cable length: 15 m</p>	1	NC	
		2	RXD	Receive signal
		3	TxD	Transmit signal
		4	NC	
		5	GND	Ground
		6	NC	
		7	RTS	Request To Send
		8	CTS	Clear To Send
		9	NC	

Table 7: IF766 - RS232 interface (IF1)

1.1.10 Profibus DP master interface (IF2)

Interface	Description	Pin assignments		
		Pin	RS485	
<p>Application interface Profibus DP master</p>  <p>PB DP Master</p> <p>9-pin DSUB socket</p>	<p>The IF766 is connected as a master to a Profibus DP network via the electrically isolated interface</p> <p>LEDs above the interface indicate the Profibus DP bus function.</p> <p>The shield is connected to the DSUB socket's housing.</p> <p>Maximum transfer rate: 12 MBit/s</p>	1	Reserved	
		2	Reserved	
		3	RxD/TxD-P	Data
		4	CNTR-P	Transmit enable
		5	DGND	Electrically isolated supply
		6	VP	Electrically isolated supply
		7	Reserved	
		8	RxD/TxD-N	Data\
		9	CNTR-N	Transmit enable\
		CNTR ... Directional switch for external repeater		

Table 8: IF766 - Profibus DP master interface (IF2)

1.1.11 Firmware

SG3

The IF766 module is not supported.

SG4

The firmware is part of the B&R Automation Runtime™ operating system for the PLC. It is loaded to the IF766 module during every restart.

The Profibus DP master firmware is preconfigured on the module. The B&R Fieldbus Configurator is needed to perform updates (model number: 1A0550.03).