1.1 IF722

1.1.1 General Information

The IF722 interface module is an aPCI module and can be installed in all corresponding interface module slots (e. g. in the CP360).

The IF722 is equipped with an RS485/RS422 interface, a CAN bus interface (with its own object buffers in both the send and receive directions) and a RS485 interface.

The RS485/RS422 and RS485 interfaces are used mostly for visualization and networking based on a wide variety of protocols (e. g. NET2000).

1.1.2 Order Data

Model number	Short description	Image
	Interface Module	
3IF722.9	aPCI interface module, 1 CAN bus interface, max. 500 kBit/s, object buffers in both send and receive directions, network capable, electrically isolated. Order 1 RS485/RS422 interface, 1 RS485 interface to terminal block, 2 x 0TB704.9 terminal blocks separately!	
	Required Accessory	
0TB704.9	Accessory terminal block, 4-pin, screw clamp, 1.5 mm²	
	Optional Accessory	
0AC913.93	Bus adapter, CAN, 2 CAN interfaces, including 30 cm connection cable (TB704)	
0G1000.00-090	Bus connector, RS485, for PROFIBUS networks, remote I/O	

Table 1: IF722 order data

1.1.3 Technical Data

Product ID	IF722
Short Description	
Communication Module	1 x RS485/RS422, 1 x CAN bus, 1 x RS485
interfaces	

Interface IF1
    Type
    Design
    Maximum Transfer Rate
	RS485/RS422
	9-pin DSUB socket
	115.2 kBit/sec

Interface IF2
    Type
    Design
    Maximum Transfer Rate
	CAN bus
	4-pin multipoint connector
	500 kBit/sec

Interface IF3
    Type
    Design
    Maximum Transfer Rate
	RS485
	4-pin multipoint connector
	115.2 kBit/sec

General Information	
Status Display	2 LEDs for sending/receiving data for IF1 1 LED each for sending data for IF2 and IF3
Diagnostics Data Transfer	Yes, with status LEDs

Electrical Isolation
    PLC - IFx
    IFx - IFx
	Yes
	Yes

Power Input
    3.3 V
    5 V
    Total
	0.74 W
	1.0 W
	1.74 W

Certification	CE, GOST-R
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	Order 0TB704.9 terminal blocks (2x) separately

Table 2: IF722 technical data

1.1.4 Additional Technical Data

Product ID	IF722
Interface IF1, RS485/RS422	
Controller	UART Type 16C550 compatible
FIFO	16 bytes in send and receive direction
Maximum Distance	1200 m
Network Capable	Yes
Bus Termination Resistor	External T-connector (0G1000.00-090)
IF2 interface, CAN bus	
Controller	Controller SJA 1000
Maximum Distance	1000 m

Maximum Transfer Rate
  Bus Length ≤60 m
  Bus Length ≤200 m
  Bus Length ≤1,000 m
	500 kBit/sec
	250 kBit/sec
	50 kBit/sec

Network Capable	Yes
Bus Termination Resistor	Externally wired (optional)
IF1 interface, RS485	
Controller	UART Type 16C550 compatible
FIFO	16 bytes in send and receive direction
Maximum Distance	1200 m
Network Capable	Yes
Bus Termination Resistor	The bus termination 0AC916.9 is available from B&R. [1]

Table 3: IF722 additional technical data

1) The active bus termination allows the network to be terminated independently of the supply for the communication modules. The supply voltage for the active bus termination is 120 / 230 VAC.

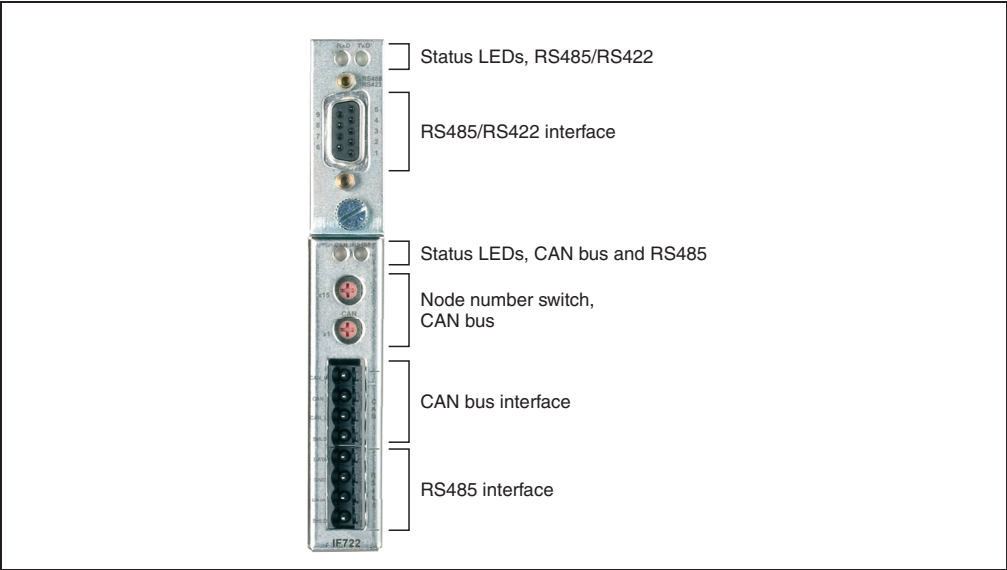## 1.1.5 Operational and Connection Elements

Figure 1: IF722 operational and connection elements

1.1.6 Status Display, RS485/RS422 Interface

Image	LED	Color	Description
RS485/RS422	RXD	Orange	The module receives data via the RS485/RS422 interface.
	TxD	Orange	The module sends data via the RS485/RS422 interface.

Table 4: IF722 status display RS485/RS422 interface

1.1.7 Status Display, CAN Bus and RS485 Interface

Image	LED	Color	Description
CAN bus und RS485	CAN	Orange	The module sends data via the CAN bus interface.
	RS485	Orange	The module sends data via the RS485 interface.

Table 5: IF722 status display, CAN bus and RS485 interface

1.1.8 RS485/RS422 Interface (IF1)

Interface	Description	Pin Assignments		
Application Interface RS485/RS422 9-pin DSUB socket	The RS485/RS422 interface is electrically isolated. LEDs show on the interface whether data is being received (RXD) or sent (TXD). The shield is connected to the DSUB socket's housing. Maximum Transfer Rate: 115.2 kBit/s Max. cable length: 1200 m	**Pin**	**RS485**	**RS422**
		1	Reserved	Reserved
		2	Reserved	TXD [1]
		3	DATA	RXD
		4	Reserved	Reserved
		5	GND	GND
		6	+5 V / 50 mA	+5 V / 50 mA
		7	Reserved	TXD\ [1]
		8	DATA\	RXD\
		9	Reserved	Reserved

Table 6: IF722 RS485/RS422 interface (IF1)

1) RS422 send data is TRISTATE capable.

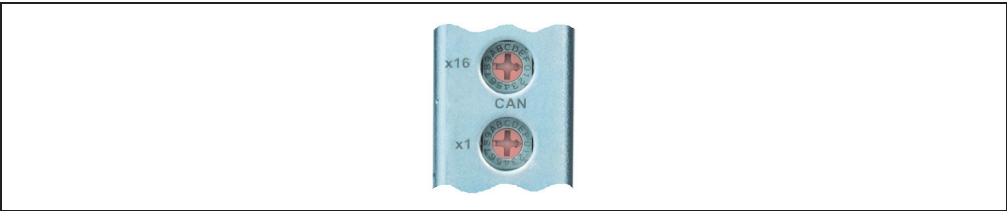## 1.1.9 CAN Bus Node Number

Figure 2: IF722 CAN bus node number switch

The node number for the CAN bus interface (IF2) is set with the two hex switches.

1.1.10 CAN Bus Interface (IF2)

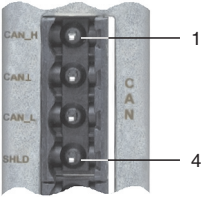A 120 Ω bus terminating resistor is included with delivery. The resistor can be inserted between pin 1 and pin 3.

Interface	Description	Pin Assignments		
Application Interface CAN bus 4-pin multipoint connector	The electrically isolated CAN bus interface is a 4-pin multipoint connector. Maximum Transfer Rate: 500 kBit/s bus length: ≤60 m 250 kBit/s bus length: ≤200 m 50 kBit/s bus length: ≤1000 m	**Terminal**	**CAN bus**	
		1	CAN_H	CAN High
		2	CAN⊥	CAN Ground
		3	CAN_L	CAN Low
		4	SHLD	Shield

Table 7: IF722 CAN bus interface (IF2)

1.1.11 RS485 Interface (IF3)

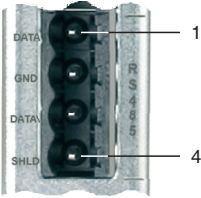| Interface	Description	Pin Assignments		
Application Interface RS485 4-pin multipoint connector	The RS485 interface is electrically isolated. Maximum Transfer Rate: 115.2 kBit/s Max. cable length: 1200 m	**Terminal**	**RS485**	
		1	DATA	Data
		2	GND	Ground
		3	DATA\	Data\
		4	SHLD	Shield

Table 8: IF722 RS485 interface (IF3)

1.1.12 Firmware

SG3

The IF722 module is not supported.

SG4

The firmware is a component of the PLC operating system of B&R Automation Runtime™. It is loaded to the IF722 module during every restart.