

5ACCIF01.ICAN-C01

1 General information

Interface option 5ACCIF01.ICAN-C01 is equipped with an RS232 and CAN bus master interface.

- 1x CAN bus master interface
- 1x RS232 interface
- Compatible with APC2100, APC2200, PPC2100, PPC2200

Information:

B&R makes every effort to keep this technical description as current as possible. The latest version of this technical description is available in PDF format on the B&R website (www.br-automation.com). For specifications that are not listed here, see the user's manual for the complete device being used.

2 Order data


Model number	Short description	Figure
	Interface options	
5ACCIF01.ICAN-C01	Interface card - 1x RS232 interface - 1x CAN interface - For APC2100/PPC2100/APC2200/PPC2200 - Only available with a new device - Customized -	
	Optional accessories	
	Terminal blocks	
0TB1210.3100	Connector 300 VDC - 10-pin female - Cage clamp terminal block - Protected against vibration by the screw flange	

Table 1: 5ACCIF01.ICAN-C01 - Order data

3 Technical data

Information:

The following specified characteristic data, features and limit values are only valid for this accessory and may differ from those of the complete system. The data specified for the complete system applies to the complete system in which this accessory is installed, for example.

Model number	5ACCIF01.ICAN-C01
General information	
LEDs	L1
B&R ID code	0xFB10
Certifications	
CE	Yes
Interfaces	
COM	
Quantity	1
Type	RS232, modem not supported, not galvanically isolated
Variant	10-pin, male
UART	16550-compatible, 16-byte FIFO buffer
Max. baud rate	115 kbit/s
CAN	
Quantity	1
Controller	SJA1000
Variant	10-pin, male, galvanically isolated
Transfer rate	Max. 1 Mbit/s
Terminating resistor	
Type	Can be switched on and off with slide switch
Default setting	OFF
Electrical properties	
Power consumption	0.5 W
Operating conditions	
Pollution degree per EN 61131-2	Pollution degree 2

Table 2: 5ACCIF01.ICAN-C01 - Technical data

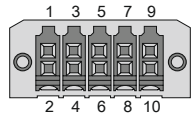
Model number	5ACCIF01.ICAN-C01
Ambient conditions	
Temperature	
Operation	-20 to 55°C
Storage	-20 to 60°C
Transport	-20 to 60°C
Relative humidity	
Operation	5 to 90%, non-condensing
Storage	5 to 95%, non-condensing
Transport	5 to 95%, non-condensing
Mechanical properties	
Weight	Approx. 25 g

Table 2: 5ACCIF01.ICAN-C01 - Technical data

3.1 Serial interface COMA - Pinout

Serial interface COMA on the system unit is referred to as "IFx".

Serial interface COMA - IFx ^(1,2)	
RS232	
Type	RS232, not modem-capable, not electrically isolated
Variant	10-pin, male
UART	16550-compatible, 16-byte FIFO
Transfer rate	Max. 115 kbit/s
Bus length	Max. 15 m
Pin	Assignment
1	-
2	Shield
3	-
4	-
5	DCD
6	CTS
7	RXD
8	COM GND
9	TXD
10	DTR

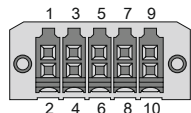


- 1) The interfaces, etc. available on the device or module have been numbered as such for easy identification. This numbering may differ from that used by the particular operating system.
- 2) This interface (if available) is enabled automatically in BIOS as COMA with default I/O address 3F8h and IRQ 4.

3.2 CAN bus interface - Pinout

The electrically isolated CAN bus interface on the system unit is referred to as IFx.

CAN bus - IFx ^(1,2)	
Variant	10-pin, male
Transfer rate	Max. 1 Mbit/s
Bus length	Max. 1000 m
Pin	Assignment
1	CAN L
2	Shield
3	CAN H
4	CAN GND
5	-
6	-
7	-
8	-
9	-
10	-



- 1) The interfaces, etc. available on the device or module have been numbered as such for easy identification. This numbering may differ from that used by the particular operating system.
- 2) This interface (if available) is enabled automatically in BIOS as CAN with default I/O address 384h/385h and IRQ 10.

3.2.1 I/O address and IRQ

Resource	Default setting	Function
I/O address	384h (address register)	Defines the register number to be accessed.
	385h (data register)	Access to the register defined in the address register.
IRQ	IRQ:10	Interrupt

3.2.2 CAN driver settings

The baud rate can be set either with "predefined values" (CAN driver) or with the "bit timing register".

Bit timing register 1	Bit timing register 0	Baud rate
00h	14h	1000 kbit/s
80h or 00h	1Ch	500 kbit/s
81h or 01h	1Ch	250 kbit/s
83h or 03h	1Ch	125 kbit/s
84h or 04h	1Ch	100 kbit/s
89h or 09h	1Ch	50 kbit/s

3.2.3 CAN - Bus length and cable type

The type of cable to be used depends largely on the required bus length and number of nodes. The bus length is determined by the transfer rate. Per CiA (CAN in Automation), the maximum bus length is 1000 meters.

The following bus lengths are permitted at a maximum permissible oscillator tolerance of 0.121%:

Extension	Transfer rate
≤1000 m	Typ. 50 kbit/s
≤200 m	Typ. 250 kbit/s
≤100 m	Typ. 500 kbit/s
≤20 m ¹⁾	Typ. 1 Mbit/s
≤15 m	Typ. 1 Mbit/s

1) The specified cable length is only valid with the values specified in section [CAN driver settings](#). Otherwise, the cable lengths depend on the values in the timing register.

Preferably, the cable material used should have the following properties or deviate only slightly from them in order to achieve an optimal transfer rate.

CAN cable	Property
Signal line	
Cable cross section	2x 0.25 mm ² (24AWG/19), tinned copper stranded wire
Wire insulation	PE
Conductor resistance	≤82 Ω/km
Stranding	Wires stranded in pairs
Shield	Pair shielding with aluminum foil
GND	
Cable cross section	1x 0.34 mm ² (22AWG/19), tinned copper stranded wire
Wire insulation	PE
Conductor resistance	≤59 Ω/km
Outer jacket	
Material	PUR compound
Properties	Halogen-free
Cable shield	Tinned copper wire

3.2.4 Terminating resistor

A terminating resistor is integrated on the interface option. It is switched on or off for the CAN bus interface with a switch. LED status indicator L1 indicates the current state:

- ON: Activated
- OFF (default): Switched off

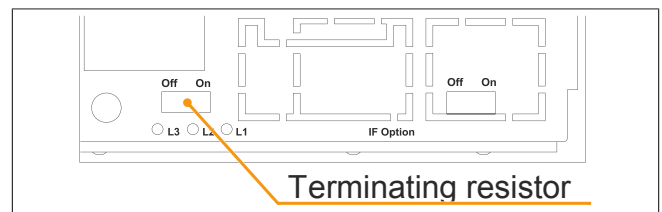


Figure 1: (symbolic image)

3.3 Shielding

For the interfaces on the 10-pin female connector, the shield of the interfaces can be connected to pin "Shield" (pin 2) of the female connector.

In addition, there is a functional ground connection on the interface cover of the system unit that can also be used for the cable shields.

In addition, there is a functional ground connection on the interface cover of the system unit and a screw point for cable shields that can also be used for the shielded cables.

3.4 Status LED

An LED is integrated on the interface option above the terminating resistor.

LED status indicator			
LED	Color	Status	Function
L1	Yellow	On	CAN bus terminating resistor enabled
		Off	CAN bus terminating resistor disabled
L2	-	-	-
L3	-	-	-

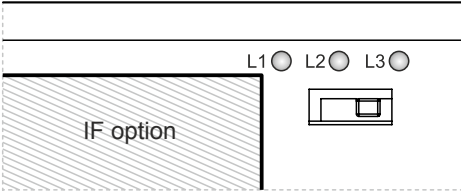


Figure 2: (symbolic image)

3.5 Firmware

In order to guarantee the functionality of the interface option, at least the following firmware version (MTCX) must be installed on the PC:

- Automation PC 2100: V1.07
- Automation PC 2200: V1.02
- Panel PC 2100: V1.07
- Panel PC 2200: V1.02

This firmware can be downloaded from the B&R website (www.br-automation.com).

Information about firmware upgrades can be found in section "Firmware upgrade" of the respective user's manual.