

Serial port communication board - EAU-321

AutoSafe interactive fire detection system
Product datasheet

Features

- 4 channel multiprotocol serial port PC/104 module
- 4 ports for RS232, RS422 and RS485 interface
- Type of interface easily defined by means of jumper settings
- Capable of handling redundant AutoCom (AutoSafe standard communication protocol) communication to third party equipment.
- Easily mounted inside AutoSafe fire alarm control panels BS-310/-320 or controller BC-320
- CAT-5 communication cable

Description

The serial port communication board EAU-321 is required when third party equipment is to be interfaced with AutoSafe via the internal protocol AutoCom. Typical applications are interface to building management systems, paging systems (via the ESPA interface module), or interface to external PLC equipment (via the Modbus converter).

Communication ports

EAU-321 features 4 ports with duplicated outputs.

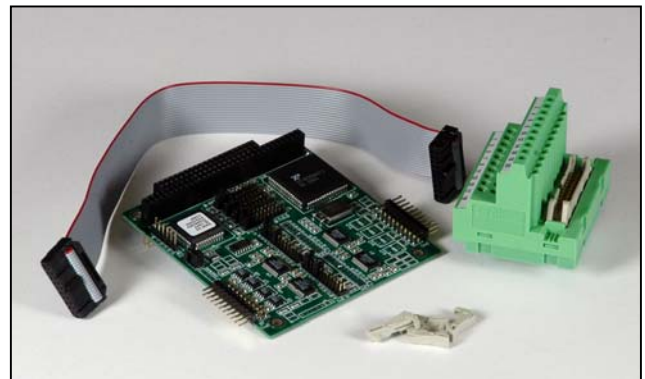
- Port 1 and 2 can be used for AutoCom communication, and can provide redundant communication for this.
- Port 3 is dedicated to AutoSafe IFG AutoFieldBus communication.
- Port 4 is dedicated to AUTROLON network downloading, i.e. configuration files are downloaded to all panels in a distributed system by use of port 4 on the EAU-321 mounted inside the booting panel.
- Port 1 and 2 can be used for both RS232, RS422 and RS485 interface (defined by means of jumper settings).
- Port 3 and 4 are fixed RS232 ports.

Capacity / Limitations

The AutoSafe system software supports 1 serial port communication board EAU-321 per system unit (AutoSafe fire alarm control panels BS-310/-320 or controller BC-320).

If a system unit is not equipped with batteries, one unit can accommodate up to a maximum of 3 different types of communication boards (serial port communication board EAU-321, AUTROLON communication board EAU-310 and ethernet communication board EAU-330). In a distributed system where the AUTROLON communication board EAU-310 is required, up to 2 additional communication boards can be installed.

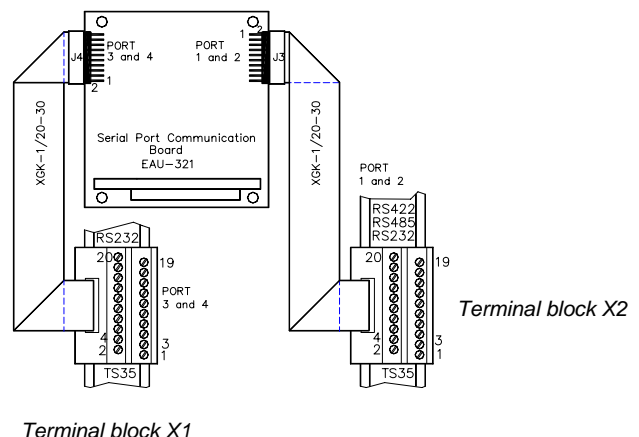
If a system unit is equipped with batteries, one unit can accommodate up to a maximum of 2 communication boards. In a distributed system where the AUTROLON communication board EAU-310 is required, only 1 additional communication board can be installed.



Connections

X1-X2				X2							
Port 1-4 (RS232)				Port 1-2 (RS422)							
1	DCD	1(3)	11	DCD	2(4)	1	NC	11	NC		
2	DCR	1(3)	12	DSR	2(4)	2	NC	12	NC		
3	RXD	1(3)	13	RXD	2(4)	3	TxD+	1	13	TxD+	2
4	RTS	1(3)	14	RTS	2(4)	4	TxD-	1	14	TxD-	2
5	TXD	1(3)	15	TXD	2(4)	5	GND	15	GND		
6	CTS	1(3)	16	CTS	2(4)	6	RxD-	1	16	RxD-	2
7	DTR	1(3)	17	DTR	2(4)	7	RxD+	1	17	RxD+	2
8	R1	1(3)	18	R1	2(4)	8	NC	18	NC		
9	GND	1(3)	19	GND	2(4)	9	GND	19	GND		
10	NC		20	NC		10	NC	20	NC		

X2					
Port 1-2 (RS485)					
1	NC	11	NC		
2	NC	12	NC		
3	TxD/RxD+	1	13	TxD/RxD+	2
4	TxD/RxD-	1	14	TxD/RxD-	2
5	GND	15	GND		
6	NC	16	NC		
7	NC	17	NC		
8	NC	18	NC		
9	GND	19	GND		
10	NC	20	NC		



Technical specifications	
Serial port specifications	
No. of serial ports	4
Protocol	RS232, RS422, RS485
Baud rate, AutoSafe specification	9600 baud
Communication parameters in AutoSafe application	8 data, 1 stop bit and no parity
Short circuit protection	All outputs protected against continuous short circuit
RS232 mode	
Input impedance:	3K Ω min
Input voltage swing:	$\pm 30V$ max
Output voltage swing:	$\pm 5V$ min, $\pm 7V$ typical
RS422/RS485 modes	
Differential input threshold:	-0,2V min, +0,2V max
Input impedance:	12K Ω min
Input current:	+1,0mA max ($V_{IN} = 12V$) -0,8mA max ($V_{IN} = -7V$)
Differential output voltage:	2,0V min ($R_L = 50\Omega$)
High/low states differential output voltage symmetry:	0,2V max
General specifications	
I/O header (plugs) or screw terminals	Two 20-position (2x10). 025" square pin header on .1" centres. Headers mate with standard ribbon cable (IDC) connectors. (Two 20-position terminal blocks X1 and X2).
Dimensions (mm)	90 x 96
Power supply	+5VDC $\pm 10\%$
Current consumption	80mA typical, all outputs unloaded
Operating temperature	-40° to +85°C standard
Operating humidity	5% to 95% non-condensing
PC/104 bus	8 bit and 16 bit bus headers are installed and used (16 bit header is used for interrupt levels only)

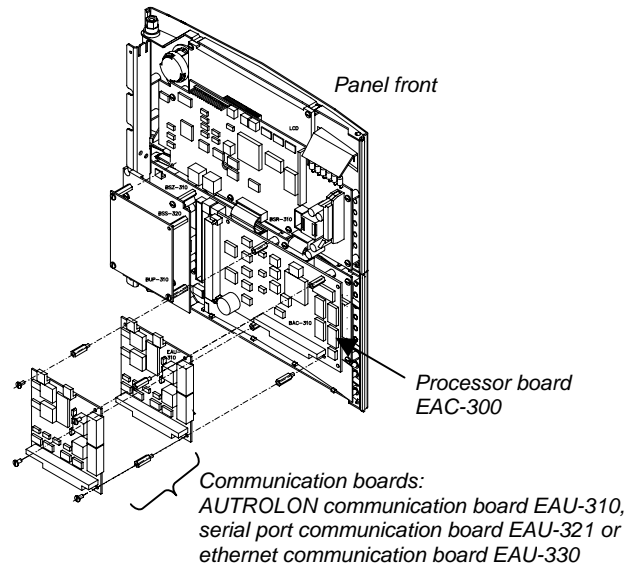
Part number	Description
116-EAU-321	Serial port communication board

Installation overview

The serial port communication board EAU-321 is mounted onto the AUTROLON communication board EAU-310* (if the system is a distributed system) or directly onto the processor board EAC-300 (if the system is a standalone system).

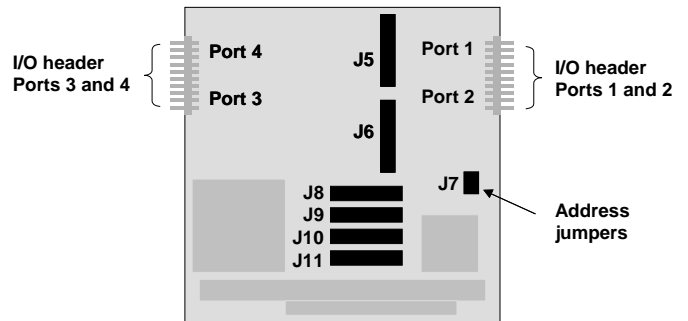
The board can be mounted inside any fire alarm control panel BS-310/320 or controller BC-320. However in a distributed system the board should preferably be mounted inside the booting panel.

* The illustration above shows how to mount the EAU-321 board onto the AUTROLON communication board EAU-310 inside a system unit.



Jumpers

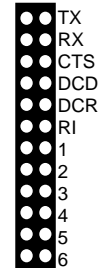
The table below gives an overview of the jumpers on EAU-321.



Serial port communication board EAU-321

Jumpers J5 (Port 1) and J6 (Port 2)

J5 and J6	Protocol		
	RS232	RS422	RS485
Tx	Out	Note1	Note1
Rx	Out	Note1	Note1
CTS	Out	In	In
DCD	Out	In	In
DCR	Out	In	In
R1	Out	In	In
1	Out	In	In
2	In	Out	Out
3	Out	In	Out
4	Out	Out	In
5	In	Out	Out
6	Out	Out	In



Note1
A jumper in the positions Rx or Tx will terminate the cable with 120 Ohm.

NB! The cable should only be terminated at the end points.

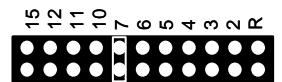
Jumpers J8 (interrupt)

J8 must be set to interrupt 7 and R



Jumpers J9, J10 and J11 (interrupt)

All ports must be set to interrupt 7.



Jumper J7 (board address)

Jumper in position A and B must be set to In. This setting applies to all communication boards. Gives address 100h.



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