X9017

Option card, EIB

Communication card for EIB and KNX networks, for internal mounting in an EXOflex house etc.

- **Makes logic, calculation and control functions possible for an EIB network**

- **For applications where EP7408, EP8101 or EP8102 are installed**
- **Suitable for controlling lighting etc. over EIB**

Option X9017 is a plug-in card for serial communication on the EIB bus. This interface has no galvanic isolation from the rest of the internal electronics.

The option occupies Port 2 or Port 3 in EXOflex, and Port 3 in other controllers. The maximum cable length is 3 meters. It is important that the cable is placed away from power cables.

See the EIB manual for more information.

The figure below illustrates the connection of an EIB bus connector, BCU, to EP8101/EP8102. The DTR output on EP8101/EP8102 cannot be controlled from software but is internally connected to +12 V.

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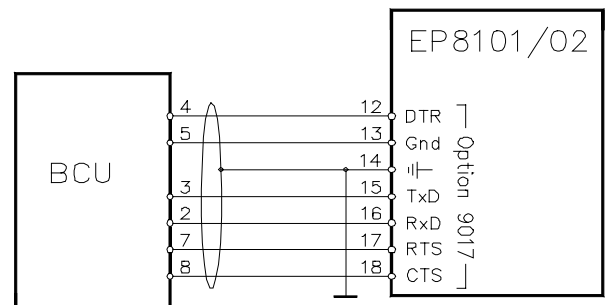
Connections

The RS232 Port

The designations below follow the RS232 standard's DTE terminology.

Pin no	Signal	Function	Direction
Port 2			
21	TxD2	Transmit data	Out
22	RxD2	Receive data	In
23	RTS2	Request to send	Out
24	CTS2	Clear to send	In
25	GND2	Signal Ground	
26	SEL2	Select RS232 interface. The RS232 interface is selected via the hardware if you connect the signal SEL2 to GND2.	
Port 3			
27	TxD3	Transmit Data	Out
28	RxD3	Receive Data	In
29	RTS3	Request To Send	Out
30	CTS3	Clear To Send	In
31	GND3	Signal Ground	
32	SEL3	Select RS232 interface. The RS232 interface is selected via the hardware if you connect the signal SEL3 to GND3.	
33	DTR3	Data Terminal Ready	Out
34	DSR3	Data Set Ready	In
35	DCD3	Data Carrier Detect	In
36	RI3	Ring Indication	In

Connection of EP7408 with the EIB option X9017 on Port 3.

Pin no	Signal	Detailed function	Group function
1	+C	+24 V DC. Output for analog inputs AI and digital inputs DI.	
2	EMI ground	This terminal is connected internally to the PIFA's frame and to internal protective circuits. It should be connected to the ground rail with a separate, heavy gauge.	
3	AI1	Analog input 1, type Multisensor	
4	AI2	Analog input 2, type Multisensor	
5	AI3	Analog input 3, type Multisensor	
6	AI4	Analog input 4, type Multisensor	
7	AGnd	Reference pole for AI1-AI4	
8	SCR	Connection for screen, AI1-AI4	
9	AO1	Analog output 1, type Standard	
10	AO2	Analog output 2, type Standard	
11	AGnd	Reference pole for AO1-AO2 for high-ohm loads. For low-ohm loads, use the 0 V terminal (20) as reference pole.	
12	DTR		Option X9017
13	Gnd	Signal Ground	
14	EMI ground	This terminal is connected internally to the PIFA's frame and to internal protective circuits. It should be connected to the ground rail with a separate, heavy gauge.	
15	TxD	Transmit Data (Out)	
16	RxD	Receive Data (In)	
17	RTS	Request To Send (Out)	
18	CTS	Clear To Send (In)	
19	+24 V DC		Inputs for +24 V DC power supply
20	0 V	Power supply 0 V. The 0 V-connection is normally grounded at the supply source, so as to define the potential to earth reference and to compensate for disturbances and transients from I/O signals.	
21	DI1	Digital input 1, type Standard 24 V DC	
22	DI2	Digital input 2, type Standard 24 V DC	
23	B3		EXOline connection, Port 3 Galvanically insulated from all other circuits.
24	A3		
25	N3	The 0 V reference. This should be connected to the screen of the communication cable, which in turn should be grounded at one point at least.	
26	E3		
27	TxD3	*See "The RS232 Port" on page 2.*	RS232 connection, Port 3 This connection is galvanically insulated from the internal circuits. GND3 is the signal zero. Use screened cable and earth it at one point.
28	RxD3		
29	RTS3		
30	CTS3		
31	GND3		
32	SEL3		
33	DTR3		
34	DSR3		
35	DCD3		
36	RI3		

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Connection of EP8101 with the EIB option X9017 on Port 3.

Pin no	Signal	Detailed function	Group function
1	EMI ground	This terminal is connected internally to the PIFA's frame and to internal protective circuits. It should be connected to the ground rail with a separate, heavy gauge.	
2	nc		
8	B		EXOline connection, Port 2/3
9	A		Galvanically insulated from all other
10	N	The 0 V reference. This should be connected to the screen of the communication cable, which in turn should be grounded at one point at least.	circuits.
11	E		
12	DTR		Option X9017
13	Gnd	Signal Ground	
14	EMI ground	This terminal is connected internally to the PIFA's frame and to internal protective circuits. It should be connected to the ground rail with a separate, heavy gauge.	
15	TxD	Transmit Data (Out)	
16	RxD	Receive Data (In)	
17	RTS	Request To Send (Out)	
18	CTS	Clear To Send (In)	
19	nc		
20	nc		
27	TxD	*See "The RS232 Port" on page 2.*	RS232 connection, Port 2/3
28	RxD		This connection is galvanically
29	RTS		insulated from the internal circuits.
30	CTS		GND is the signal zero. Use screened
31	GND		cable and earth it at one point.
32	SEL		
33	DTR3		
34	DSR3		
35	DCD3		
36	RI3		

Connection of EP8102 with the EIB option X9017 on Port 3.

Pin no	Signal	Detailed function	Group function
1	EMI ground	This terminal is connected internally to the PIFA's frame and to internal protective circuits. It should be connected to the ground rail with a separate, heavy gauge.	
2	+12 V DC		+12 V DC output
3	Gnd3	Signal Ground	
4	B2		EXOline connection, Port 2
5	A2		Galvanically insulated from all other
6	N2	The 0 V reference. This should be connected to the screen of the communication cable, which in turn should be grounded at one point at least.	circuits.
7	E2		
8	B3		EXOline connection, Port 3
9	A3		Galvanically insulated from all other
10	N3	The 0 V reference. This should be connected to the screen of the communication cable, which in turn should be grounded at one point at least.	circuits.
11	E3		
12	DTR		Option X9017
13	Gnd	Signal Ground	
14	EMI ground	This terminal is connected internally to the PIFA's frame and to internal protective circuits. It should be connected to the ground rail with a separate, heavy gauge.	
15	TxD	Transmit Data (Out)	
16	RxD	Receive Data (In)	
17	RTS	Request To Send (Out)	
18	CTS	Clear To Send (In)	
19	+24 V DC		Inputs for +24 V DC power supply
20	0 V	Power supply 0 V. The 0 V-connection is normally grounded at the supply source, so as to define the potential to earth reference and to compensate for disturbances and transients from I/O signals.	
21	TxD2	*See "The RS232 Port" on page 2.*	RS232 connection, Port 2
22	RxD2		This connection is galvanically
23	RTS2		insulated from the internal circuits.
24	CTS2		GND2 is the signal zero. Use screened
25	GND2		cable and earth it at one point.
26	SEL2		
27	TxD3	*See "The RS232 Port" on page 2.*	RS232 connection, Port 3
28	RxD3		This connection is galvanically
29	RTS3		insulated from the internal circuits.
30	CTS3		GND3 is the signal zero. Use screened
31	GND3		cable and earth it at one point.
32	SEL3		
33	DTR3		
34	DSR3		
35	DCD3		
36	RI3		

Product documentation

Document	Type
EH11...41 / EH10...40 / ECX1	Instruction for EXOflex houses and the EXOflex processor ECX1
EXO System Manual 2005	Manual covering the EXO System

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