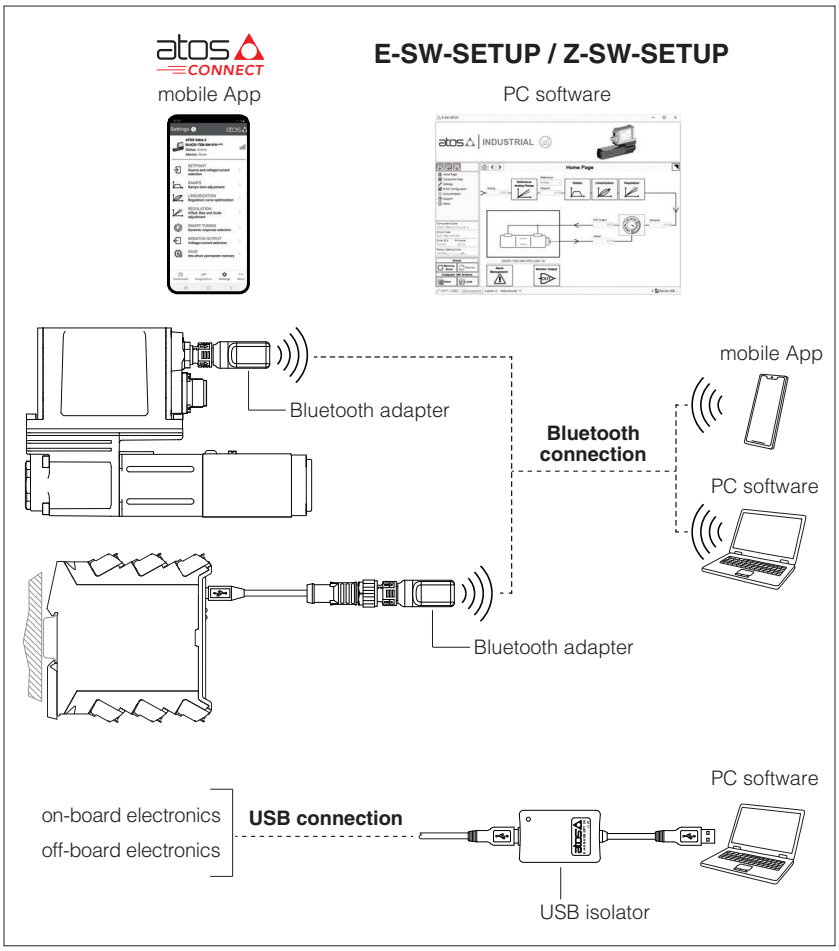
Programming tools for valve drivers & axis controls

Atos CONNECT mobile App, Atos PC software, Bluetooth/USB adapters, cables and terminators



Atos CONNECT is a free iOS / Android mobile App available in the respective App stores, while E-SW-SETUP and Z-SW-SETUP programming software are developed for Windows and free downloadable at www.atos.com in MyAtos download area.

The intuitive interface allows:

- set up valve's functional parameters
- verify the actual working conditions
- identify and quickly solve fault conditions
- adapt the factory preset parameters to the application requirements
- store the customized setting into the valve drivers or axis controls
- archive the customized setting into the PC

The interface is organized in pages related to different specific groups of functions and parameters.

The connected devices models are automatically recognized and the parameters groups will be displayed.

General features:

- automatic recognition of connected devices
- numeric parameters settings (scale, bias, ramp, linearization, dither, etc.)
- real-time parameters modification
- diagnostic and monitor signals

Atos CONNECT mobile App:

- supports Bluetooth communication for all Atos devices except valves with p/Q control or axis controls (see section 9)

E-SW-SETUP / Z-SW-SETUP PC software:

- supports Bluetooth/USB communication for all Atos devices (see section 10)
- internal oscilloscope function
- firmware update

1 PROGRAMMING TOOLS

1.1 Atos CONNECT mobile App

Free downloadable App for smartphones and tablets which allows quick access to valve main functional parameters and basic diagnostic information via Bluetooth, thus avoiding physical cable connection and significantly reducing commissioning time.
Atos CONNECT supports Atos digital valve drivers equipped with E-A-BTH adapter or with built-in Bluetooth.
It does not support valves with p/Q control or axis controls (see 9.2).

Minimum requirements

iOS	iOS 14
Android	Android 9
Interface	Bluetooth Low Energy (BLE), version 4.0

Download on the App Store

GET IT ON Google Play

1.2 PC software

Free downloadable software for PC allows to set all valve functional parameters and to access complete diagnostic information of digital valves drivers and axis controls via Bluetooth/USB service port.
Atos PC software supports all Atos digital valves drivers and axis controls and it is available in MyAtos area upon web registration at www.atos.com.

Different software versions are available:

E-SW-SETUP = for valve drivers

Z-SW-SETUP = for axis controls

Minimum requirements

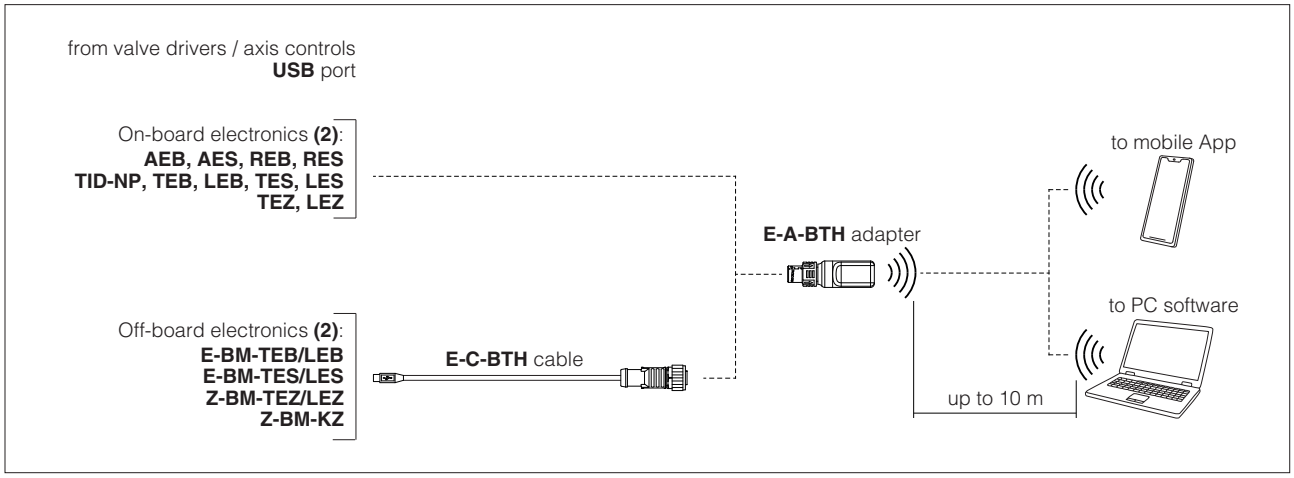
Personal Computer	Pentium® processor 1GHz or equivalent
Operating System	Windows 7 SP1
Monitor Resolution	1024 x 768
Memory	2 GB RAM + Hard Disk with 1 GB free space
Interface	USB port Bluetooth Low Energy (BLE), version 4.0

2 BLUETOOTH connection - ADAPTER AND CABLE

Bluetooth connection permits the functional parameters programming through mobile App and PC software **(1)**.

2.1 Connection tools

Adapter and cables shown in the image below can be ordered individually or in a single solution purchasing a dedicated kit: **E-KIT-BTH**

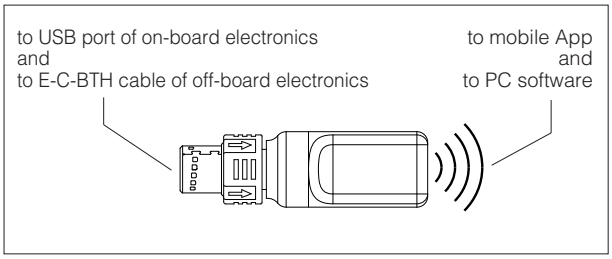


(1) The previous versions of the Bluetooth adapter and cables are still compatible (see 9.1)

(2) Bluetooth not available for off-board E-BM-AES, E-BM-RES and on-board TID-BC valve drivers

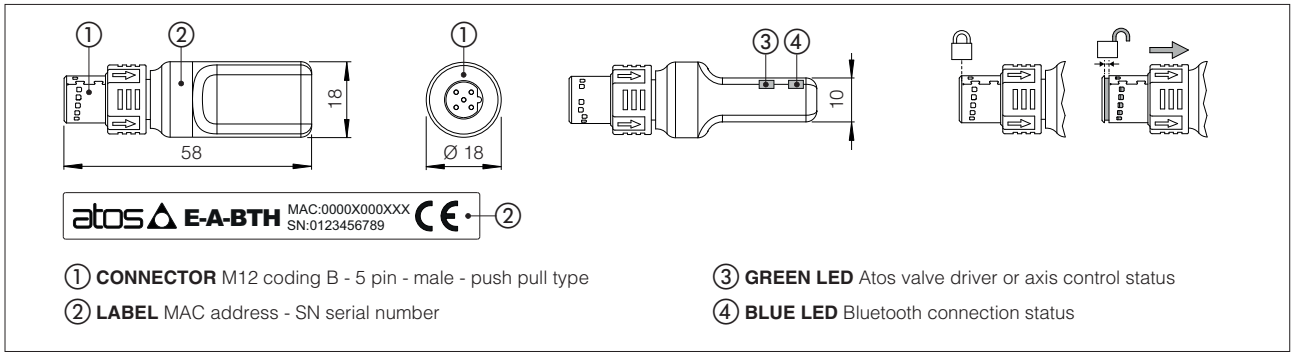
2.2 **E-A-BTH** - Bluetooth adapter

E-A-BTH adapter adds the Bluetooth® connectivity to Atos valve drivers and axis controls. E-A-BTH adapter can be left permanently installed on-board, to allow the Bluetooth connection with the valve drivers and axis controls at any time. E-A-BTH adapter can be directly supplied with the valve dirvers selecting **T** option or purchased separately.
Bluetooth connection to the Atos devices can be protected against unauthorised access by setting a personal password.
The adapter leds visually indicates the status of valve drivers or axis controls and Bluetooth connection.
For more info, please refer to STARTUP-BLUETOOTH guide.



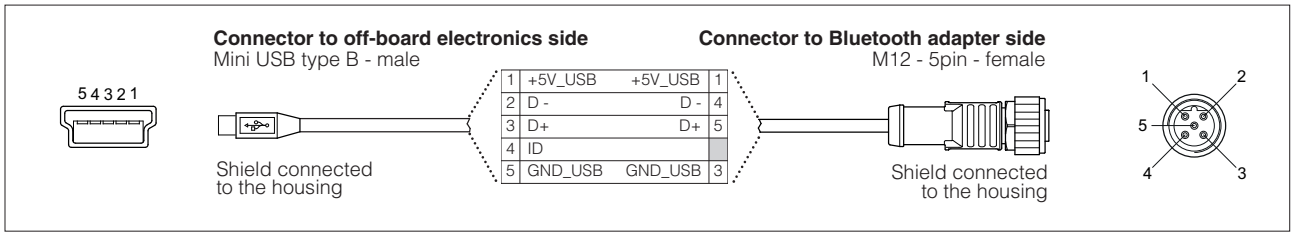
- M12 male connector, coding B, 5pin, push pull type
- Operating temperature: -40 ÷ +60 °C (storage -40 ÷ +70 °C)
- Bluetooth technology: Bluetooth Low Energy (BLE) 5.4
- Max RF transmission power: +6 dBm
- Frequency: 2.402 GHz to 2.480 GHz
- Format: IP66 / IP67 protection degree
- Mass: 14 g
- Two LEDs for an immediate basic diagnostic
- External power supply not required (from Atos digital electronics only)

Overview and dimensions [mm]



WARNING: Bluetooth adapter is available only for Europe, USA, Canada, China, Japan, India, Korea markets!
Bluetooth adapter is certified according to RED (Europe), FCC (USA), ISED (Canada), SRRC (China), MIC (Japan), BIS (India), KC (Korea) directives

2.3 **E-C-BTH** cable - 10 cm length - only for off-board electronics

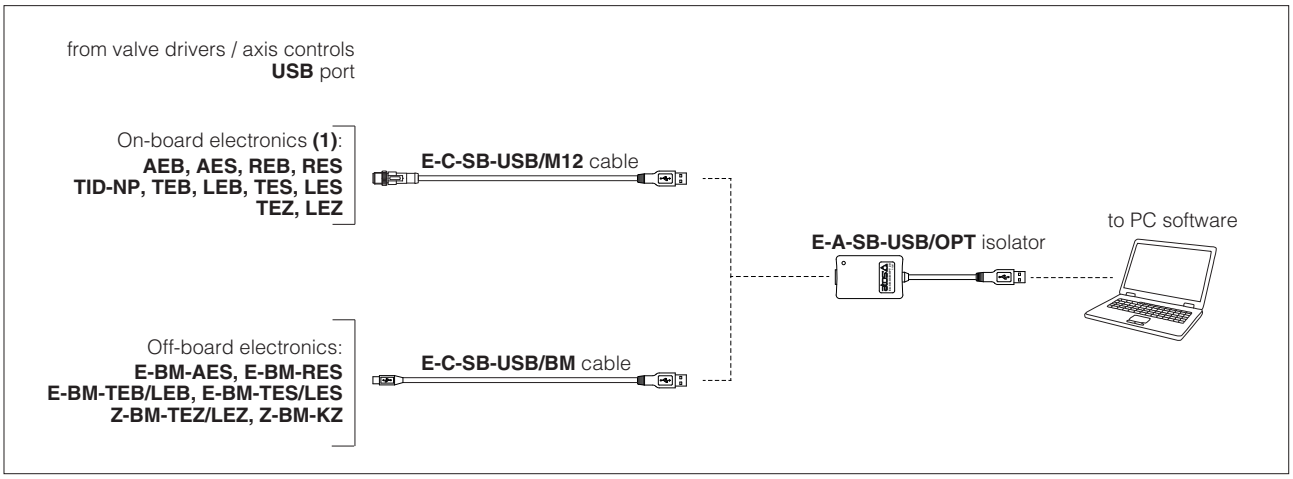


3 USB connection - ISOLATOR AND CABLE

USB connection permits the functional parameters programming through PC software.

3.1 Connection tools

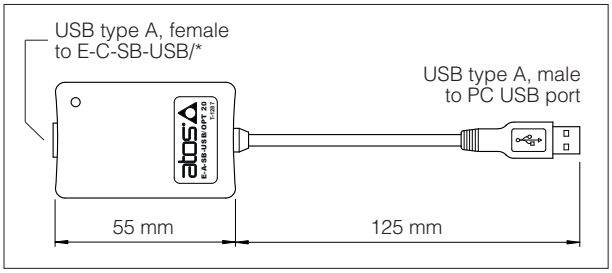
Isolator and cables shown in the image below can be ordered individually or in a single solution purchasing a dedicated kit: **E-KIT-USB**



(1) USB port is not available for on-board TID-BC valve drivers

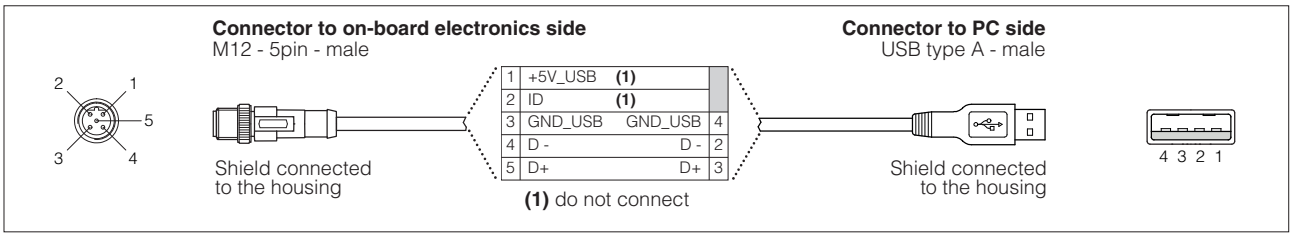
WARNING: the USB port of valve drivers / axis controls is not isolated and use of USB isolator adapter is highly recommended!
Wrong earthing connections may cause high potential difference between GNDs, generating high currents that could damage valve drivers / axis controls or the connected PC.

3.2 **E-A-SB-USB/OPT** isolator adapter

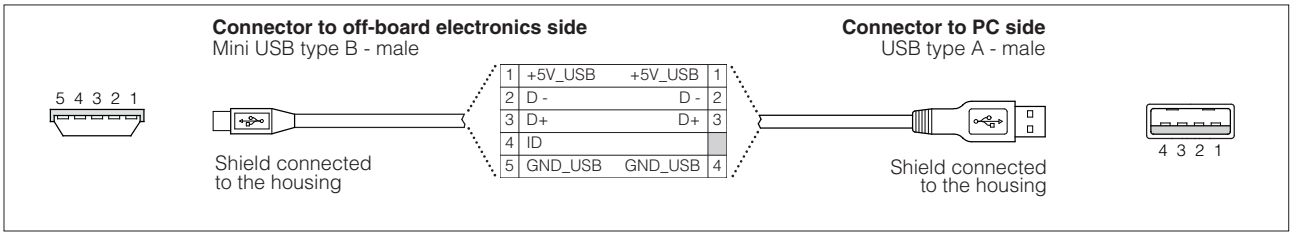


- USB 2.0 Full speed (12 MBps)
- electrical isolation 3 kV
- temperature range, -40°C ÷ +80°C
- external power supply not required
- PC driver not required
- status LED

3.3 **E-C-SB-USB/M12** cable - 4 m length - only for on-board electronics



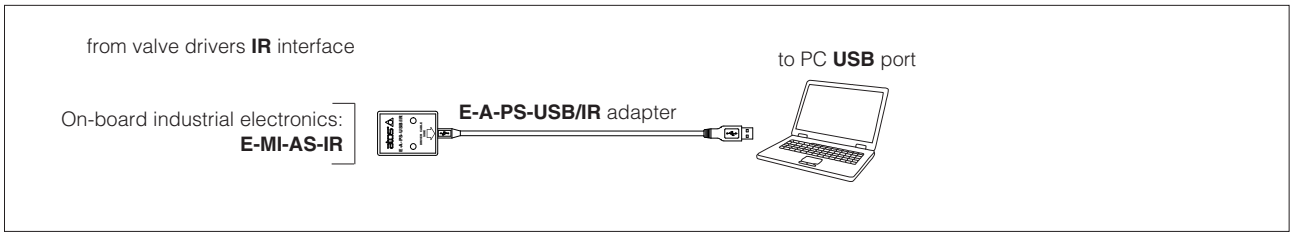
3.4 **E-C-SB-USB/BM** cable - 3 m length - only for off-board electronics



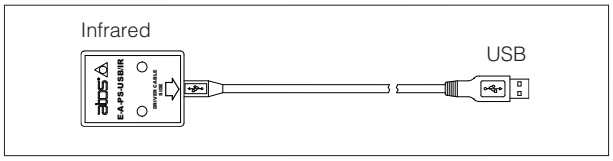
4 **IR infrared - USB COMMUNICATION ADAPTER** - only for on-board **E-MI-AS-IR** valve drivers

The adapter have to be connected to the USB communication port of PC to activate the IR infrared communication interface towards Atos digital electrohydraulics.

4.1 Connection tools



4.2 **E-A-PS-USB/IR** adapter - 3 m length

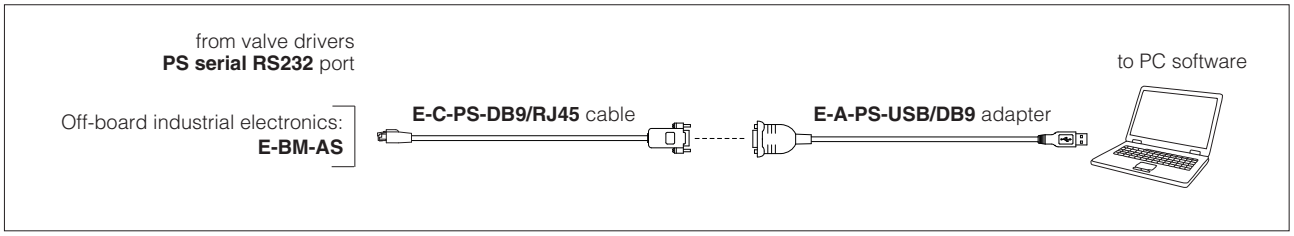


- direct infrared communication with the valve driver
- USB male connector, type A
- plug-in format for direct infrared connection on the valve driver
- transmission rate 9,6 kbit/s
- external power supply not required (USB supply)

5 **PS serial RS232 - USB COMMUNICATION ADAPTER AND CROSS CABLES** - only for off-board **E-BM-AS** valve drivers

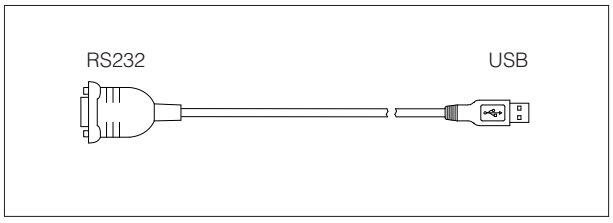
The adapter have to be connected to the USB communication port of PC to activate the PS serial RS232 communication interface towards Atos digital electrohydraulics. The cross cables connect the relevant connector of the USB adapter with the communication port of the valve drivers.

5.1 Connection tools



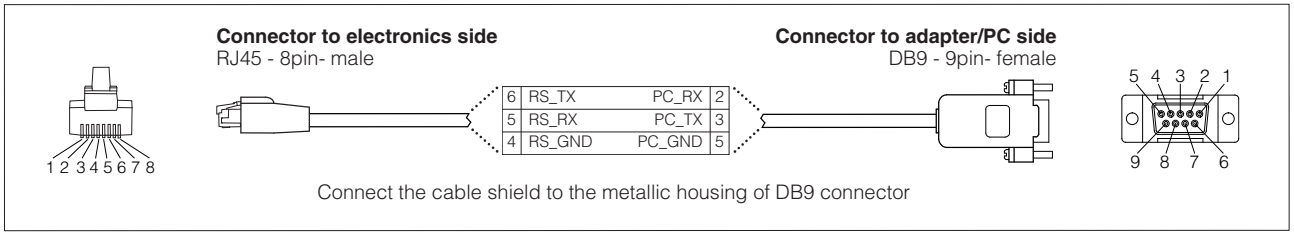
Note: the adapter is not required if PC is already equipped with a serial RS232 communication port

5.2 **E-A-PS-USB/DB9** adapter - 0,45 m length



- DB9 male connector according to serial RS232 specification
- USB male connector, type A
- transmission rate from 1,6 kbit/s up to 225 kbit/s
- external power supply not required (USB supply)

5.3 **E-C-PS-DB9/RJ45** cable - 2,5 m length

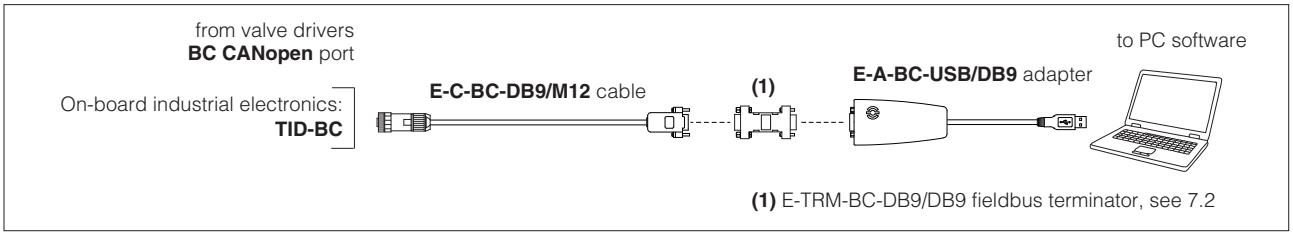


Connect the cable shield to the metallic housing of DB9 connector

6 **BC CANopen - USB COMMUNICATION ADAPTER AND CROSS CABLES** - only for on-board **TID-BC** valve drivers

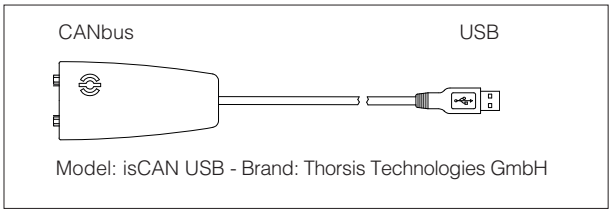
The adapter have to be connected to the USB communication port of PC to activate the BC CANopen communication interface towards Atos digital electrohydraulics. The cross cables connect the relevant connector of the USB adapter with the communication port of the valve drivers.

6.1 Connection tools



(1) E-TRM-BC-DB9/DB9 fieldbus terminator, see 7.2

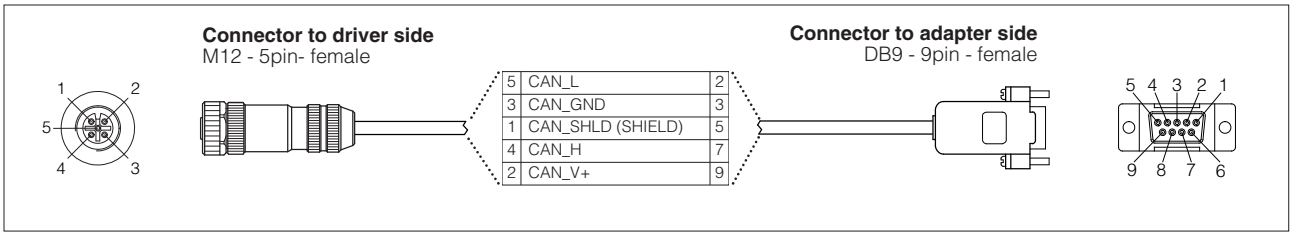
6.2 **E-A-BC-USB/DB9** adapter - 2 m length



Model: isCAN USB - Brand: Thorsis Technologies GmbH

- DB9 male connector according to the CiA specification DR303-1
- USB male connector, type A
- transmission rate from 10 kbit/s to 1 Mbit/s
- external power supply not required (USB supply)
- LEDs indicate the actual working condition

6.3 **E-C-BC-DB9/M12** cable - 2 m length



5	CAN_L	2
3	CAN_GND	3
1	CAN_SHLD (SHIELD)	5
4	CAN_H	7
2	CAN_V+	9

7 FIELDBUS TERMINATORS - only for **BC** and **BP**

The fieldbus terminators are required when output fieldbus connector has to be used as network end point.

Note: fieldbus terminators not available for ex-proof electronics

E - TRM	-	BC	-	M12	/	5PM

Terminator

Fieldbus interfaces:
BC = CANopen
BP = PROFIBUS DP

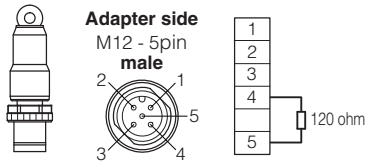
Connector:
M12 = from M12 output fieldbus connector **(1)**
DB9 = from DB9 connector, adapter side **(2)**

Connector:
5PM = to BC executions **(1)**
4PF = to BP executions **(1)**
DB9 = to DB9 connector, cable side **(2)**

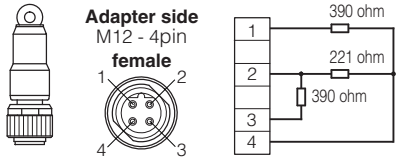
(1) for on-board TES, LES, TEZ, LEZ series 40 or higher
(2) for off-board E-BM-AES, E-BM-RES, E-BM-TEB/LEB, E-BM-TES/LES, Z-BM-TEZ/LEZ, Z-BM-KZ and for on-board TID-BC

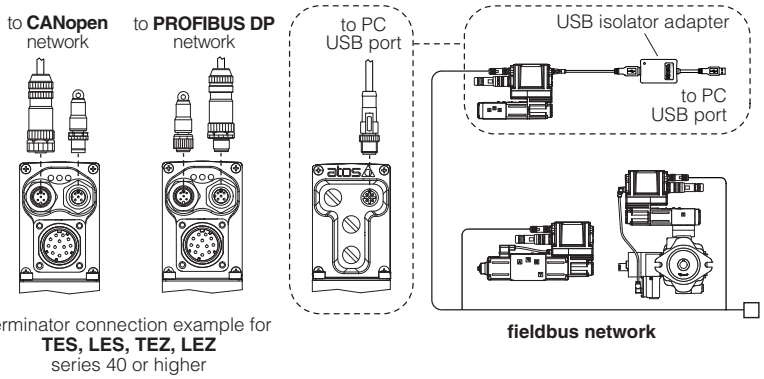
7.1 M12 terminators

E-TRM-BC-M12/5PM network CANopen terminator



E-TRM-BP-M12/4PF network PROFIBUS DP terminator

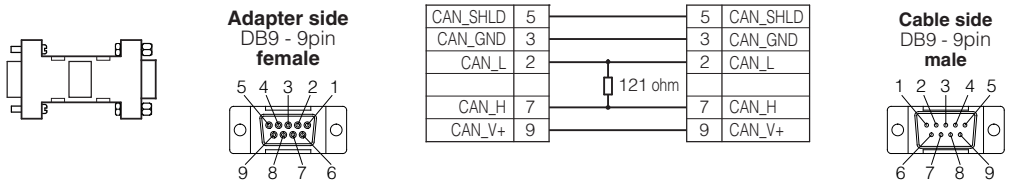




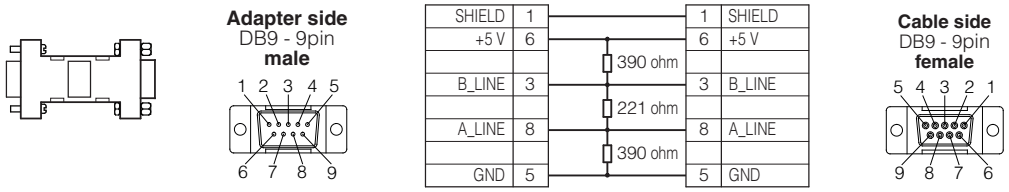
terminator connection example for
TES, LES, TEZ, LEZ
series 40 or higher

7.2 DB9 terminators

E-TRM-BC-DB9/DB9 CANopen terminator for E-A-BC-USB/DB9 USB adapter



E-TRM-BP-DB9/DB9 PROFIBUS DP terminator for E-A-BP-USB/DB9 USB adapter



8 FIRMWARE UPDATE - only with E-SW-SETUP and Z-SW-SETUP PC software via USB cable

It is possible to update the firmware of the following valve drivers and axis controls, using proper USB communication port.
The firmware update is allowed starting from electronics series listed into the table or higher series:

Industrial electronics

E-RI-AEB s10 E-RI-AES s40	E-RI-REB s10 E-RI-RES s10	E-RI-TEB s10 E-RI-LEB s10	E-RI-TES s40 E-RI-LES s40	E-RI-TES-S s40 E-RI-LES-S s40	E-RI-TID-NP s10 **(1)**
E-BM-AES s10	E-BM-RES s10	E-BM-TEB s10 E-BM-LEB s10	E-BM-TES s10 E-BM-LES s10	E-BM-TES-S s10 E-BM-LES-S s10	
Z-RI-TEZ s40 Z-RI-LEZ s40	Z-BM-KZ s10	Z-BM-TEZ s10 Z-BM-LEZ s10			

(1) Firmware update procedure is not available for E-RI-TID-BC

Ex-proof electronics

E-RA-AES s40	E-RA-RES s40	E-RA-TES s40 E-RA-LES s40	E-RA-TES-S s40 E-RA-LES-S s40
Z-RA-TEZ s40 Z-RA-LEZ s40	Z-RA-TEZ-S s40 Z-RA-LEZ-S s40		

9 MOBILE APP COMPATIBILITY AND RECOMMENDED TOOLS SELECTION

9.1 Industrial and ex-proof electronics - compatible with Atos CONNECT mobile App

Model Code	Series	Bluetooth tools		Obsolete Bluetooth tools	
		Adapter	Cable	Adapter	Cable
AEB	10 or higher	E-A-BTH		E-A-SB-USB/BTH	E-C-SB-USB/M12
AES	40 or higher				
REB, RES	10 or higher				
TID-NP	10 or higher				
TEB, LEB	10 or higher				
TES-SN, LES-SN	40 or higher				
E-BM-TEB, E-BM-LEB	10 or higher		E-C-BTH		E-C-SB-USB/BM
E-BM-TES-SN, E-BM-LES-SN	10 or higher				

9.2 Industrial and ex-proof electronics - NOT compatible with Atos CONNECT mobile App

Model Code	Series
E-MI-AS-IR	11
E-BM-AS	10 or higher
E-BM-AES	10 or higher
E-BM-RES	10 or higher
TID-BC	10 or higher
TES, LES with p/Q control	40 or higher
E-BM-TES with p/Q control	10 or higher
TEZ, LEZ	40 or higher
Z-BM-KZ	10 or higher
Z-BM-TEZ, Z-BM-LEZ	10 or higher

10 PC SOFTWARE AND RECCOMENDED TOOLS SELECTION

10.1 Industrial and ex-proof electronics

PC software	Model Code	Series	Bluetooth		USB , Serial, Infrared		
			Adapter	Cable	Adapter	Cable	Terminator
E-SW-SETUP	E-MI-AS-IR	11			E-A-PS-USB/IR		
	E-BM-AS	10 or higher			E-A-PS-USB/DB9	E-C-PS-DB9/RJ45	
	E-BM-AES	10 or higher			E-A-SB-USB/OPT	E-C-SB-USB/BM	
	E-BM-RES	10 or higher					
	E-BM-TEB, E-BM-LEB	10 or higher	E-A-BTH	E-C-BTH			
	E-BM-TES, E-BM-LES	10 or higher					
	AES	40 or higher				E-C-SB-USB/M12	
	AEB	10 or higher					
	REB, RES	10 or higher					
	TEB, LEB	10 or higher					
	TES, LES	40 or higher					
	TID-NP	10 or higher					
	TID-BC	10 or higher			E-A-BC-USB/DB9	E-C-BC-DB9/M12	E-TRM-BC-DB9/DB9
Z-SW-SETUP	TEZ, LEZ	40 or higher	E-A-BTH		E-A-SB-USB/OPT	E-C-SB-USB/M12	
	Z-BM-KZ	10 or higher		E-C-BTH		E-C-SB-USB/BM	
	Z-BM-TEZ, Z-BM-LEZ	10 or higher					

10.2 Obsolete industrial electronics

PC software	Model Code	Series	Communication type	Adapter	Cable	Terminator
E-SW-SETUP	E-BM-TID, E-BM-LID	10	NP - fieldbus not present	E-A-SB-USB/OPT	E-C-SB-USB/BM	
	AES	30	PS - Serial	E-A-PS-USB/DB9	E-C-PS-DB9/M12	
	AERS, TERS, TES, LES	31				
	AES	30	BC - CANopen			
	AERS, TERS, TES, LES	31		E-A-BC-USB/DB9	E-C-BC-DB9/M12	E-TRM-BC-DB9/DB9
	AES	30	BP - PROFIBUS	E-A-PS-USB/DB9	E-C-PS-DB9/M12	
	AERS, TERS, TES, LES	31		E-A-BP-USB/DB9	E-C-BP-DB9/M12	E-TRM-BP-DB9/DB9
	AES	30	EH - EtherCAT	E-A-PS-USB/DB9	E-C-PS-DB9/M12	
Z-SW-SETUP	TEZ,LEZ	10	PS - Serial	E-A-PS-USB/DB9	E-C-PS-DB9/M12	
	Z-BM-KZ-PS	10 or higher			E-C-PS-DB9/DB9	
	TEZ,LEZ	10	BC - CANopen	E-A-BC-USB/DB9	E-C-BC-DB9/M12	E-TRM-BC-DB9/DB9
	TEZ,LEZ	10	BP - PROFIBUS	E-A-BP-USB/DB9	E-C-BP-DB9/M12	E-TRM-BP-DB9/DB9
	Z-BM-KZ-PS/BP	10 or higher		E-A-PS-USB/DB9	E-C-PS-DB9/DB9	

10.3 Obsolete ex-proof electronics

PC software	Model Code	Series	Communication type	Adapter	Cable	Terminator
E-SW-SETUP	AES	30	PS - Serial	E-A-PS-USB/DB9	E-C-PS-DB9/M8	
	AERS, TERS, TES, LES	31				
	AES	30	BC - CANopen	E-A-PS-USB/DB9	E-C-PS-DB9/M8	
	AERS, TERS, TES, LES	31		E-A-BC-USB/DB9	E-C-BC-DB9/RA	E-TRM-BC-DB9/DB9
	AES	30	BP - PROFIBUS	E-A-PS-USB/DB9	E-C-PS-DB9/M8	
	AERS, TERS, TES, LES	31		E-A-BP-USB/DB9	E-C-BP-DB9/RA	E-TRM-BP-DB9/DB9