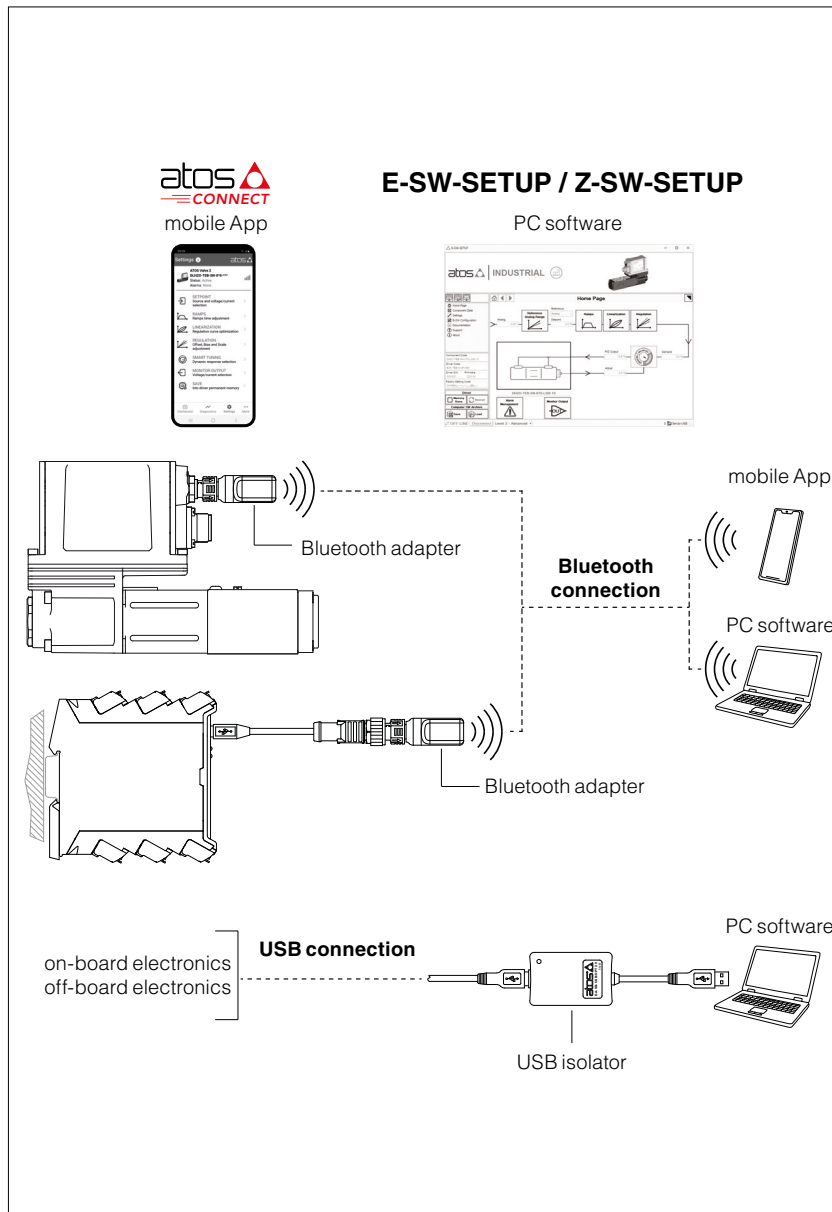


Programming tools for valve drivers & axis controls

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 valvedrivers 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.

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 1.1)
- internal oscilloscope function

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

- supports Bluetooth/USB communication for all Atos devices (see 1.2)
- 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 4.2



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.

Minimum requirements

Personal Computer	Intel® Core™ i3 - 2GHz or equivalent
Operating System	Windows 10 (1) (2)
Monitor Resolution	1024 x 768
Memory	8 GB RAM + Hard Disk with 1 GB free space
Interface	USB port Bluetooth Low Energy (BLE), version 4.2

Different software versions are available:

E-SW-SETUP = for valve drivers

Z-SW-SETUP = for axis controls

(1) Windows 7 does not support Bluetooth connectivity

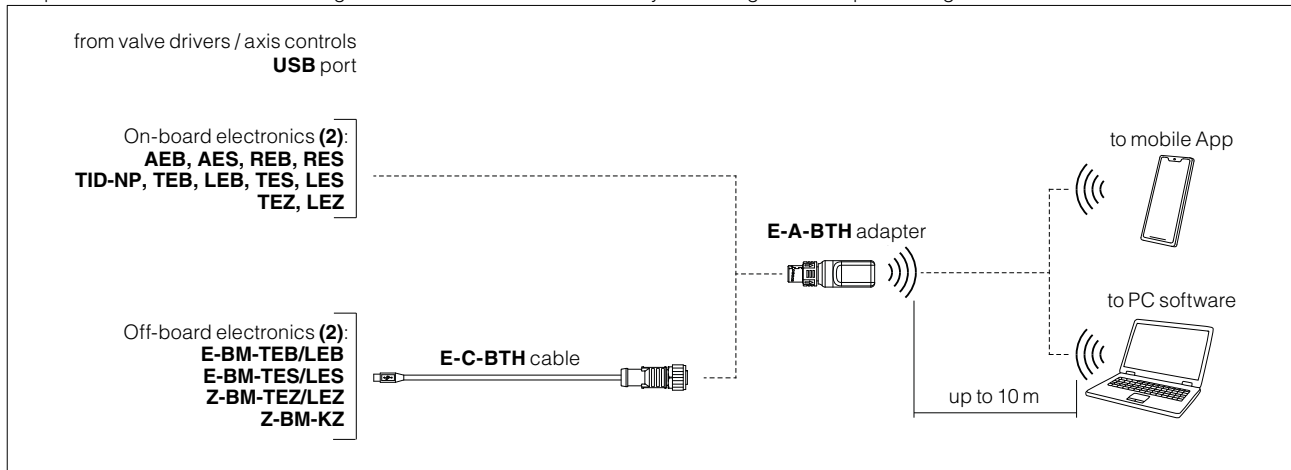
(2) Full Bluetooth features are available only with the latest version of Windows 10

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

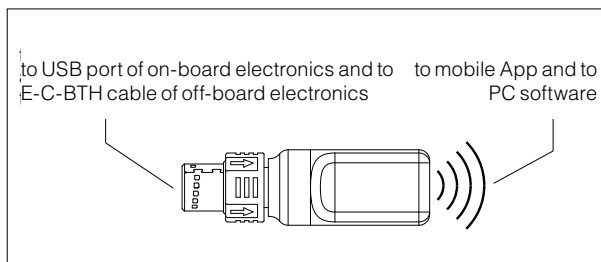
2.2 E-A-BTH - Bluetooth adapter

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 drivers selecting **T** option or purchased separately.

Bluetooth connection to the Atos devices can be protected against unauthorised access by setting a personal password.

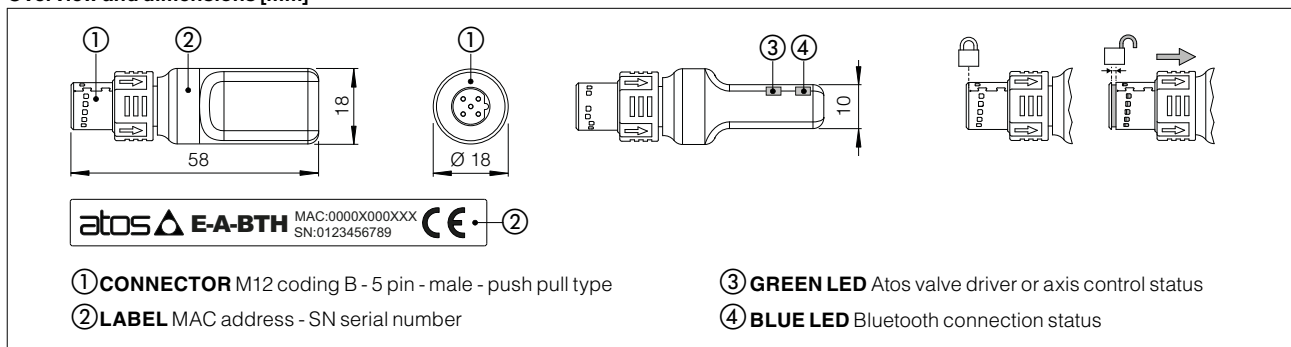
The adapter leds visually indicates the status of valve drivers or axis controls and Bluetooth connection.

For more info, please refer to STARTUP-BLUETOOTH guide.



- M12 male connector, coding B, 5pin, push pull type
- Operating temperature: $-40 \div +60$ °C (storage $-40 \div +70$ °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)

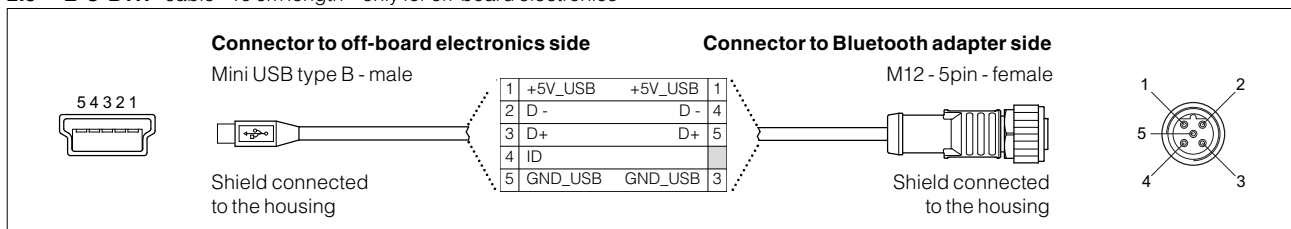
Overview and dimensions [mm]



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), JRF (Japan), BIS (India), KC (Korea) directives

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

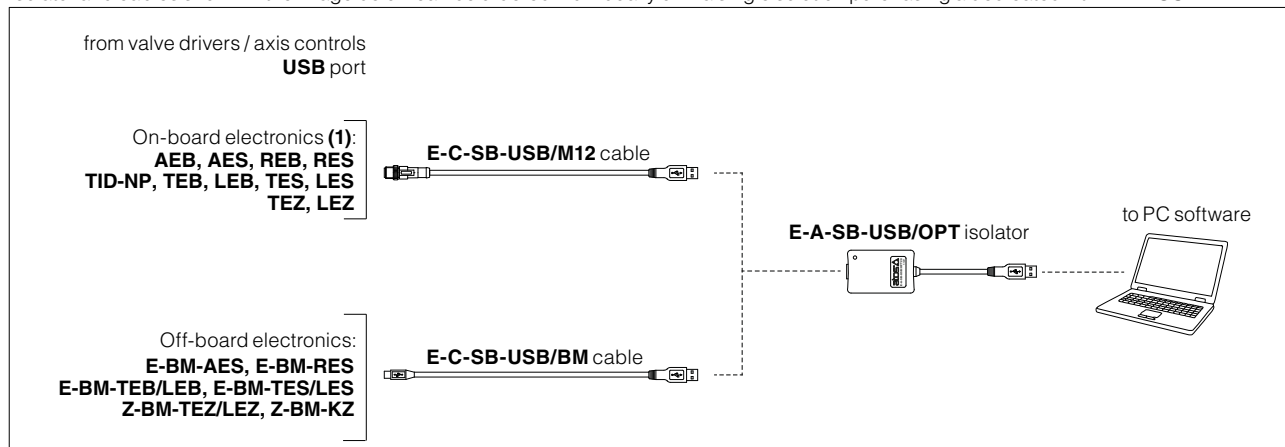


3 USB connection - ISOLATOR AND CABLE

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**

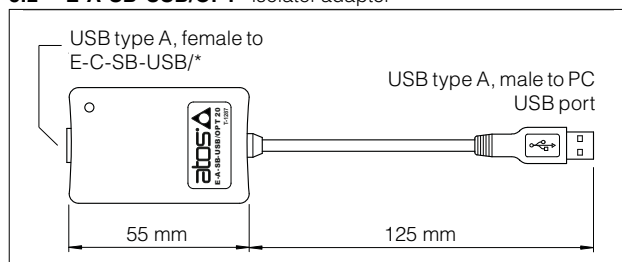


(1) USB port is not available for on-board TID-BC valve drivers

WARNING: the USB port of valve drivers / axis controls is not isolated and use of USB isolator adapter is highly recommended!

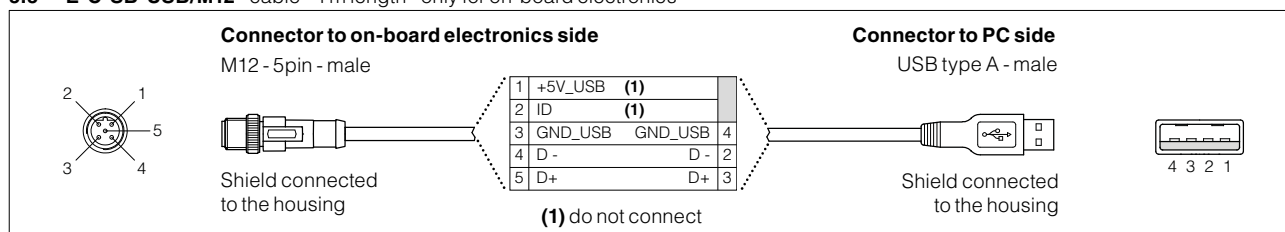
Wrong earthing connections may cause high potential difference between GNDs, generating high currents that could damage valve drivers / axis controls or the connected PC.

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

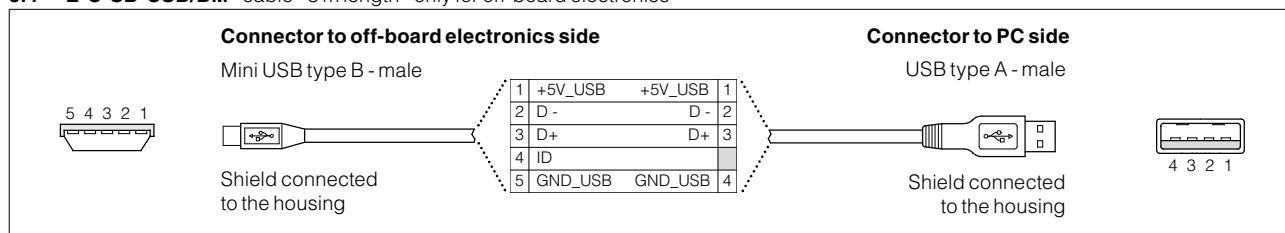


- USB 2.0 Full speed (12 MBps)
- electrical isolation 3 kV
- temperature range, -40°C ÷ +80°C
- external power supply not required
- PC driver not required
- status LED

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



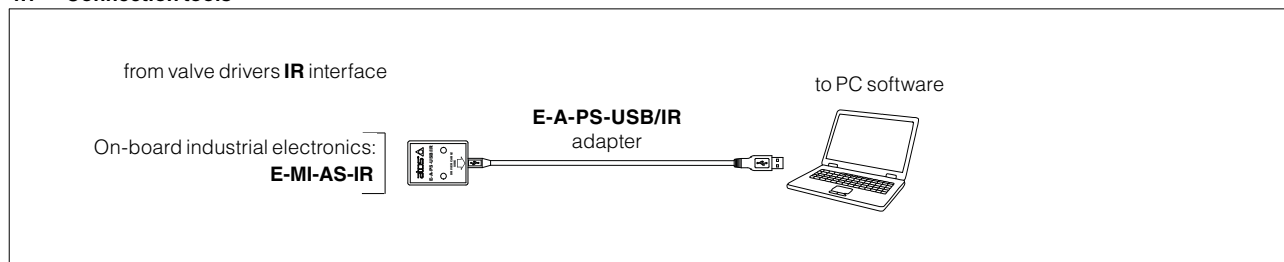
3.4 E-C-SB-USB/BM - cable - 3 m length - only for off-board electronics



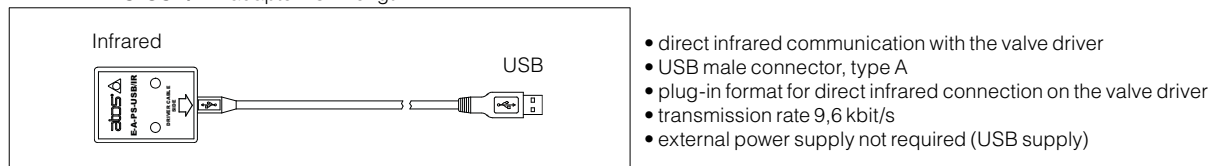
4 IR infrared - USB COMMUNICATION ADAPTER - only for on-board **E-MI-AS-IR** valve drivers

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



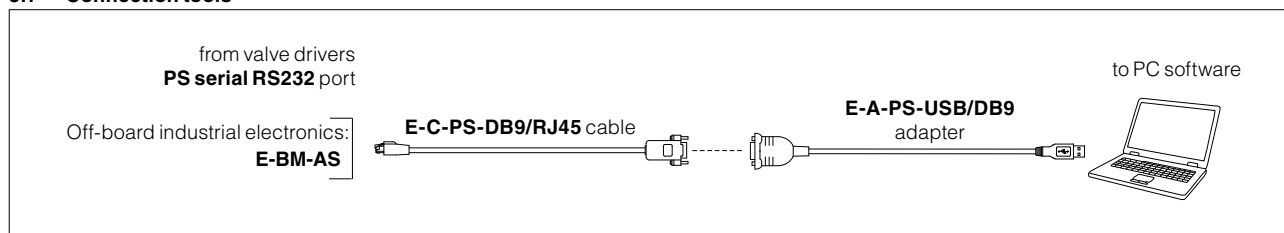
4.2 **E-A-PS-USB/IR** - adapter - 3 m length



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

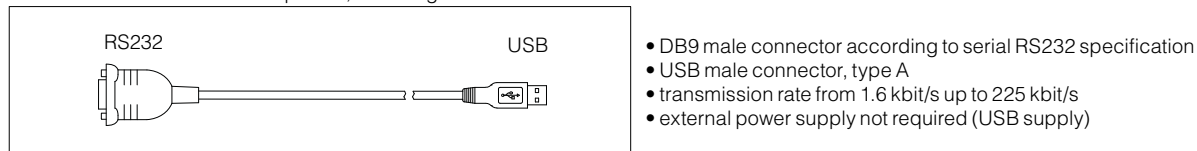
The adapter have to be connected to the USB communication port of PC to activate the PS serial RS232 communication interface towards Atos digital electrohydraulics. The cross cables connect the relevant connector of the USB adapter with the communication port of the valve drivers.

5.1 Connection tools

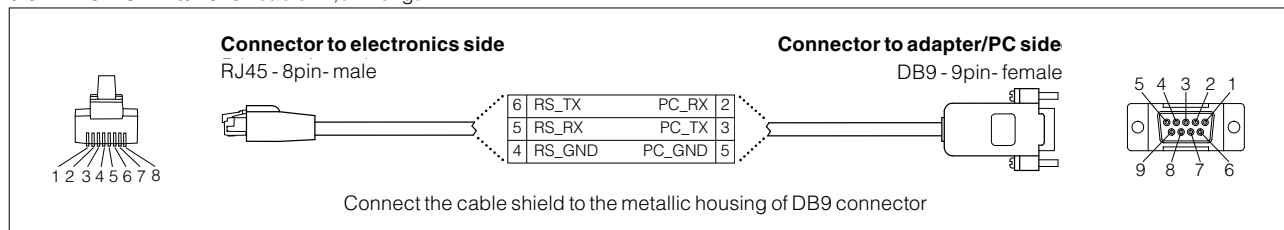


Note: the adapter is not required if PC is already equipped with a serial RS232 communication port

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



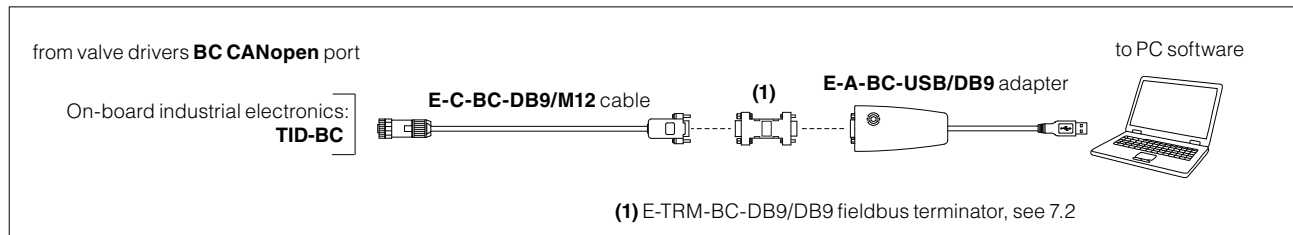
5.3 **E-C-PS-DB9/RJ45** - cable - 2,5 m length



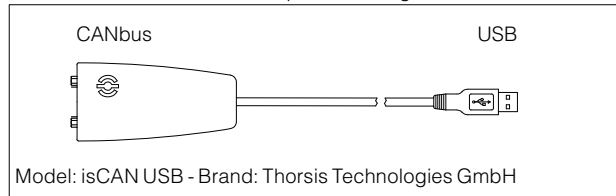
6 BC CANopen - USB COMMUNICATION ADAPTER AND CROSS CABLES - only for on-board TID-BC valve drivers

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

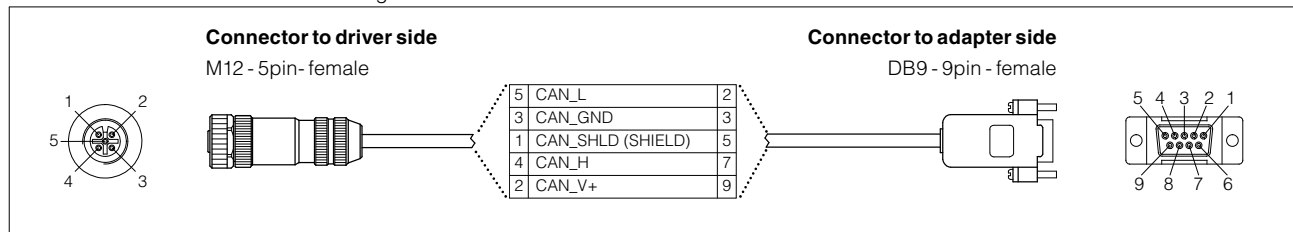


6.2 E-A-BC-USB/DB9 - adapter - 2 m length



- 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



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
1		2		3		4

1 - Terminator type	
E-TRM	Terminator
2 - Fieldbus interface	
BC	CANopen
BP	PROFIBUS DP

3 - Connector type	
M12	from M12 output fieldbus connector (1)
DB9	from DB9 connector, adapter side (2)

4 - Connector type	
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

fieldbus network

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 RECOMMENDED 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	10 or higher	E-C-BTH					
	E-BM-LEB							
	E-BM-TES	10 or higher		E-A-BC-USB/DB9				E-C-SB-USB/M12
	E-BM-LES							
	AES	40 or higher						
	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							
Z-SW-SETUP	TEZ, LEZ	40 or higher	E-A-BTH		E-C-BTH	E-A-SB-USB/OPT	E-C-SB-USB/M12	
	Z-BM-KZ	10 or higher		E-C-SB-USB/BM				
	Z-BM-TEZ	10 or higher						
	Z-BM-LEZ							

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	E-A-BC-USB/DB9	E-C-BC-DB9/M12	E-TRM-BC-DB9/DB9
	AERS, TERS, TES, LES	31				
	AES	30	BP - PROFIBUS	E-A-PS-USB/DB9	E-C-PS-DB9/M12	E-TRM-BP-DB9/DB9
	AERS, TERS, TES, LES	31		E-A-BP-USB/DB9	E-C-BP-DB9/M12	
	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		E-A-PS-USB/DB9	E-C-PS-DB9/M8	
	AERS, TERS, TES, LES	31	BC - CANopen	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