Programming tools for TID valve drivers

Atos PC software, USB adapters and cables

① Programming software
② USB isolator
③ USB cable
④ Bluetooth adapter
⑤ Bluetooth cable

USB connection

Bluetooth connection
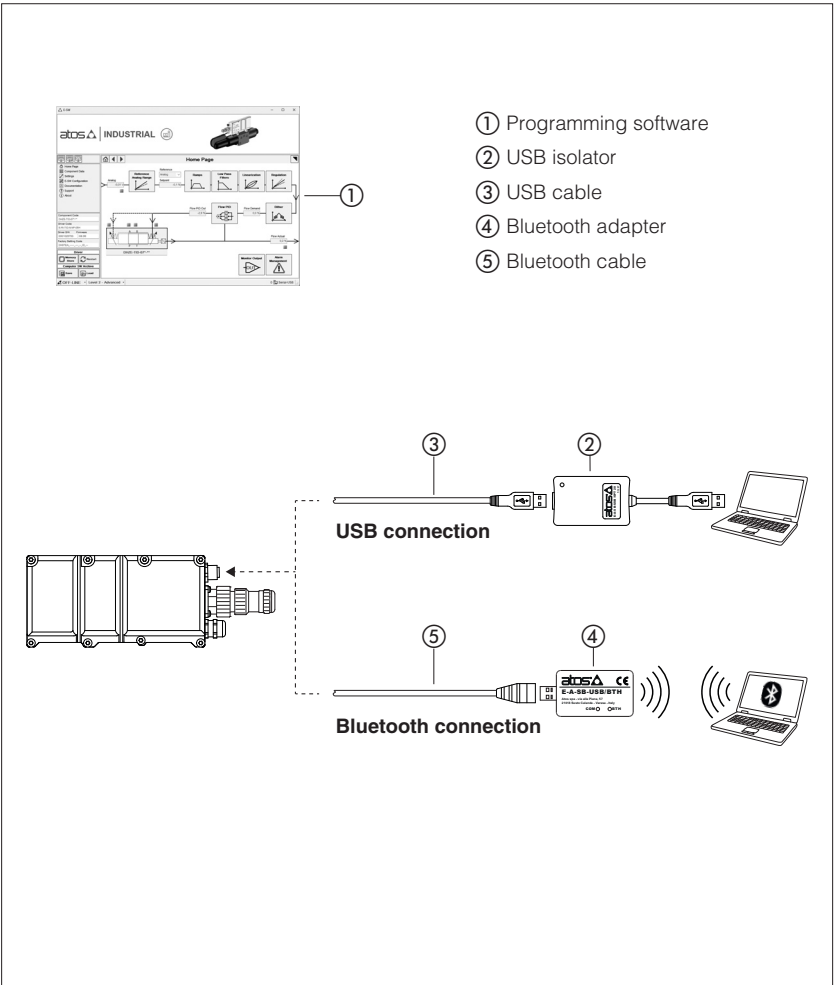
The E-SW-BASIC programming software is supplied in USB memory stick format and can be easily installed on a desktop or a notebook computer.

The intuitive graphic 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 driver
- archive the customized setting into the PC

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

The software automatically recognizes the connected valve model and adapts the displayed parameter groups, according to the selected access level.

Features:
- automatic valve recognition
- multilevel graphic interface
- numeric parameters settings (scale, bias, ramp, linearization, dither, etc.)
- real-time parameters modification
- diagnostic and monitor signals
- preset data storing into permanent memory
- internal oscilloscope function
- internal database of customized preset

USB memory stick contents:
- software installer
- user manuals
- IO-Link configuration files (not used for TID)

| 1 | **PROGRAMMING SOFTWARE** |

Valve driver functional parameters can be easily set up respectively with E-SW-BASIC programming software using proper connection to the digital electronics.

E - SW	-	**BASIC**	-	*
E-SW = for valve drivers				
				Supplies:
Valve drivers supported communications:				**-** = first supply
BASIC = NP (USB)　IL (IO-Link)　PS (Serial)　IR (Infrared)				**N** = next supply

1.1 Programming software versions

Note: the E-SW-BASIC software is supplied in USB memory stick format
the E-SW-BASIC software can be free downloaded from the Atos website

Web download, free programming software:

E-SW-BASIC

The software can be downloaded from MyAtos area upon web registration at www.atos.com:
- technical assistance for the software not included
- USB memory stick not included

Upon web registration the user receives via email the Activation Code (free software license)

The software remains active for 10 days from the installation date and then it stops until the user inputs the Activation Code.

USB memory stick first supply of programming software, to be ordered separately:

E-SW-BASIC

The software can be activated from the MyAtos area after web registration on www.atos.com using the serial number printed into the USB memory stick plastic box:
- technical assistance for the software included for 1 year, starting from web registration;
  the access to the service may happen by telephone, e-mail, or at the Atos Headquarters

Upon web registration user receives via email the Activation Code (purchased software license)

The software remains active for 10 days from the installation date and then it stops until the user inputs the Activation Code.

USB memory stick next supplies of programming software, to be ordered separately:

E-SW-BASIC-N

Available only for supplies after the first, these software cannot be activated from MyAtos area:
- technical assistance for the software not included

The software can be activated only with the Activation Code received upon **USB memory stick first supply** registration and it is recommended only for supplies that require additional USB memory stick physical copies of the software.

1.2 Atos Download Area

Direct access to latest releases of programming software, manuals, USB drivers and fieldbus configuration files in MyAtos area at www.atos.com
An automatic mailing message will inform all the registered users whenever a new software update is available.

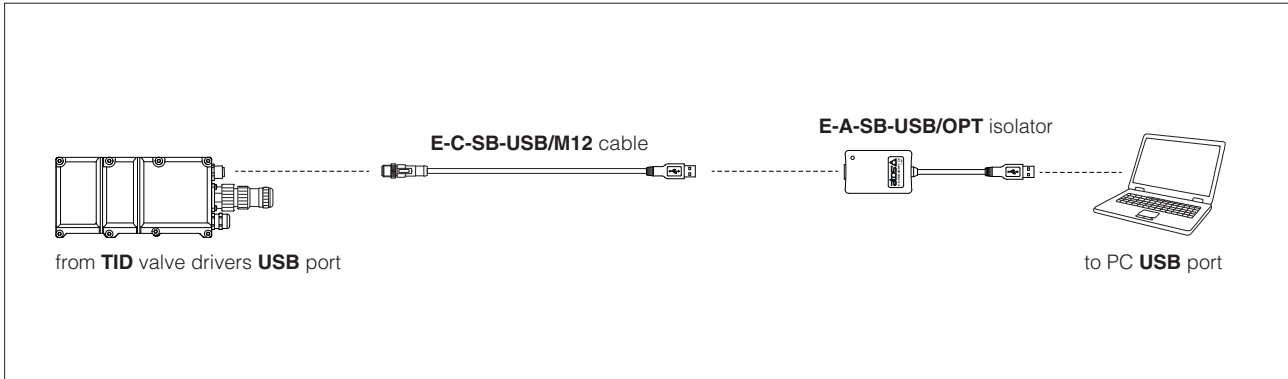## 1.3 E-SW-BASIC minimum PC requirements

Personal Computer	Pentium® processor 1GHz or equivalent
Operating System	Windows XP SP3
Monitor Resolution	1024 x 768
Memory	512 MB RAM + Hard Disk with 250MB free space
Interface	USB port

E-SW-BASIC software permit the functional parameters programming through USB port.

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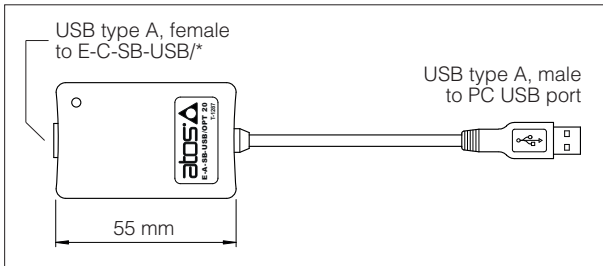
Isolator and cables shown in the image below can be ordered individually or in a single solution purchasing a dedicated kit: **E-KIT-USB**

E-C-SB-USB/M12 cable

E-A-SB-USB/OPT isolator

from **TID** valve drivers **USB** port

to PC **USB** port

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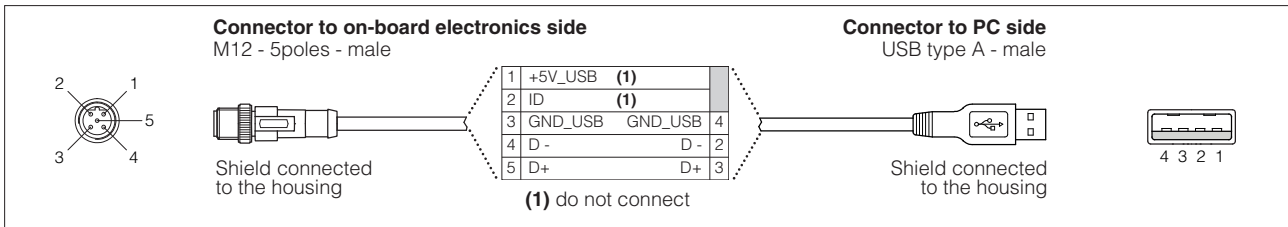Wrong earthing connections may cause high potential difference between GNDs, generating high currents that could damage valve drivers or the connected PC.

2.2 E-A-SB-USB/OPT - 0,10 m cable - isolator adapter

USB type A, female
to E-C-SB-USB/*

USB type A, male
to PC USB port

55 mm

- 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

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

Connector to on-board electronics side
M12 - 5poles - male

Connector to PC side
USB type A - male

1	+5V_USB	**(1)**	
2	ID	**(1)**	
3	GND_USB	GND_USB	4
4	D -	D -	2
5	D+	D+	3

Shield connected
to the housing

Shield connected
to the housing

4 3 2 1

(1) do not connect

3 | BLUETOOTH connection - ADAPTER AND CABLE

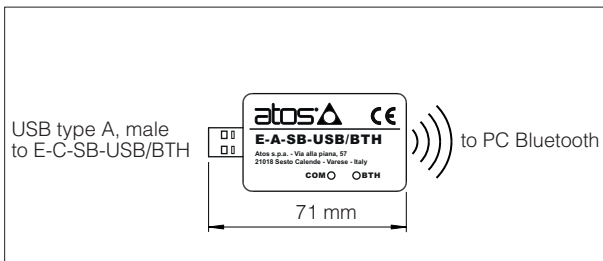E-SW-BASIC software permit the functional parameters programming through Bluetooth.

3.1 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**

E-C-SB-M12/BTH cable

E-A-SB-USB/BTH adapter

(1)

up to 10 m

from **TID** valve drivers **USB** port
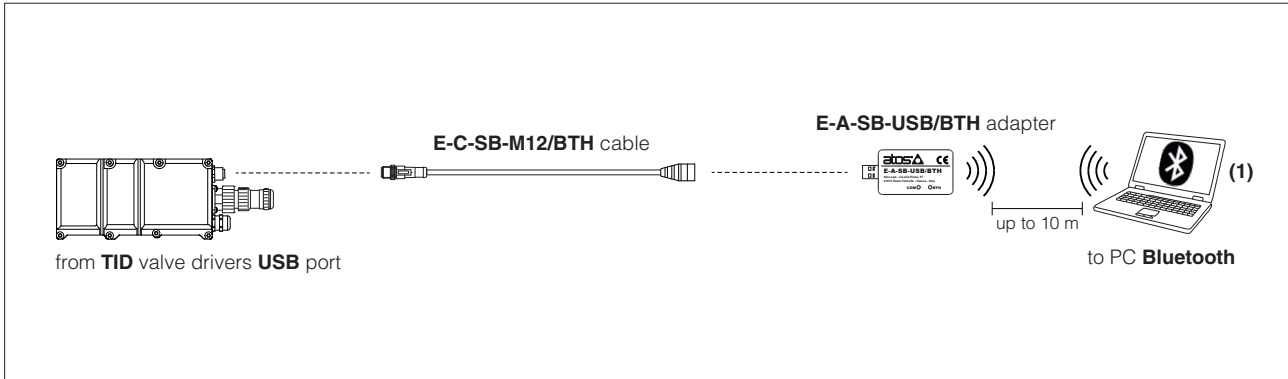
to PC **Bluetooth**

(1) If PC has not built-in Bluetooth, use standard USB to Bluetooth dongle compatible with E-A-SB-USB/BTH specification
(please refer to STARTUP-BLUETOOTH guide)
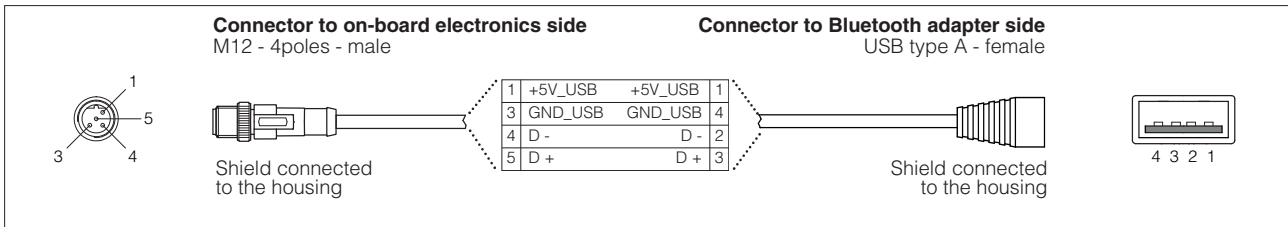
3.2 E-A-SB-USB/BTH - Bluetooth adapter

USB type A, male
to E-C-SB-USB/BTH

atos

E-A-SB-USB/BTH
Atos s.p.a. - Via alla piana, 57
21018 Sesto Calende - Varese - Italy

COM ◯   ◯ BTH

to PC Bluetooth

71 mm

- USB male connector, type A
- type of radio interface: Bluetooth Class 2
- temperature range, -20 ÷ +70 °C (storage -40 ÷ +70 °C)
- external power supply not required (from Atos digital electronics only)
- protocol: Bluetooth Classic Version 2.x , 3.x supporting Serial Port Profile
- max RF transmission power: Class 2 Output Power (+1.5 dBm typical)
- frequency: 2.402 GHz to 2.480 GHz
- LEDs indicate the actual working condition
- IP20 protection degree

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

3.3 E-C-SB-M12/BTH - 0,4 m cable - only for on-board electronics

Connector to on-board electronics side
M12 - 4poles - male

Connector to Bluetooth adapter side
USB type A - female

1	+5V_USB	+5V_USB	1
3	GND_USB	GND_USB	4
4	D -	D -	2
5	D +	D +	3

Shield connected
to the housing

Shield connected
to the housing

4 3 2 1

4 | FIRMWARE UPDATE

It is possible to update the firmware of the valve drivers starting from electronics E-RI-TID series10 or higher, using proper USB communication port.

5 | RECCOMENDED TOOLS SELECTION

5.1 USB connection tools

Model Code	Software	Cable	USB Adapter
TID-NP	E-SW-BASIC	E-C-SB-USB/M12	E-A-SB-USB/OPT

5.2 Bluetooth connection tools

Model Code	Software	Cable	Bluetooth Adapter
TID-NP	E-SW-BASIC	E-C-SB-M12/BTH	E-A-SB-USB/BTH