

PILOTED OPERATED PROPORTIONAL DIRECTIONAL VALVES

Valve model:  
DPZE-TID-2  
DPZE-TID-4  
DPZE-TID-6  
Driver model:  
E-RI-TID-N-NP

IDENTIFICATION

Valve identification plates and label

Pilot valve and driver name plate : L

Valve name plate : M

1 : driver code  
2 : driver serial number  
3 : factory firmware version  
4 : valve matrix code  
5 : valve code  
6 : hydraulic symbol

INSTALLATION TOOLS ACCORDING TO VALVE MODEL- not included

Fastening bolts	Wrenches	Main connector
socket head screws	for fastening bolts	7 pin - metallic
see STEP 1		see STEP 2

PROGRAMMING TOOLS - not included

PC software	mobile App	Bluetooth Adapter	OR	USB connection KIT
E-SW-SETUP	Atos CONNECT	E-A-BTH		E-C-SB-USB/M12 E-A-SB-USB/OPT

NOTE: Atos CONNECT supports Atos digital valve drivers equipped with E-A-BTH or with built-in Bluetooth, see STEP 5

PC SOFTWARE

E-SW-SETUP	supports	NP (USB)	IL (IO-Link)	PS (Serial)	IR (Infrared)
		BC (CANopen)	BP (PROFIBUS DP)	EH (EtherCAT)	
		EW (POWERLINK)	EI (EtherNet/IP)	EP (PROFINET RT/IRT)	
	supports	valves with SP, SF, SL alternated p/Q control			

REMARK Atos PC software is designed for Windows based operative systems - Windows 10 or later

PC SOFTWARE DOWNLOAD

Download PC software at [www.atos.com](http://www.atos.com) accessing to "MyAtos -> Download area electronics"

Free registration by filling the form at [www.atos.com/en-it/login](http://www.atos.com/en-it/login)

E-SW-SETUP is free and available in Download area

RELATED DOCUMENTATION - [www.atos.com](http://www.atos.com)

FS900	Operating and maintenance information - tech. table	STARTUP BLUETOOTH	Bluetooth adapter startup guide
FS158	DPZE one LVDT transd. positive spool overlap - tech. table	E-MAN-RI-TID	TID - driver operating manual
P005	Mounting surfaces - tech. table		
GS500	Programming tools - tech. table		
K800	Electric and electronic connectors - tech. table		


ATTENTION !

The purpose of this quickstart guide is show a logical sequence of basic operations. This guide does not cover all details or variants of Atos valves. All operations described in this document should be performed only by qualified personnel. Operations and images could be subject to change without notice. For further information please refer to related documentation.

CONTACT US

PRODUCTS OVERVIEW

STEP 1

STEP 2

STEP 3

INSTALLATION		PROGRAMMING	
STEP 1	STEP 2	STEP 3	STEP 4
MECHANICAL	ELECTRICAL	PC SOFTWARE	MOBILE APP

STEP 1 MECHANICAL

In case of first commissioning, before the valve installation the whole system must be correctly flushed to grant the required cleanliness level:  
During the flushing operation use on-off or by-pass valves in place of the proportional valve

- remove protection pad **P1** located on the valve bottom face only immediately before installation (do not remove connectors caps)
- check the presence and correct positioning of the seals on valve ports
- verify that valve mounting surface is clean and free from damages or burrs
- verify the correct valve orientation according to the pattern of the relevant mounting interface
- lock the fastening bolts respecting below sequence and tightening torque according to valve model

DPZE-TID-2

Mounting surface layout

4401-07-07-0-05

Valve size ISO 4401: 16

Fastening bolts socket head screws

Tightening torque: 15 Nm for M6 70 Nm for M10

DPZE-TID-4

Mounting surface layout

4401-08-08-0-05

Valve size ISO 4401: 25

Fastening bolts socket head screws

Tightening torque: 125 Nm

DPZE-TID-6

Mounting surface layout

4401-10-09-0-05

Valve size ISO 4401: 32

Fastening bolts socket head screws

Tightening torque: 600 Nm

STEP 2 ELECTRICAL

To proceed with the wiring of the main connector, perform the following steps

1 Remove main connector cap P2

2 Proceed with wirings operations

Recommended LIYCY shielded cables:  
7 x 0,75 mm² max 20 m  
7 x 1 mm² max 40 m

**WARNING:** a safety fuse is required in series to driver power supply - 2,5 A time lag fuse

3 Connect the valve to the system

**NOTE:** the use of above metallic connectors is strongly recommended in order to fulfill EMC requirements

ELECTRICAL WIRING EXAMPLES

MAIN CONNECTOR - REFERENCE INPUT

REFERENCE INPUT - DIFFERENTIAL MODE

REFERENCE INPUT - COMMON MODE

MAIN CONNECTOR - MONITOR OUTPUT

MONITOR OUTPUT

STEP 3 PC SOFTWARE

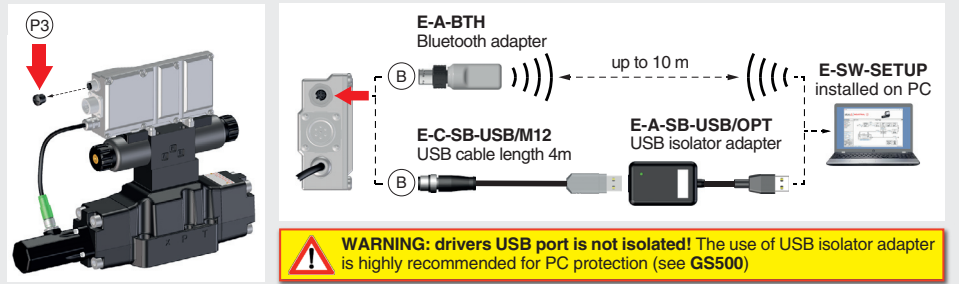
**REMARK** proportional valves with on-board electronics are factory preset with default parameter and ready to use after piping and electrical connections. **Play with parameters is optional, not mandatory!**

3.1 CONNECTION

**1** In order to access valve parameterization:

- Install E-SW-SETUP software on PC
- Insert main connector to the valve and power on with 24Vdc

**2** Remove USB plastic protection cap **P3** and connect valve to the PC as show below via Bluetooth (adapter only) or USB (cable and isolator adapter)

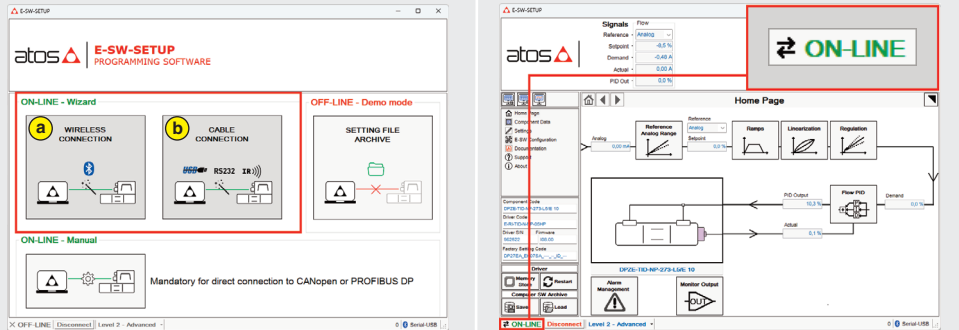


**3** Launch the PC software using E-SW-SETUP icon:

- **PC software does NOT detect valid connection** communication is not established, please follow wizard procedure
- **PC software detects valid connection** communication automatically established - valve is **ON-LINE** see

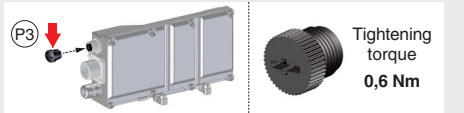
**4** In **ON-LINE - Wizard** press button:

- a** : **WIRELESS CONNECTION** Wizard procedure for connection via Bluetooth
- b** : **CABLE CONNECTION** Wizard procedure for connection via USB cable

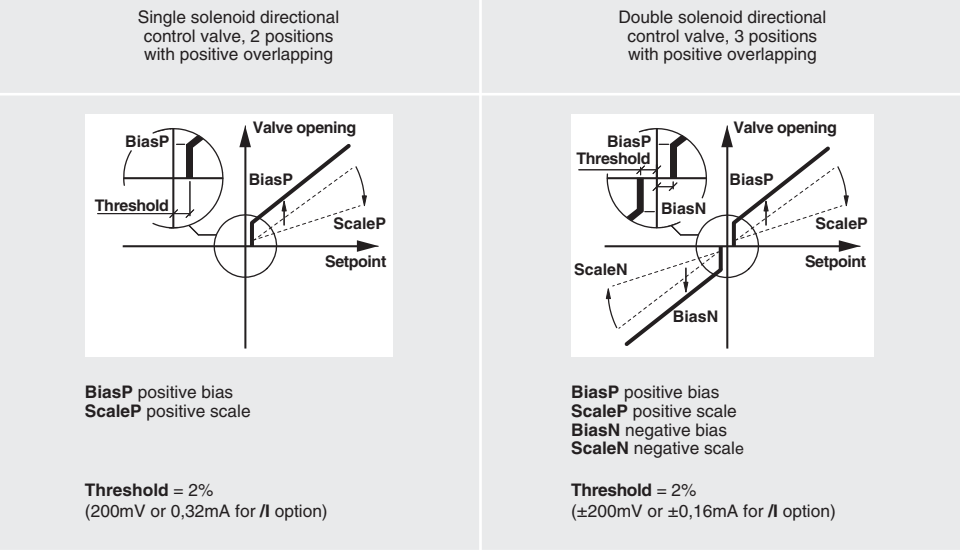


**NOTE:** for more info about E-A-BTH Bluetooth adapter, please refer to STARTUP BLUETOOTH guide

**REMARK:** once removed the E-A-BTH Bluetooth adapter or E-C-SB-USB/M12 USB cable, screw the plastic protection cap **P3** applying the correct tightening torque, in order to preserve valve's IP protection characteristics



3.2 CONFIGURATION



**BIAS AND SCALE - 2 POSITION VALVES**

**Bias setting:** supply input signal just over the Threshold value; increase the Bias until the actuator is start moving, then lightly reduce the Bias just to stop the actuator

**Scale setting:** supply the max input signal; adjust the Scale to obtain the max actuator speed

**BIAS AND SCALE - 3 POSITION VALVES**

Follow the same indications reported for 2 position valves for both valve's solenoids

**RAMPS**

**Ramps setting:** select the required ramp configuration and adjust the ramp time to optimize the actuator's acceleration and deceleration

**No Ramp** : no ramps selected  
**Single Ramp** : setup **Ramp 1**  
**Double Ramp** : setup **Ramp 1** and **2**  
**Four Ramps** : setup **Ramp 1, 2, 3** and **4** (only 3 position)

3.3 STORE

Parameters modifications will be stored into driver permanent memory:

- press **Memory Store** button to access **Driver - Memory Save** window
- press **Save User Set** button to store **Valve Parameters**

3.4 BACK UP

Parameter modifications will be saved into PC memory:

- press **Save** button to access **Computer SW Archive - Setting Files** page, **Setting File Name** pop-up appears
- input a valid name into **Description** field and press **Ok** button

STEP 4 MOBILE APP

**ATOS CONNECT** for smartphones and tablets is a free downloadable app which allows quick access to valve main functional parameters and configuration via Bluetooth, thus avoiding physical cable connection and significantly reducing commissioning times.

**ATOS CONNECT** app requirements:

- iOS 14 / Android 9
- Bluetooth Low Energy (BLE), version 4.2 or higher
- Atos digital valves/drivers equipped with E-A-BTH Bluetooth adapter or with built-in Bluetooth

TROUBLESHOOTING

**The valve does not follow the reference signal**

- valve is powered off, verify presence of 24 Vdc power supply
- flow/pressure values exceeding the valve's performance limits, verify that hydraulic operating conditions are in compliance with the valve's characteristics
- spool sticking, contact Atos service center
- missing piloting pressure, verify that hydraulic power level is compliant with valve's characteristics
- wrong pilot/drain configuration - check if the pilot/drain configuration of the valve corresponds to the effective system layout

**PC software parameters modifications are lost when valve is switched off**

- parameter store operation was not performed, check store procedure – see STEP 3, section 3.3

**PC software parameters modifications have no effect on the valve**

- valve is OFF LINE, check connection procedure – see STEP 3, section 3.1

**After the modifications of PC software parameters the valve does not work properly**

- restore valve factory parameters using 'Load Factory Set' button, located in 'Driver - Memory Save' window:
  - during restore, the current to the solenoid(s) will be temporarily switched to off!
  - factory parameters will be applied at next driver restart or after power off-on sequence!