**MECHANICAL EARTH A2/Q V0 MAIN CONNECTOR - CURRENT/Z NC V+**

**ELECTRICAL/P_INPUT+**

**P_MONITOR 2 ENABLE ELECTRICAL/P_INPUT+**

**INSTALLATION TOOLS ACCORDING TO VALVE MODEL - not included**

- Fastening bolts
- Wrenches
- Screwdriver
- Main connectors
- ISO socket head screws
- ISO mechanical pilot relief
- ISO air blinding
- ISO fastening bolts
- ISO 7-PIN main connector

**PROGRAMMING TOOLS - not included**

- USB connection KIT
- DVI
- Bluetooth connection KIT

**DOWNLOAD AREA**

- E-SW-BASIC free basic software can be downloaded upon web registration at www.atos.com

**OVERVIEW**

**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.
- Check the presence and correct positioning of the seals on valve ports.
- Verify that valve mounting surface is clean and free from damages or burns.
- Lock the fastening bolts respecting below sequence and tightening torque according to valve model.

**ELECTRICAL**

**HYDRAULICS**

**SOFTWARE**

**CONTACT US**

www.atos.com  |  support@atos.com

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**NOTE:**

- Use of above metallic connectors is strongly recommended in order to fulfill EMC requirements.
- **WARNING:**
  - Do not leave valves unattended during electrical or wiring operations.
  - Connect the valve to the system: the system pressure will not increase until the mechanical pressure limiter remains unloaded.
  - Air blinding: release 2 or 3 turns the air bleed screw V.
  - Mon. P: the valve air line pressure until the oil leaking from the V port is assuamed from air bubbles.
  - **WARNING:**
  - Do not to remove connectors caps.

**RECOMMENDED LIFCY**

- Shaded cable: 7 x 0.75 mm² max. 20 m
- 7 x 1.75 mm² max. 40 m

**TECHNICAL DATA**

- **Valve size ISO 4401:**
  - n°4 M5:20 class:12.9
- **Valve size ISO 6264:**
  - n°4 M20

**TIGHTENING TORQUE**

- 8 mm wrench: 10 mm
- 10 mm wrench: 125 Nm
- 12 mm wrench: 600 Nm

**Mounting surface layout**

<table>
<thead>
<tr>
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**Programmable pin-out**

- Reference input: differential 0÷10VDC / 4÷20mA
- Common mode: input 24VDC
- Reference input: direct/analogue
- Common mode: (power supply 0VDC) (power supply 24VDC)

**ELECTRICAL WIRING EXAMPLES**

**MAIN CONNECTOR - VOLTAGE**

- **REFERENCE INPUT - DIFFERENTIAL**
- **REFERENCE INPUT - DIRECT/ANALOGUE**
- **REFERENCE INPUT - RELAY**

**MAIN CONNECTOR - CURRENT**

- **REFERENCE INPUT - DIFFERENTIAL**
- **REFERENCE INPUT - DIRECT/ANALOGUE**

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**STEP 4** SOFTWARE

**SOFTWARE**

**0,6 Nm**

**STORE**

**5**

**CONNECTION**

**CONFIGURATION**

**BACK UP**

**Remark:** proportional valves with integral electronics are factory preset with default parameter and ready to use after piping and electrical connections. **Play with parameters is optional, not mandatory!**

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**REMARK:** For more info please refer to **STARTUP-BTH guide**

**tightening torque, in order to preserve valve’s IP protection**

**Remark:** Once removed the USB cable **E-C-SB-USB/M12**, apply the correct tightening torque, in order to preserve valve’s IP protection characteristics.

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**Bias setting:** BIAS AND SCALE

- **Bias settings:** apply the input signal equal to 0 bar
- **relief valves:** increase the Bias until the pressure starts to increase, then lightly reduce the Bias just to bring back the pressure lightly over the minimum regulated value
- **reducing valves:** increase the Bias until is reached the minimum desired value of starting pressure

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**Ramps**

**Ramps setting:** select the required ramp configuration and adjust the ramp time to optimize the pressure response according to the system characteristics

- **No Ramp:** no ramps selected
- **Single Ramp:** setup Ramp 1
- **Double Ramp:** setup Ramp 1 and 2

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**Pressure Instability or vibration**

- **Presence of air in the solenoid:** perform air bleeding procedure – see **STEP 3.1**
- **Valve vibration or noise:** check eventual anomalies in the hydraulic circuit as the presence of air

**1.** Store the valve is OFF LINE, check connection procedure – see **STEP 4, section 4.1**

**Software parameters modifications have no effect on the valve**

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**TROUBLESHOOTING**

**Value vibration or noise**

- **Presence of air in the solenoid:** perform air bleeding procedure – see **STEP 3.1**

**Value does not follow the reference signal**

- **Value is powered off:** verify presence of 24 Vdc power supply
- **Value is disabled:** verify presence of 24 Vdc on enable pin - only for /Q and /Z options
- **Value is OFF LINE:** check connection procedure – see **STEP 4, section 4.1**

**Pressure instability or vibration**

- **Solenoid power:** press Voltage **Standard button** to automatically set the analog input signal to voltage
- **Supply the max input signal:** press Voltage **Standard button**
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