**Main characteristics:**

- **Output configuration:**

<table>
<thead>
<tr>
<th>Reference</th>
<th>ZMLPA1P2SH</th>
<th>ZMLPA1N2SH</th>
<th>ZMLPA1P2SW</th>
<th>ZMLPA1N2SW</th>
<th>ZMLPA2P0SH</th>
<th>ZMLPA2N0SW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front face caption</td>
<td><img src="image1.png" alt="Image of Front Face Caption" /></td>
<td><img src="image2.png" alt="Image of Front Face Caption" /></td>
<td><img src="image3.png" alt="Image of Front Face Caption" /></td>
<td><img src="image4.png" alt="Image of Front Face Caption" /></td>
<td><img src="image5.png" alt="Image of Front Face Caption" /></td>
<td><img src="image6.png" alt="Image of Front Face Caption" /></td>
</tr>
<tr>
<td>Analogue output</td>
<td>4...20 mA</td>
<td>4...20 mA</td>
<td>4...20 mA</td>
<td>4...20 mA</td>
<td>No / Non</td>
<td>No / Non</td>
</tr>
<tr>
<td>Switching output</td>
<td>PNP</td>
<td>NPN</td>
<td>PNP</td>
<td>NPN</td>
<td>2 x PNP</td>
<td>2 x NPN</td>
</tr>
<tr>
<td>Switching mode</td>
<td>Hysteresis</td>
<td>Hysteresis</td>
<td>Window</td>
<td>Window</td>
<td>Hysteresis</td>
<td>Hysteresis</td>
</tr>
<tr>
<td>Connector wiring</td>
<td><img src="image7.png" alt="Image of Connector Wiring" /></td>
<td><img src="image8.png" alt="Image of Connector Wiring" /></td>
<td><img src="image9.png" alt="Image of Connector Wiring" /></td>
<td><img src="image10.png" alt="Image of Connector Wiring" /></td>
<td><img src="image11.png" alt="Image of Connector Wiring" /></td>
<td><img src="image12.png" alt="Image of Connector Wiring" /></td>
</tr>
<tr>
<td>Power supply</td>
<td>± 24 Vdc SELV or PELV(*) power supply, operating range from 17 to 33 Vdc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>≤ 50mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switching outputs</td>
<td></td>
<td>Switching capacity</td>
<td>≤ 200 mA with short-circuit &amp; overload protection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voltage drop</td>
<td>≤ 2V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analogue output</td>
<td>4...20 mA load: ≤ 500 Ω (24V)</td>
<td></td>
<td>≤ 200 Ω (17V)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-25 to +70 °C (-13 to +158 °F)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP65, IP67 conforming to EN/IEC 60529</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP69K conforming to DIN 40050</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall accuracy (analogue, digital output, display)</td>
<td>&lt; 1% of the selected display range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>&lt; 5 ms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Dimensions and tightening torques:**

  | M12 x 1 | 35 mm |
  | ![Image of Dimensions](image13.png) |

- **CAUTION:**

  Unintended equipment operation
  - Read the user guide before the first installation.
  - Use the equipment within the characteristics mentioned in catalogue.
  - Use insulated SELV(*) or PELV(**) power supply.
  - Failure to follow these instructions can result in injury or equipment damage.

(*) SELV: Safety extra low voltage
(**) PELV: Protected extra low voltage

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**Note:** You can download this user guide, plus other languages from our website at: www.tesensors.com

We welcome your comments about this document. You can reach us by e-mail at: customer-support@tesensors.com

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**Electrical equipment should be installed, operated and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.**

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Wiring Diagram:

Input M12 4-pin female connector

CAUTION

UNINTENDED EQUIPMENT OPERATION
- Only connect a 4-20mA pressure transmitter, directly or thanks to M12-M12 4-pin electrical jumper.
- Make sure the pressure transmitter pin out and analogue signal is compatible with ZMLP if it is not a Telemecanique one.

Failure to follow these instructions can result in injury or equipment damage.

Mounting possibility:

Fixing bracket

XMLPZLV01 or XMLPZLH01

Computer

Usage precautions:

Setting Head position

Tmax = 80°C (176°F)

1/8" ≤ Ø ≤ 1 1/4"

300°

Cleaning

Maintenance:

At each power on, all the display segments are simultaneously lit up briefly. This allows the operator to check that all segments are well operating.

Cleaning
Setting:

1. Choose the pressure unit in accordance to the connected pressure transmitter: The default unit is «bar».
   psi, kPa and MPa adhesive labels provided with the product can be stuck on the front face in the place of «bar».

2. Select the displayed value range in accordance to the connected pressure transmitter.
   Put the rotary switch on «Set» position (factory default position). «Set» and a value are alternatively displayed.

   Then select the appropriate value by turning the potentiometer.

<table>
<thead>
<tr>
<th>Pressure range</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to x (bar, psi or Pa)</td>
<td>X</td>
</tr>
<tr>
<td>Ex: 250 bar</td>
<td>250 psi</td>
</tr>
<tr>
<td>-x to 0 (bar, psi or Pa)</td>
<td>-X</td>
</tr>
<tr>
<td>Ex: -14,5 to 0 psi</td>
<td>-14,5 psi</td>
</tr>
</tbody>
</table>

   Combined pressure ranges
   -1,00 to +1,00 (bar)
   -1,00 to +5,00 (bar)
   -1,00 to +8,00 (bar)
   -1,00 to +24,00 (bar)
   -14,50 to +15,00 (psi)
   -14,50 to +60,00 (psi)

   The change of rotary switch position memorizes the selected value.

3. Adjust the high pressure threshold (Set Point):
   Put the rotary switch on «SP» or «FH» or «SP1» position (depending on model). «SP» or «FH» or «SP1» and threshold value are alternatively displayed.

   Then adjust the threshold value by turning the potentiometer.

   The change of rotary switch position memorizes the selected value.

4. Adjust the low pressure threshold (Reset Point) or output 2 Set Point:
   Put the rotary switch on «RP» or «FL» or «SP2» position (depending on model). «P» or «FL» or «SP2» and threshold value are alternatively displayed. SP2 means that you are adjusting the «Set Point» of the output 2.

   Then adjust the threshold value by turning the potentiometer.

   The change of rotary switch position memorizes the selected value.

5. At the end of the setting:
   Put the rotary switch on «Run» position in order for the product to be operational. The fluid pressure is displayed. The potentiometer is no longer operational.

If the setting is final, it is recommended to enable the "Locking" function (see procedure in «Complementary setting»).
Complementary setting:

- **NO/NC output setting:** Factory default output setting is NO function.

To change to NC:

1. Turn the rotary switch to «Set» position.
2. Then turn the potentiometer to display the «NC» item.
3. Then turn back the switch on «Run» position. «NC» function is activated and the fluid pressure is displayed.

To come back to NO function, use the same process but select the «nO» item.

- **Locking / unlocking function:** In order to avoid any mis-adjustment afterward by an unauthorized person, the product can be locked.

**Locking**

- To activate the locking function:
  1. Turn the rotary switch to «Set» position.
  2. Then turn the potentiometer to display the «LOC» item.
  3. Then turn back the switch on «Run» position. The product is locked and the fluid pressure is displayed.

- When the locking function is activated, no adjustment is possible. Nevertheless you can read the adjusted values by turning the rotary switch in «SP*» position (*: Can be SP1, SP2, SP, rP, FH or FL depending of the model).

- If the operator turns the potentiometer, «LOC» is alternately displayed with the threshold value.

**Unlocking**

- To unlock the product and to allow adjustment again:
  1. Turn the rotary switch to «Set» position. "PaSS" is displayed, requesting for a password.
  2. Then turn the potentiometer to display the key value «520».
  3. Then turn back the switch on «Run» position. The fluid pressure is displayed.

Then the product is unlocked and can be adjusted again.