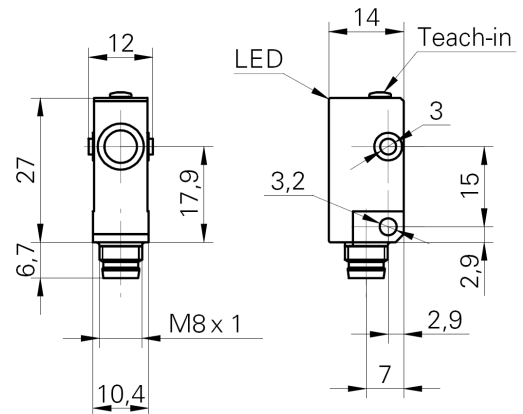


PRODUCT: ultrasonic diff. reflection sensor
DESIGN: 14 12x14x27

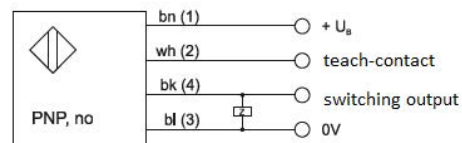
- ✓ very small angle of beam spread
- ✓ filling-level control in vessels of $\geq \varnothing 25\text{mm}$ possible
- ✓ integrated amplifier
- ✓ short-circuit and reverse polarity protected adjustment of switching point via teach-in
- ✓ teach-in via teach-button or white wire (PIN 2)
- ✓ green LED for switching condition and teach-in control
- ✓ connection via 4-pin M8-connector



Technical Data

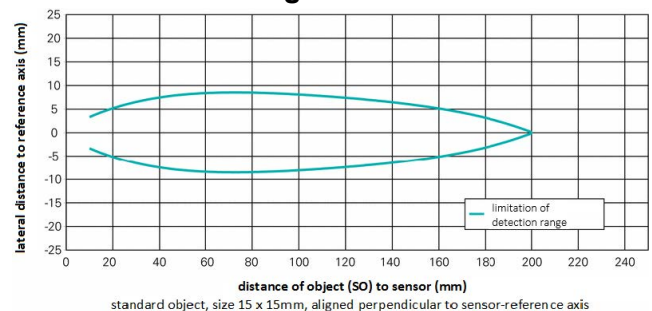
operating voltage	12 ... 30V DC
residual ripple	< 10%
current consumption (w/o load)	< 35mA
voltage decay (max. load) output	$\leq 2\text{V DC}$
signal	pnp, no/nc switchable
output current (max. load)	200mA
detection range S_d	10 ... 200mm
detection range final value S_{de}	30 ... 200mm
hysteresis (typ.)	$\leq 4\%$ of S_{de}
repeat accuracy	$\leq 0.5\text{mm}$
ultrasonic frequency	380kHz
display (signal)	LED green
reaction time (t_{on} / t_{off})	$\leq 15\text{ms}$
temperature drift	$< 0,18\%$ S_{de} per Kelvin
temperature (operating)	$-10 \dots +60^\circ\text{C}$
degree of protection (EN 60529)	IP 67
housing material	polyester
connection	M8-connector, 4-pin
connection accessories	e.g. VK200371
mounting accessories	AO000073 or AY000092

connection



bn=brown, wh=white, bk=black, bl=blue
 terminal marking of cable sockets in brackets

detection range



Adjustment of the switching point

- Connect power supply and switching output, the teach-process has to be carried out within 5 minutes.
- Press the teach-button for approx. 2 sec, until the LED flashes green.
- Release the button, the LED flashes green.
- Place the object to be detected in the desired detection range (30 ... 200mm).
- Press the teach-in button shortly. The sensor confirms the successful teach-process by lighting up the green LED for 2sec.

Adjustment of the output function

- Press the teach-button for approx. 4 sec, until the LED flashes red.
- Release the button
- The LED displays the output function; green indicates NO, red indicates NC. By pressing the teach-button shortly, the output function is switched.
- Press the teach-button for approx. 2 sec, the selected output function is stored.

Further notes:

- Five minutes after switching on or after the teach-process, the teach-in locking comes into effect in order to prevent unauthorized adjustment. Before a possibly new teach-process, it is essential to disconnect the operating voltage. If after the connection of the operating voltage no teach-process is performed, the device will go on operating with the recently taught value.
- To reset the sensor to the factory settings (max. detection range), press the teach-button longer than 6 sec. The sensor confirms the reset by fast blinking LEDs.
- If you do not want to adjust the device via button, you can also use the teach-in wire (white wire / PIN 2). Instead of pressing the teach-button, connect the white wire with $+U_B$.
- If the teach-in wire is not used, it has to be grounded.

article-no.: **UT 14 03 70**

Warning: Never use these devices in applications where the safety of a person depends on their functionality!