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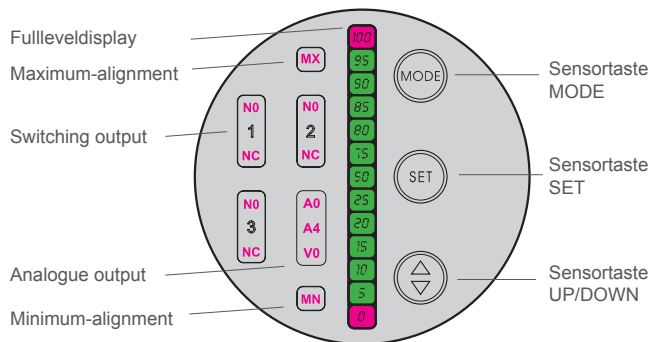
SETTING INSTRUCTIONS FOR THE SENSOR AMPLIFIER VA-234

SENSOR KEY FUNCTION

MODE = continue to next setting point without overwriting stored settings

SET = continue to next setting point with overwriting of the current settings

UP/DOWN = set value/function



IMPORTANT INFORMATION ON COMMISSIONING!

Delivery state of the sensor

- Sensor recalibrated in water (DK value approx. 80)
- Switch output 1: NO / switches at 10% of filling level
- Switch output 2: NO / switches at 20% of filling level
- Switch output 3: NO / switches at 50% of filling level
- Analog output: A4 = 4...20mA

Recommendation

Perform a reset prior to first alignment or use of a new medium.

Information on setting mode

All settings will be saved only after point 6 of the setting mode.
 If no sensor key is pressed within 60 seconds, the sensor automatically reverts to measuring mode without saving the settings.
 The 0% and 100% display light up red to signal the setting mode.

Information on alignment

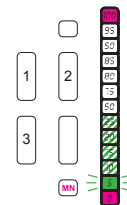
If filling a container between minimum and maximum alignment takes longer than 60 seconds and the minimum value has already been taught, it is necessary to proceed using MODE until the setting mode has been left (point 6) in order to save the previous min. value.
 When the container has been sufficiently filled, the setting mode can once again be called up (point 1). The min. value entry can now be skipped with MODE in order to go directly to the max. value menu item.

INSTRUCTIONS FOR THE ALIGNMENT OF THE FILLING LEVEL

Point 1

Calling up the setting mode

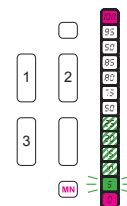
To call up the min. alignment press MODE and UP/DOWN at the same time for approx. 5 seconds until 0%, 100% and MN light up in red on the LED display and the last set min. value flashes green, then release within 3 seconds. The sensor automatically jumps to point 2.



Point 2

Minimum alignment or Reset function

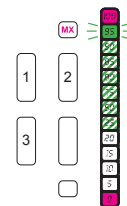
0%, 100% and MN light up red and the last set min. value flashes green.
 Fill container to between 5% and 25% of the desired measuring range. Set the filling level display to the value corresponding to the filling level using UP/DOWN and confirm by pressing SET. The green % display stops flashing and the sensor automatically jumps to the next point after approx. 5 seconds.
 A reset can be performed provided that neither SET nor MODE have been pressed in point 2. (see Reset function)



Point 3

Maximum alignment

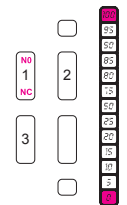
0%, 100% and MX light up red and the last set max. value flashes green.
 Fill container to between 25% and 95% of the desired measuring range.
 Set the filling level display to the value corresponding to the filling level using UP/DOWN and confirm by pressing SET. The green % display stops flashing and the sensor automatically jumps to the next point after approx. 5 seconds.



Point 4

Setting the switch output function

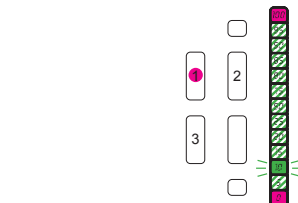
0% and 100% light up and NO or NC display flashes red. Select NO or NC using UP/DOWN and confirm with SET.
 The NO or NC display stops flashing and the sensor automatically jumps to the next point.
 NO = normally open contact
 NC = normally closed contact



Point 5

Setting the switching point

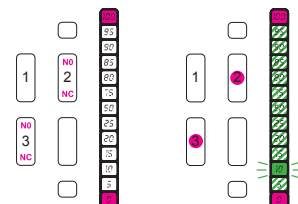
0%, 100% and LED light up red, and a green % display flashes.
 Set switching point between 5% and 95% using UP/DOWN and confirm with SET.
 The green % display stops flashing and the sensor automatically jumps to the next point.
 NO = output HIGH if switching point was exceeded
 NO = output LOW if switching point was exceeded



Point 6

Setting the PNP switching points 2 and 3

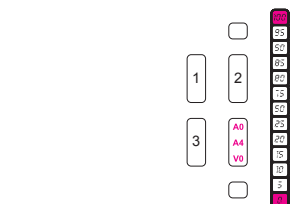
For switching points 2 and 3 repeat points 4 and 5.



Point 7

Setting the analog output function

0% and 100% light up and A0, A4 and V0 display flashes red.
 Select the desired analog output mode using UP/DOWN and confirm with SET.
 The A0, A4 or V0 display stops flashing and the sensor automatically jumps to the measuring mode.
 A0 = 0...20 mA; A4 = 4...20 mA; V0 = 0...10 V



Sensor is ready for operation (measuring mode)

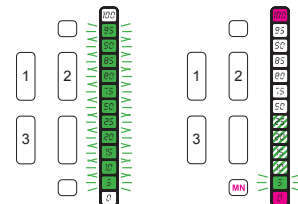
0% and 100% no longer light up red.
 The alignment process is completed.
 The sensor is now ready for operation and shows the current filling level.

RESET FUNCTION

The reset function can only be performed in the minimum alignment menu item.
 Perform point 1 of the alignment instructions

Press and hold UP/DOWN and then also press SET until all green LEDs light up for approx. 1 second.

The sensor is once again in the minimum alignment menu item.
 To conclude the reset function, MODE must now be pressed in points 2 to 6 in order to leave the setting mode.
 To recalibrate the sensor continue with point 1.



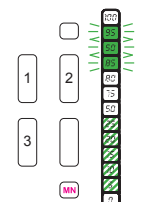
ERROR MESSAGES

This error message occurs in the minimum alignment menu item:

MN lights up red and 85% to 95% and the last set min. value flash green.

Cause:
 The set min. filling level is equal to or higher than the (pre)set max. filling level.

Troubleshooting:
 Repeat min. alignment with a filling level less than the taught max. value.
 If this is not possible, perform Reset function. (It is possible to skip this step by pressing MODE, in which case the min. value taught before alignment will remain saved.)

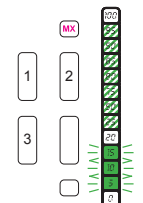


This error message occurs in maximum alignment menu item:

MX lights red and 5% to 15% and the last set max. value flash green.

Cause:
 The set max. filling level is equal to or lower than the (pre)set min. filling level.

Troubleshooting:
 Repeat max. alignment with the filling level greater than the taught min. value. If this is not possible, change to point 1 and perform the Reset function. (It is possible to skip this step by pressing MODE, in which case the min. value taught before alignment will remain saved.)



OPTION: LIGHTCAP

Illumination of the container interior by high-power LEDs. Press SET to switch on the LEDs in measuring mode. Light switches itself off automatically after 15 seconds and can be reactivated after a pause of approx. 5 seconds (overheating protection).

