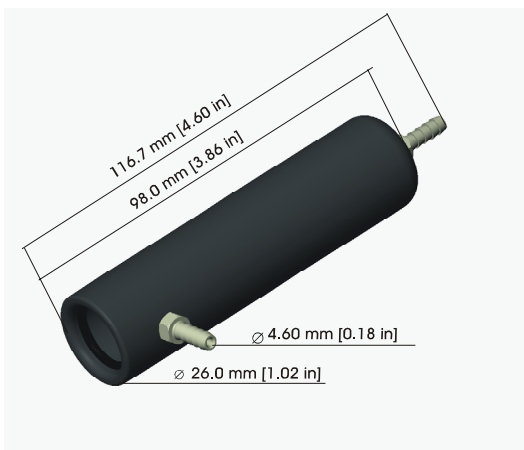


## Quick Reference Guide

### Field Check Adapter

# 26150GM



- Tool for easy field checking
- Compatible with Vaisala AMMONICAP® Ammonia Detector Series AMT100 and Vaisala CARBOCAP® Carbon Dioxide Probes Series GM220

## FIELD CHECK OF AMMONIA DETECTORS

The performance of the Vaisala AMMONICAP® Ammonia Detector Series AMT100 can be checked on site with ammonia gas. A field check ensures the detector is functioning and the sensor responds to ammonia gas.

During the field check, the sensor is purged using a reference gas with a known ammonia concentration. The ammonia gas causes alarm signals (in the case of AMT100 Series, led lights) to turn on, thus indicating that the detector is functioning.

Note that a field comparison can only check the performance of the detector. For accurate calibration and adjustment, the probe or the detector should be returned to Vaisala Service (see table on the reverse side).

### Field Check Equipment

To perform a field check, certified calibration gas, a pressure regulator, a field check adapter, and flexible tubes (preferably teflon) with inner diameters of 4 mm and 6 mm are required.

Reference gas, pressure regulators and the field check adapter can be ordered from Vaisala with the following order codes:

- Ammonia reference gas 100ppm 210374
- Ammonia reference gas 300ppm 210375
- Pressure regulator 210376
- Field check adapter 26150GM

100 ppm reference gas is recommended for probes with a 0...100 ppm measuring range. For probes with a 0...1000 ppm measuring range, the 300 ppm reference gas is recommended.

The gas bottles contain 34 liters of ammonia compressed into a small and light (1 lb/0.44kg) container. The bottles are not refillable. The pressure regulator, however, can be used again.

### Field Check Instructions

1. Turn the detector to SERVICE MODE either by pressing the button or via the serial line connection. When the detector is in service mode, the operation light is blinking.
2. Place the field check adapter onto the probe.
3. Connect the reference gas bottle to the adapter inlet (at the bottom of the adapter) with flexible tubing. The diameter of the

gas outlet pipe is 6 mm, and the diameter of the field check adapter's inlet is 4 mm.

4. Open the bottle valve and let the reference gas flow through the adapter. The regulator's preset flow rate is 0.5 l/min.
5. Let the gas flow for 2...5 minutes. (If you want to check the exact reading or if the reference concentration is very close to the alarm level, let the gas flow for at least 5 minutes to establish a stabilized environment.)
6. The low level and high level leds are lit as the ammonia concentration on the sensor exceeds the two alarm setpoint levels. This indicates that the detector reacts to ammonia and that the alarms are functioning.
7. On completion, close the bottle valve and detach the adapter from the probe.
8. When the readout has dropped below the alarm levels, turn the detector back to normal operation mode by pressing the SERVICE MODE button.



Field checking ammonia detector.

## FIELD CHECK OF CARBON DIOXIDE TRANSMITTERS

The field check adapter for Vaisala CARBOCAP® Carbon Dioxide Probes Series GMP220 can be used as

- a chamber for feeding in reference gas in a field checking of the probes
- a chamber for pump aspirated sampling system.

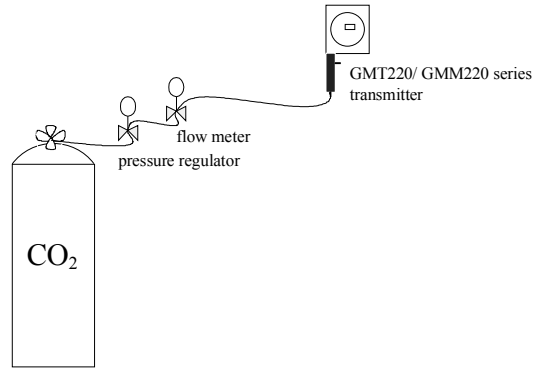
Note that a field comparison can only check the performance of the transmitter. For accurate calibration and adjustment, the probe or transmitter should be returned to Vaisala Service Centre.

### Field Check Equipment

- Accurate reference gas (Basically any concentration within the measurement range will do. If available, a good choice is one close to the normal measurement concentration.)
- A pressure regulator for reducing the pressure of the calibration gas
- A flow meter to adjust the gas flow
- Tubing with 3mm (1/8") inner diameter (for example neoprene tubing, part no. 18229. (Teflon tube NOT recommended).
- The field check adapter (part no. 26150 GM)

### Field Check Instructions for the GMT220-series

1. Attach the adapter to the probe of your GMT220 series transmitter. The adapter fits both the probe sizes available (GMP221 and GMP222) and can be attached to a probe on a transmitter as well as one attached to a cable. Push the adapter up the probe. Connect tubing to the bottom port of the adapter.
2. Connect the adapter with the tubing to the flow meter, the pressure regulator, and further to the reference gas bottle. The other port of the adapter is left open for gas outflow.



3. Let the reference gas flow through the pressure regulator and the flow meter to the adapter. The recommended flow rate is 0.6 l/min. Let the transmitter stabilize for 5 minutes.

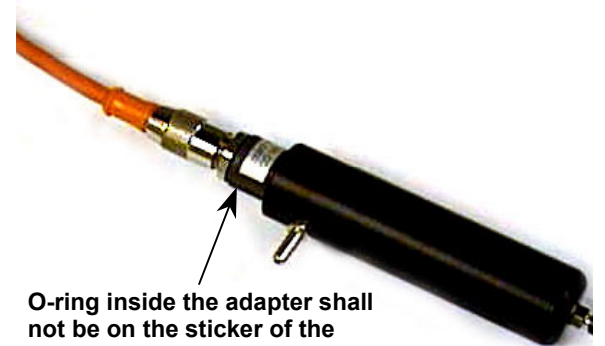
4. Check the reading on the display, or if the transmitter has no display, from the analog output. If the difference between the reading and the reference gas concentration after pressure and temperature correction is more than the accuracy and long-term stability specifications allow, detach the probe and send it to Vaisala for adjustment.

### Note when installing the probe

- The probe should be pushed into the adapter deep enough, so that none of the diffusion holes will be outside the adapter chamber.
- Also the excess space inside the chamber should be minimized by pushing the probe well inside the chamber (this is especially important if using the field check adapter with inadequate gas flows of below 0.4 l/min)

### Important note for the GMP221 !

When using the shorter probe (GMP221) with the Field Check Adapter, the adapter must be inserted on the probe so that the o-ring inside the adapter is not on the sticker of the probe (see Figure). If the adapter is placed on the sticker, the seam between the probe and the adapter will let the gas leak from the chamber.



**O-ring inside the adapter shall not be on the sticker of the probe !**

**The Field Check Adapter and a GMP220 Series probe.**

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