

# Test Station TS400

for MICROTECTOR II G450,G460

## Quick reference guide

Firmware version 2.30  
211-200.25\_KA\_TS400.doc

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**Application** The Test Station TS400 is an automatic test station for carrying out the function test ("bump test") on the sensors of Microtector II gas detectors. Charging of the battery pack is optionally available.



**Positioning/mounting** The Test Station must be placed on a firm and even surface. Gas must be supplied pressure-free and the test gas must be able to leave the Test Station freely. During commissioning, the tubing and leads for test gas supply, mains power supply and PC interface must be connected according to the diagram. For the bump test, use gas mixtures, for example: 50% LEL CH<sub>4</sub>, 18 vol.% O<sub>2</sub>, 100 ppm CO, 25ppm H<sub>2</sub>S balance: N<sub>2</sub>.

**Operation** The Test Station TS400 is switched on by either connecting to the plug-in power supply unit, or by interfacing to a PC. After switching on, the green LED flashes rapidly for a short time. During this time a memory test of the TS400 is performed. When the TS400 is ready for operation, the green LED lights up. Should the red LED light up after the memory test, the Test Station has to be serviced. The Test Station can be set up for the connected gases and various functions with the configuration software.

**Bump test** For the bump test, switch on the gas detector and insert it into the test station. The test starts automatically after 10 seconds. The effective time for the test is approx. 20 seconds. If the green and red LED flash simultaneously, the gas supply has to be switched on and the gas flow has to be maintained until both LEDs flash again. The test progress and the bump test report are shown on the display of the gas detector.

**Test interval** The bump test interval is specified in accordance with T021/T023, and is used for calculation of the next date for bump test or calibration.



**Scope of the bump test:** The following parameters are tested:

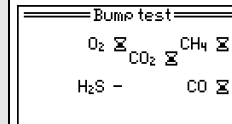
- Clock
- Audible alarm (horn)
- Visual alarm /alarm LED
- Response time of the sensors of alarm 1 and 2, response sensitivity
- T<sub>50</sub> time (time for achieving 50% of the test gas concentration)
- Detector errors
- Setting the bump test interval

**Charging** Charging the battery pack is only possible with stations that are equipped with the optional charging function (DIC). For charging, the Microtector II has to be switched off and placed in the TS400. Charging starts automatically.

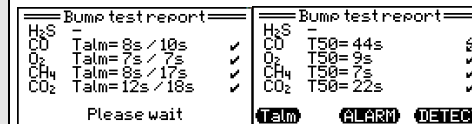
**Yellow LED:** Charging  
**Constantly lit:** Normal charging  
**Flashing:** Trickle charge

**Green LED: On:** Power supply for charging module switched on  
**Off:** Detector is in the Test Station and a bump test is being performed  
 After the normal charging, the detector automatically turns to trickle charge.

**Test evaluation/signalisation** Signalisation of the test results is done on the display of the gas detector. During the test the display indicates which sensors/gases are being tested and which have already been tested.



Once the bump test is completed, the display shows a report:



- Sensor not available -> indicated by ---
- Errors detected -> indicated by red background of the display

**After the completion of the bump test, the test result is shown by a red LED and red display background - test failed, errors occurred - or a green LED and green display background - test completed successfully, the detector is ready to be used again.**

**Data storage** All information regarding the bump test is automatically stored on a micro SD memory card, if inserted.

**Data transfer:** The data can be transferred by means of a card reader or by connecting the Test Station to a PC. In this case, the data transfer is performed automatically with the TS 400 software.