

DMT152 ON/OFF OUTPUTS

In many applications a simple indication that e.g. a certain dewpoint level has been exceeded is very useful information. The Vaisala DRYCP dewpoint transmitter DMT152 has the feature to use an analog output for on/off status indication. This means that instead of a linear analog signal (e.g. 0...5 V) corresponding to the measured dewpoint value, this output can be switched from the lower level value (e.g. 0 V) to higher level value (e.g. 5 V) at some certain point of interest (e.g. at -40 °C). The same switching can be used to indicate the periodically active DMT152 self diagnostics (autocalibration or sensor purge).

The voltage and current outputs available in DMT152 can be used in simple installations to control a lamp, LED, buzzer, relay coil etc. However, some additional external components may be needed to complete the installation.

The DMT152 on/off feature is selected in the order form in the section of *Analog output parameter or function*.

Alarm level on/off output

The *alarm level on/off output* will switch the status at a selected humidity level. As a factory setting the analog signal level is switched from low to high when the specified level is exceeded (from low humidity to higher humidity). When the humidity level decreases below the selected level the analog signal level returns back to low level.

When the *Alarm level on/off output* is used the parameter and level are specified when placing the order.

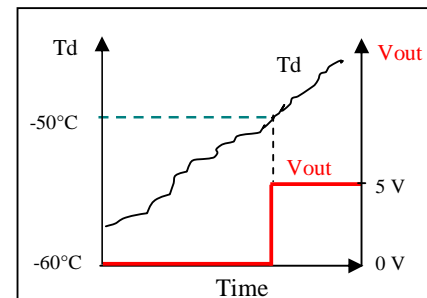
Parameter choices are *Td*, *ppm* or *ppm_w*.

Level is freely selectable, but should be naturally within the specified measurement range. If the selected parameter is *Td*, then the unit of numeric value (°C or °F) follows the *output units* selection. For *ppm* which is a unitless parameter this selection has no effect.

Example:

Specified parameter is *Td*, level -50, metric units selected in *output units*, *Analog output selection* is 0...5V.

The DMT152 on/off output will switch from 0V to 5V when the humidity increases from lower humidity to above -50 °C like in the figure at right.



Autocalibration & purge on/off output

Autocalibration & purge on/off output indicates when the DMT152 self diagnostics (autocalibration or sensor purge) is activated. The analog signal is switched from the low level to high level during the self diagnostics and returned back to low level when self diagnostics is over.

When self diagnostics is active the dewpoint and ppm measurement are not active and the normal analog output is frozen to the value prior the self diagnostics.

When the *Autocalibration & purge on/off output* is used there is no need to make further definitions when placing the order.

Configuration of the on/off settings

The Configuration of the on/off settings are user configurable through the serial line interface. A USB connection cable accessory is available for this purpose (Vaisala part# 219690).

The user can modify the on/off key settings, e.g. dewpoint/ppm level, hysteresis and signal high/low status, i.e. whether the signal is switched high or low when the set humidity level is exceeded. The serial line commands and detailed instructions are available in the *DMT152 User's Guide*.