

WMT700 POWER-SAVING OPTIONS

This Application Note describes how to use the WMT700 power-saving options. WMT700 can operate in two modes:

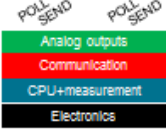
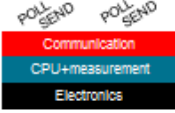
- Normal mode
- Low-power mode

If there are no limitations to the supply of power, the use of the normal operating mode is recommended. The calibration values are the same for both modes.

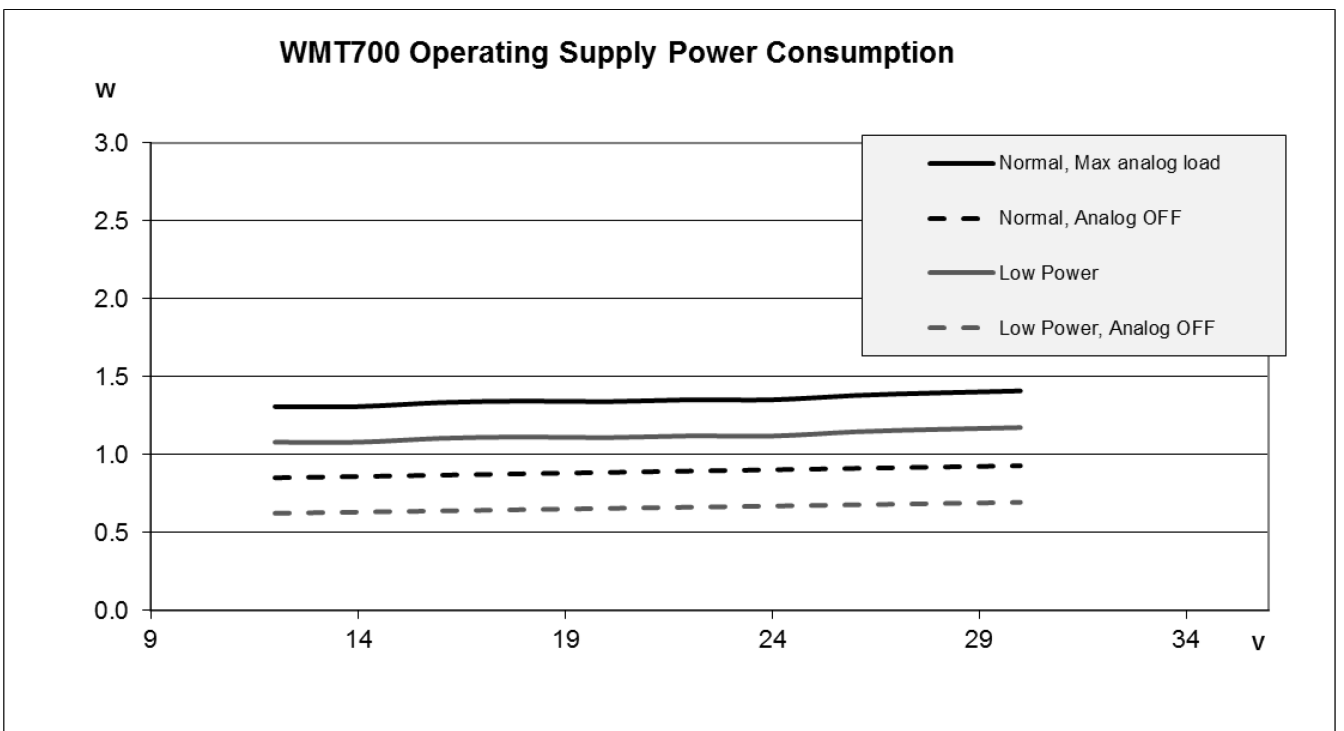
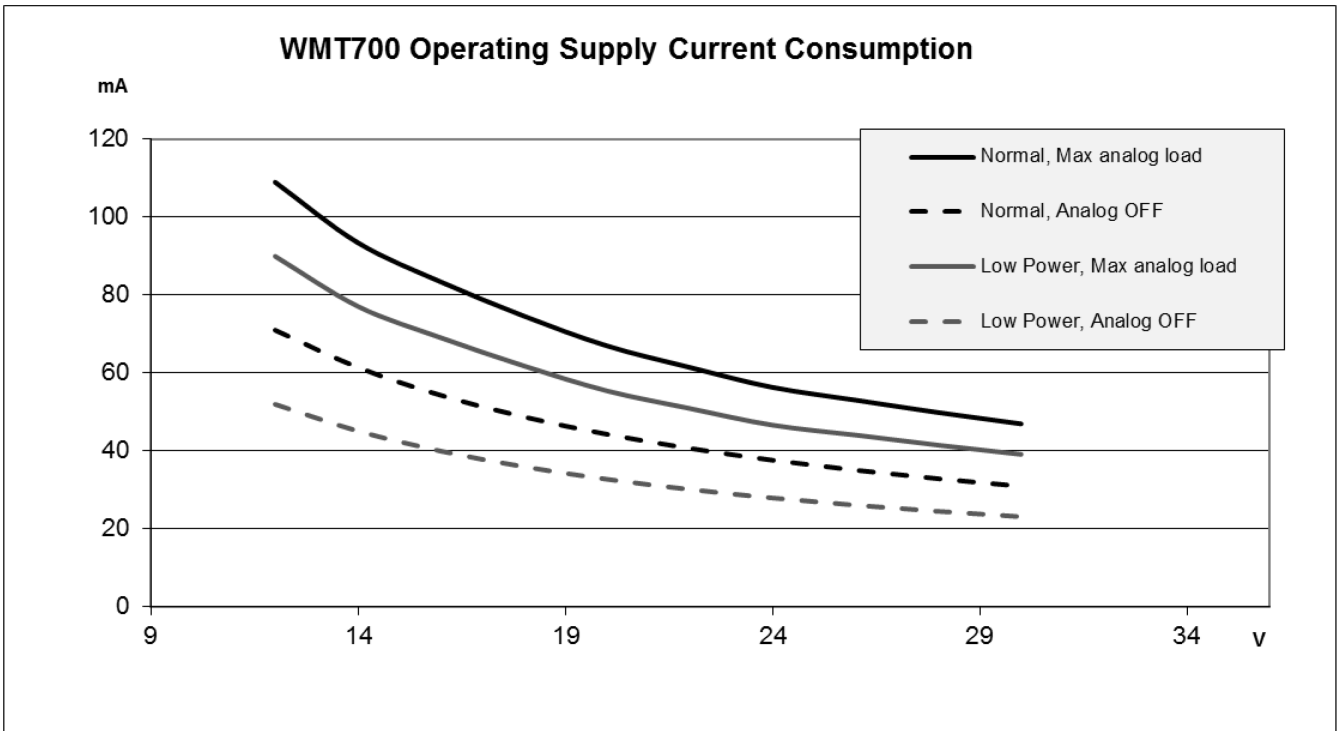
WMT700 measures wind by sending ultrasound pulses. When used in the low-power mode, WMT700 uses less power for ultrasonic measurement. In low-power mode, it is recommended to use an averaging time of over four seconds.

The analog output can be disabled with the Analog Off feature. If you enable this feature, a considerable amount of power is saved.

The WMT700 power-saving options are described in the following table.

	No power save	Analog Off
Normal	85mA 1.02W@12V	71mA 0.85W@12V
Low-Power	63mA 0.76W@12V	52mA 0.62W@12V
Measure	4 Hz	4 Hz
Readout update interval (max)	4 Hz	4 Hz
Analog	On	Disabled
COM	On	On
CPU	On	On
Measurement	Continuous	Continuous
Properties	Normal operating mode	Analog is turned OFF
Example		
WMO/ICAO Compliancy	Yes	Yes

The following figures show the WMT700 operating supply current and power consumption. In the normal mode with the maximum analog load, the current and power consumption varies. The figures below show the maximum current and power consumption.



Low-Power Mode

The normal mode is the default mode for WMT700. If there are no limitations to the supply of power, the use of the normal operating mode is recommended.

Setting on the Low-Power Mode

The power mode is set with the parameter *lowPower*.

- Normal mode: `lowPower=0`
- Low-power mode: `lowPower=1`

The power mode setting is stored in the WMT700 non-volatile memory, and remains in the memory even if WMT700 is rebooted.

1. First enter the configuration mode:
 - Connect WMT700 to a serial port.
 - Open the terminal port.
 - Switch WMT700 on. WMT700 responds with

```
WMT700 vxxx
ready
```
 - Enter the command (all commands end with \r)

```
$0open
```

WMT700 responds with the prompt
>

2. To read the power setting mode, enter

```
g lowpower
```

WMT700 responds with

```
>s lowPower ,0
```

In this example WMT700 is in the normal mode, set with the parameter *lowPower=0*.

3. To set on the low-power mode, enter the following commands

```
$0open
s lowpower,1
reset
```

Setting on the Normal Mode

1. Enter the configuration mode as described in the previous section.
2. To set on the normal mode, enter the following commands

```
$0open
s lowpower,0
reset
```

Analog Off Feature

The analog output can be disabled with the Analog Off feature.

1. First enter the configuration mode:
 - Connect WMT700 to a serial port.
 - Open the terminal port.
 - Switch WMT700 on. WMT700 responds with


```
WMT700 vxxx
ready
```
 - Enter the command (all commands end with `\r`)


```
$0open
```

WMT700 responds with the prompt
>

2. To set on the Analog Off feature, use the parameters *aout1mode* and *aout2mode*. Enter the following commands

```
$0open
s aout1mode,3
s aout2mode,7
close
```

WMT700 Specifications

The low-power mode has an effect on the WMT700 wind speed measurement accuracy specifications.

Table 1 Wind Speed Measurement Accuracy Specification

	Normal Mode	Low-Power Mode
Accuracy	±0.1 m/s or 2% of reading, whichever is greater	±0.3 m/s or 3% of reading, whichever is greater