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# Celsicom MM601 Sensor with internal temperature sensor User Guide

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**Celsicom MM601 Sensor with internal temperature**

**Quick Guide**

Register as a customer and create an account for the Celsiview cloud service At the moment the Celsiview cloud service version two can be tested, it can be accessed by click-ing on the "Celsiview 2 Beta" button on celsiview.se. The instructions below are based on Celsiview 2. Click on the "Create new account" button. Fill in all the information needed to create the account. A verification email will then be sent to the email address provided in the registration process. Click on the link in the email to verify the account. If you do not receive an email, please check the spam mail. Once the account is verified, a page will appear with a link to the login page.

## Adding the sensor to your sensor register

Go to the Celsiview 2 login page by clicking on "Celsiview 2 Beta" on celsiview.se and log in. Select " Sensor " in the menu and then " Add new sensor ". Now scan a sensor or enter the data manually (S/N + control code written on the sensor). After the sensor data is displayed, click on "Add this sensor". The cost of the sensor is now presented. Accept by adding the sensor to the shopping basket. Now scan the remaining sensors in the same way before proceeding to checkout. Click on the shopping basket and view the contents. A summary of the costs is now displayed. Se-lect or create an invoice recipient. The invoice recipient should contain all the information needed to be accepted by your finance department. The references, cost centre, etc. will appear on your invoice. Click on "Complete transaction" to activate the sensor.

## Start and activate the sensor(s)

Connect the separate measuring node MM600P1 via the connector on the cable from MM601. The cable can be plugged into any of the two connector slots on the MM600P1 node. In the free connector slot, an additional MM600P1 can be connected via a bus cable (purchased separately). Up to 8 nodes can be connected to one MM601 master sensor. On the round switch you set which node in the order you connected (1 to 8). Hold the grey sensor in both hands, place your right and left thumbs on top of the °celsicom logo on the top of the sensor. Now slide the lid upwards/forwards to open it. Insert 2 alkaline AA/LR6 batteries (1.5V) into the battery holder. The sensor will now beep to indicate that it is booting up and the orange LED will light up. Both orange and green LEDs will light up shortly afterwards in a constant light while the sensor is searching for a mobile connection. The connection to the mobile network may take several minutes.

When the sensor is properly connected, the orange LED goes out and the green one starts flashing and three short beeps are heard. The green LED now flashes the mobile signal strength every 30 se-conds for three minutes. 3 blink=high level, 2=medium and 1=low. Feel free to move the transducer to achieve the best possible strength. A better signal strength gives a longer battery life.

After three minutes, the sensor switches to measuring and transmitting every three hours to save battery power. Measurement and transmission intervals are adjustable in the Celsiview cloud service. Measuring more often than every three hours will affect the properties of the wood material (measu-rement object) and may result in inaccurate readings. To restart the above process or if the sensor does not connect properly, disconnect one battery, wait 60 seconds and reconnect it again.

## Add/change measurement locations linked to the sensor

Each MM601 sensor delivers 8 measurement values if 8 MM600P1 measurement nodes are connected. 8 Login to celsiview.se (Version 2 Beta). Click on "Sensors" in the menu. At the far right of the line for the sensor, some symbols are displayed. To add all 8 channels as readings to your sensor location list click on the plus sign and enter a name/prefix for the readings, e.g. "Moisture con- tent sensor". Press "OK". The locations are now created and can be found under the menu item

Celsicom MM601 Sensor with internal temperature sensor fig 1

## "Locations".

If only a single MM600P1 measurement node is to be used, click on the symbol with a down arrow. All 8 channels of the sensor will be opened. Now click on the map pin (location) on the channel (1 to 8) where a measuring node is connected. Select "Create location", enter a name for the measurement location and save. To change a setting/name of a location, e.g. set the measurement curve (fur/spruce/Protimeter WME), click on "Locations" in the menu and then on the tool symbol on the right of the line or click on a line and select "Go to settings". By clicking on the star symbol on the far right of a location row, or selecting "Make a favorite" after clicking on a row, that measurement will appear as a favorite (widget) on the home screen. (Menu item "Home") The options "Settings", "Reports" and "Make a favourite" etc. are also accessible by simply clicking on any row/location on the "Locations" page.

## Reports

To print or export reports/measurements, click on "Reports" in the menu. Select what to display in the report/graph by the menu options above the graph. It also selects the time period you want to look at. Click on the "Export" button to download or send the report as e.g. an Excel file or PDF.

## My business

In the "My business" menu, sites can be structured into different groups/folders. Right-click on "Groups and locations" to create a group/folder. Then drag and drop the measurement locations you want into any group. A group or location can also be shared with another person by right-clicking on the location or group and selecting "Share". Select "Create new user", enter the email address of the person to be assigned to the site/group. Automatically, the username of that person will be set to the same as the email address. Click on "OK". The new recipient now appears in the list of selectable recipients. Select the rights the new user should have. Click on "OK". The new user will now receive an e-mail asking him to choose a password. The new user can then log in with their details and will have access to what has been distributed.

## Add alarm recipients

Log in to the account. Click on the username in the top right corner. Select "Alarm handling". Add the email addresses/SMS numbers where alerts should be sent. Test the alarm by clicking on the letter symbol of the recipient to which the test should be sent. NOTE! Check that it arrives.

## Other information

Stainless steel screws work well as measuring points in the measurement object (wooden structure). Pins/nails may drop out of the material as it dries. Avoid interference with the measurement signal by following these points:

- The MM600P1 measuring node should be placed at least 1 meter away from electrical equipment or cables
- The bus cable between the MM601 and the MM600P1 should not pass close to the measuring point
- The bus cable should be placed as far away from electrical cables/equipment as possible and should not be parallel to other cables
- The measuring cables are sensitive to ESD/static electricity. Take measures to protect them
- A jagged/uneven waveform in a report indicates interference at the measurement point

The encoder should be mounted with the three half-rings on the cover facing upwards and the logo facing downwards. If the sensor is to be mounted against a metal surface, magnetic mount 7040 0060 (or another non-metallic spacer) must be used to bring the sensor out at least 10 mm from the mounting surface. Otherwise, the metal surface will interfere with the connection of the sensor, and the measurement data will have difficulty reaching our servers.

Support All support is handled by our distributors. See celsicom.se for more information. User manuals and other support material are available at support.celsicom.se.

| Model | Measured value | Range | Maximum deviation |
|---|---|---|---|
| MM600P1 | Resistance (normal) Resistance (max)<br><br>Moisture ratio Fur Wood Trätek (normal) Moisture ratio Fur Wood Trätek (max) Protimeter WME A (normal)<br><br>Protimeter WME A (max) | 200kOhm to800MOhm 50kOhm to 1GOhm 12% to 26%<br><br>11,5% to 45%<br><br>10% to 25%<br><br>9,5% to 50% | ±15%<br><br>Not defined<br><br>±3% of measured value Not defined<br><br>±3% of measured value<br><br>Not defined |

| | |
|---|---|
| Connection | NB-IoT (LTE Cat NB1) B20. Power 23 dBm |
| Batteries | 2 x AA/LR6 1,5V (not included) |
| Battery time | Depending on the transmission interval. Example at 20°C, good signal quality, measurement every 3 hours and transmission every 3 hours: > 12 months |
| Measurement and transmission interval | Adjustable by users via the Celsiview cloud service. |
| Memory | 200 measurements |
| Size | MM601 enclosure, 78 (w) x 114 (h) x 30 (d) mm MM600P1 enclosure, 30 (w) x 45 (h) x 20 (d) mm |
| Weight | MM601, 148 grams (without battery) MM600P1, 50 grams |
| Certificate | CE |
| Mounting method | Mounted vertically with the screw holes facing upwards<br><br>NOTE! If the sensor is to be mounted against metal, magnetic mount 7040 0060 can be used. (Or other 10 mm spacer, not made of metal) |

**Celsicom AB**

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## Documents / Resources

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|---|---|
|  | **Celsicom MM601 Sensor with internal temperature sensor** [pdf] User Guide<br>MM601, MM600P1, MM601 Sensor with internal temperature sensor, MM601 Sensor, with internal temperature sensor |

## References

- ⭕ **Celsicom AB – Remote monitoring made easy**
- ⬛ **Celsiview**
- ⭕ **Support - Celsiview**