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Introduction.

This manual is intended as a guide how to quickly setup your OMC-045-III data logger with OMC-Programmer. For more detailed information we refer to the **help files**, which you can access via the [F1] function key anywhere in OMC-programmer.

1. Check required items:

- OMC-045-III
- SD-card (included)
- USB cable (included)
- GSM/GPRS antenna (included)
- Battery 3.0V (included)
- *SIM card*
- *Optional GPS antenna*
- OMC-Programmer
- *Suitable sensors*
- *Suitable power supply*

Important notes:

SD-Card: The OMC-045-III recognizes the write protect switch (the OMC-045-II did not). **Make sure the SD is NOT write protected, whenever used in the logger.**

SIM card: Check the card in a phone, make sure the PIN code is disabled. Test if GPRS is available.

BOTH CARDS SHOULD ONLY BE PLACED OR REMOVED WHEN THE POWER IS OFF! The SD Card can also be removed while you keep the pushbutton pressed and the left LED is green.

Power Supply: If the sensors are powered via the OMC-045-III, make sure the PSU (**P**ower **S**upply **U**nit) is suitable for both the OMC-045-III and the sensors. Else the sensor should be powered by a separate PSU.

The output voltage of the OMC-045-III is identical to the PSU! Maximum current per sensor is 350mA.

2. Connect all sensors & antenna's

- Install included 3.6V backup battery (bottom side of the OMC-045-III) **Note the polarity of the battery (see bottom of battery compartment)!**
- Use delivered diagram or use the connectors layout in the appendix to determine the correct connections.
- Connect the power supply.
- Do not connect the OMC-045-III by USB before you have installed OMC-programmer.

3. Install OMC-programmer

- Check the support page of www.observator.com (Obsermet Meteo & Hydro) for the latest version.
- Install OMC-programmer on your pc, this will also install the required USB driver.

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4. Connect the OMC-045-III via the USB cable to your pc

- Start OMC-programmer.
- **Configure Substation**
- **Read Configuration From Device**
- **Use Direct communication**
- Communication protocol: 'OMC-045 III'
- Select Com-port: COM xx (usually the highest number)**.**
- **Read Configuration From Substation**
- Baudrate: 19200.
- 'OK'.

Sensors:
Select the connected sensors, use **Advanced** to change port numbers / baudrate etc.

Parameters:
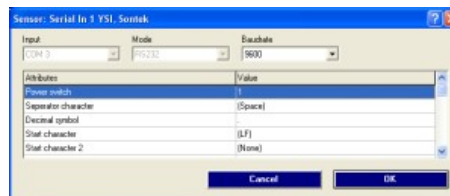Select which parameters you want to log.
Use **Advanced** to set input scaling.

Input (Tag list):
Change tag names, sensor interval, alarm values, etc.

Substation:
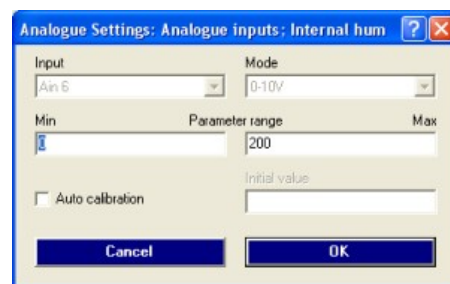Set Substation name / System Id & Data send time Delay (normally 0).

Data Output:
Select Outputs, use **Advanced** to set intervals.

Modem (Email/FTP and TCP/IP through GPRS):
Set your provider details, ftp server or email settings.

Alarm Handling:
Set sms alarm numbers

Save configuration:
Save your configuration to Substation and File as backup.

* If you don't know the correct comport, disconnect the USB cable, select 'Cancel' and select 'Use direct communication' again. Note which comports are available. Reconnect the USB cable, select 'Cancel' and select 'Use direct communication' again. The 'new' comport is the OMC-045-III.

LED's function:

Activity	L 1 (left LED)	L 2 (right LED)
RED flashing	Data writing to SD card in process.	Firmware is started, but no tasks running. (No configuration or during upload data from SD card).
RED steady	Data can not be written to SD card (No card, card write protected, not initialized or defective).	Bootloader menu active and during boot up of the firmware.
Green flashing	n.a.	Firmware running.
Green steady	SD can safely be removed or placed.	n.a.
Off	Card present and initialized, or the configuration indicates no usage of a card, or Firmware Sleeps.	Firmware sleeps or no power.

Troubleshooting

From the Main Menu you can select Read Actual Values to view if anything is read.
Also through the Main Menu you can select Maintenance (password is 'manager')
By using the Terminal Window Substation you can monitor the sensor data which is read in the OMC-045-III. This will help you identify wrong connections, port numbers & baudrate.

NOTE: COM numbers are not identical to Port numbers, select Port 1 .. 4 to monitor your inputs!

Frequent Asked Questions

1. I receive no data
- Check if data is stored on the SD card (if not see 2.)
- Check if your Sim card is working (check GPRS with the card in a phone)
- Check your configuration (GPRS, FTP or Email settings, time delay in Substation etc.)

2. My data is not stored on the SD card
- SD card correctly fitted?
- Write protection Off?
- Check your configuration.
- Check if any data is received via the Terminal Window.
- Replace SD card if the above is OK.

3. Can I read the SD card direct via a PC?
- Yes, you can.

**4. What is the password for Maintenance & Advanced Config?**
- the password is 'manager'.

5. I have checked all above, but still can't configure my OMC-045-III the way I want or I have some other questions.
- Contact our support desk at service@observator.com and include the following information:
    - o Serial number.
    - o Firmware version (Software Build in Advanced Config).
    - o OMC-programmer version number.
    - o Your configuration XML-file.
    - o Your question …

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Appendix: Connections

terminal	name	Description
1.	GND	
2.	VIN	Power supply input for 10-30V (not used for OMC-045-III-rain)
3.	GND	
4.	SensPower 1	Switched power supply output for sensors (output 1)
5.	GND	
6.	SensPower 2	Switched power supply output for sensors (output 2)
7.	GND	
8.	SensPower 3	Switched power supply output for sensors (output 3)
9.	GND	
10.	SensPower 4	Switched power supply output for sensors (output 4)
11.	Sys Led Out -	External Led output negative terminal
12.	Sys Led Out +	External Led output positive terminal
13.	GND	
14.	TX Display	RS232 transmit output
15.	RX Display	RS232 receive input
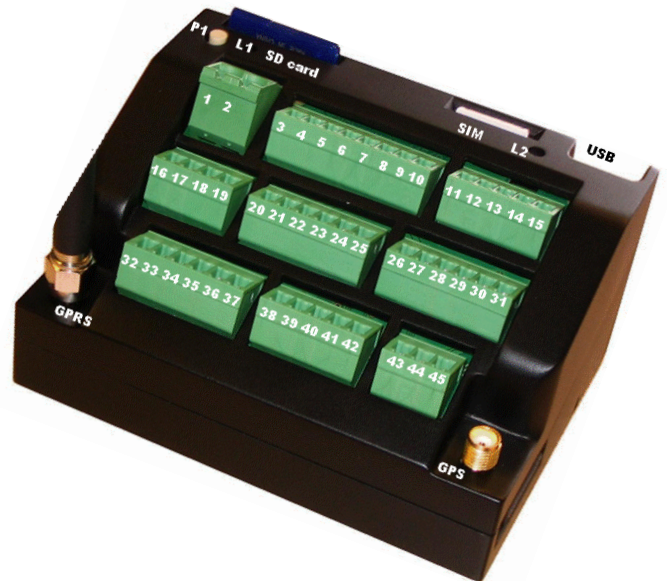
terminal	name	Description	
16.	GND		
17.	Status In	Status input for connection of a passive switch	
18.	GND		
19.	Rain In	Raingauge input; Pulse input for connection of passive switch sensors	
20.	GND	RS232 PORT 1	
21.	TX1		Datalogger → Sensor
22.	RX1		Datalogger ← Sensor
23.	GND	RS232 PORT 2	
24.	TX2		Datalogger → Sensor
25.	RX2		Datalogger ← Sensor
26.	GND	RS232 PORT 3	
27.	TX3		Datalogger → Sensor
28.	RX3		Datalogger ← Sensor
29.	GND	RS232 PORT 4 or RS422/RS485 Software-selected in the configuration	
30.	TX4 / Y		Datalogger → Sensor
31.	RX4 / Z		Datalogger ← Sensor

terminal	name	Description	
32.	GND		
33.	4-20mA A1	4-20 mA input channel A1	
34.	4-20mA A2	4-20 mA input channel A2	
35.	GND		
36.	4-20mA A3	4-20 mA input channel A3	
37.	4-20mA A4	4-20 mA input channel A4	
38.	GND		
39.	Pot In	Potentiometer input channel A5	Max 2.5 Volt in
40.	Vref		2.5 Volt ref out
41.	GND		
42.	0-10V	0-10V input channel A6	
43.	REL1 Out	Alarm output 1	Potential free
44.	REL2 Out	Alarm output 2	Potential free
45.	Common	Common shared with REL 1 & REL2	