

Chatter™ data logger

E-MAIL AND RTU MODELS

a xylem brand

Your notes:

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Introduction

Thank you for choosing Chatter™ Data Logger. We have done our best to design and produce a quality data logger to meet your requirements.

To ensure the best result MJK recommends that the user reads this manual to become familiar with all features, functions and details of the Chatter™ Data Logger

Install and use the Chatter™ Data Logger as instructed by the manufacturer, MJK Automation ApS, to ensure reliable operation and accurate measurements.

You can always get in touch with your supplier or with an MJK support hotline for advice and guidance:

Area	Phone	e-mail
Europe	+45 45 56 06 56	mjk@mjk.com
Denmark	+45 45 56 06 56	mjk@mjk.dk
Norway	+47 69 20 60 70	mjk@mjk.no
Sweden	+46 53 31 77 50	kontoret@mjk.se
Netherlands	+31 251 672171	mjknl@mjk.com
Ireland	+353 8795 35625	mke@mjk.com
USA	+1 847 482 8655	mjkusa@mjk.com
Australia	+61 3 9758 8533	ns@mjk.com

Visit our website www.mjk.com to read more about MJK Automation ApS, our other products and the people behind.

Chatter™ is a registered trademark with MJK Automation ApS, Denmark.

Notations used in this manual

Please note - denotes text which you should read carefully. It typically emphasises an important sentence.

Warning - denotes texts which you should read carefully. Failing to observe the informations in the warning may render the Chatter™ Data Logger inoperable.

Warning - denotes texts which you should read carefully. The text is valid for Chatter™ Data Logger running the e-mail.firmware version

Warning - denotes texts which you should read carefully. The text is valid for Chatter™ Data Logger running the RTU firmware version

Never do this - denotes texts which you should read carefully. Failing to observe the informations in the warning may render the Chatter™ Data Logger inoperable.

Tip - denotes text which may contain helpful tips

Ordering

Item number	Description

Revision	Description
00F	Changes regarding e-mail capabilities
00E	Changed several topics in Configuration with Chatter Link RTU
00D	Changed names after lock-down of fields in user interface Finished some topics
00C	Finished some topics
00B	Added subtopics in Initial setup. Added subtopics in Configuration with Chatter Link RTU Restructured content sequence
00A	First release in this format

Initial setup

The initial setup - or physical setup - of a Chatter™ Data Logger consists of some steps. Which steps depends on your model of Chatter™ Data Logger:

	Panel mount model	Tube mount model
1	Unpack the Chatter™ Data Logger *Additional information:* Package content, panel mount model 10	Unpacking the Chatter™ Data Logger *Additional information:* Package content, tube mount model 23
2	Opening the Chatter™ Data Logger *Additional information:* Open the panel mount Chatter™ Data Logger 11	Opening the Chatter™ Data Logger <%ADDINFO% Open the Chatter Data logger 24
3	Insert cable glands *Additional information:* Insert cable glands, panel mount model 12	Not needed, the sensor connects with an electrical plug.
4	Connect the antenna *Additional information:* Connect the antenna, panel mount model 13	Not needed, the internal antenna is already connected.
5	Insert SIM-card, *Additional information:* Insert a SIM-card, panel mount model 14	Insert SIM-card, *Additional information:* Insert a SIM-card, tube mount model 25
6	Connect sensors *Additional information:* Connecting sensors 15	Connect sensors *Additional information:* Connect sensor 29
8	Turn on the Chatter™ Data Logger *Additional information:* Turn on the Chatter Data logger 20	Turn on the Chatter™ Data Logger *Additional information:* Turn on the Chatter Data logger 26
9	Configure the Chatter™ Data Logger using Chatter™ Link *Additional information:* Configuration with Chatter Link 44	Configure the Chatter™ Data Logger using Chatter™ Link *Additional information:* Configuration with Chatter Link 44
10		Re-assemble the Chatter™ Data Logger. *Additional information:* Re-assemble the Chatter Data logger 31
11	Mount the Chatter™ Data Logger at its working location *Additional information:* Mounting in the field 21	Mount the Chatter™ Data Logger at its working location *Additional information:* Mounting in the field 27

Panel mount model



Package content

When you receive your Chatter™ Data Logger for wall mounting, the package contains:

- One Chatter™ Data Logger for mounting in a panel or on a wall.
- One plastic bag with cable glands



Identification

Your Chatter™ Data Logger can be identified by its unique MJK serial number. You will find the serial number on a label attached to one of the corners of the cabinet.



Make a note of the serial number, you may need it you have to contact the support at MJK Automation ApS.

Additional information:
Support at MJK Automation ApS 6

Open the Chatter Data logger

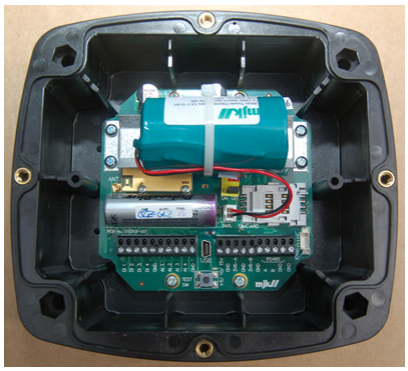
1 Loosen four screws and remove the lid.



Tools

Type	Size
Philips screw driver	PZ 2

2 Now you have access to the internal components



Insert cable glands

1 Open the plastic bag with the cable glands, the content is shown here.

Punch out the blanks in the housing where you want to insert cable glands

> Be careful when you knock out the blanks, don't damage the electronic components inside the housing.

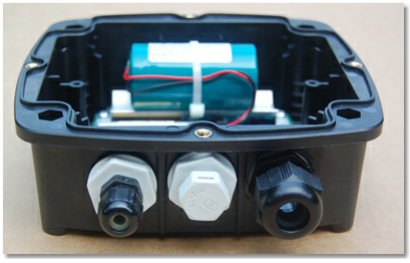


Tools

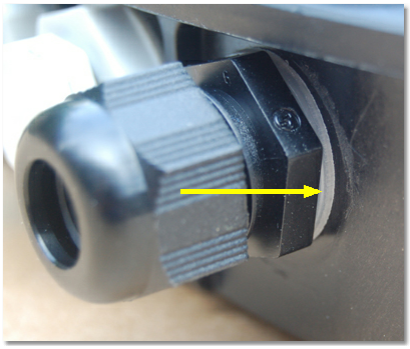
Type	Size
Open end wrench	15 mm
Open end wrench	17 mm
Open end wrench	24 mm

2 Insert the cable glands you need. Here are glands for antenna and transmitter and, in the centre, an air pressure equalization valve.

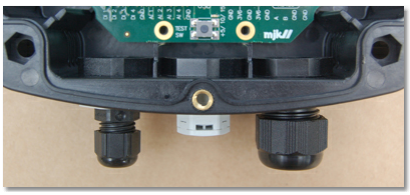
> The air pressure equalization valve **must** be fitted if a pressure transmitter with a relative measuring system is used.



3 Place the nylon washer between the cable gland and the outside of the housing.

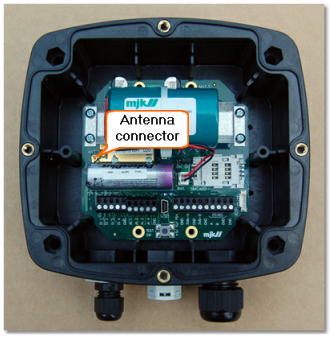


4 The nuts fit into groves on the inside, preventing them from turning when you tighten the cable glands form the outside.

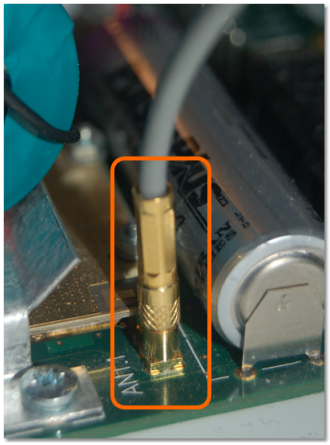


Connect the antenna

1 The antenna connector is to the left of the battery.

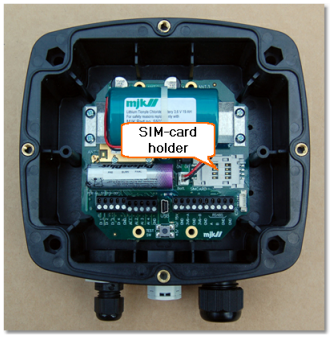


2 Connect the antenna cable to the connector. The connector must 'click' in place.

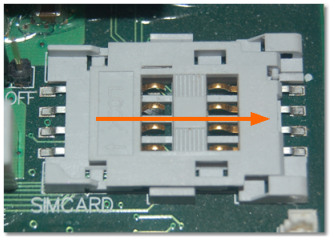


Insert a SIM-card

1 The holder for the SIM-card is on the right side of the printed circuit board.

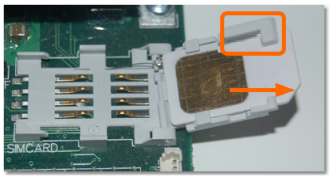


2 Push the SIM-card cover to the right to open it.

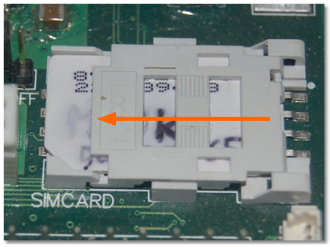


3 Insert the SIM-card into the holder.

Make sure it is positioned correctly, see the markings in the picture..



4 Close the cover and push the cover to the left to close it.



Connecting sensors

General

The panel mount version of the Chatter™ Data Logger can be attached to:

- Up to four digital sensors - mechanical switches or active devices
- Up to four analog sensors
- Up to four Instrument Net sensors

Additional information:

Digital sensors 16
Analog sensors 18
Instrument Net sensors 19

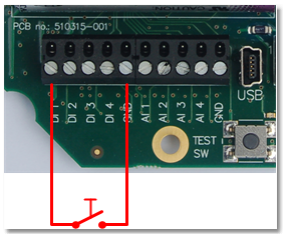
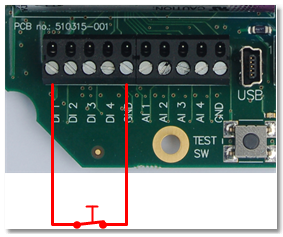
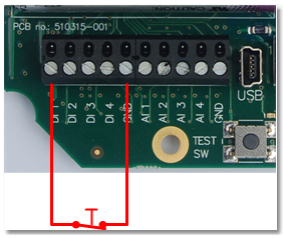
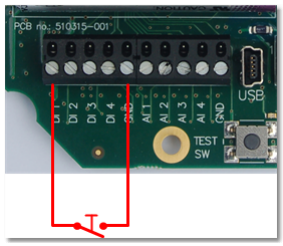
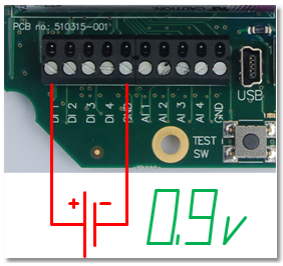
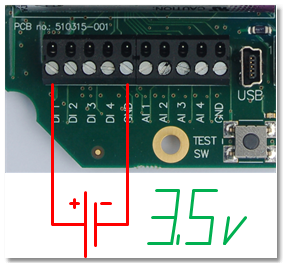
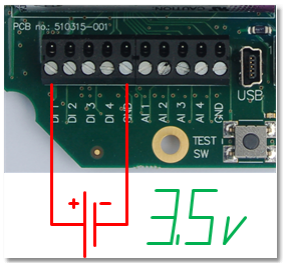
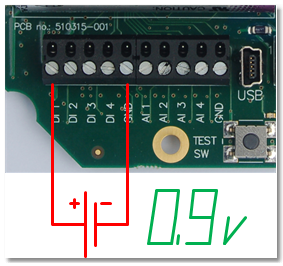
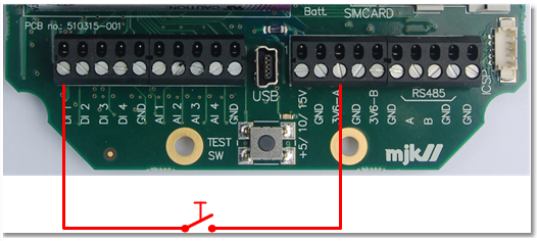
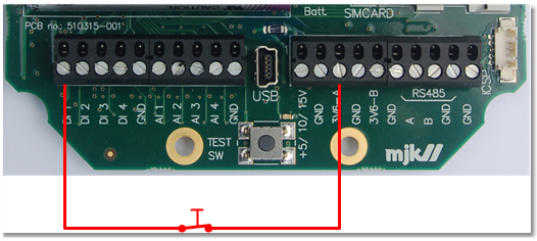
Digital sensors

General

Up to four digital sensors - mechanical switches or active devices - may be connected to the panel mount version of a Chatter™ Data Logger.

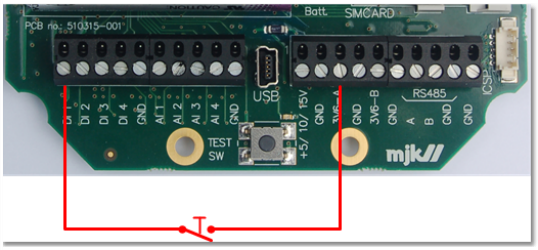
The common side of the digital sensors are connected to either the terminal marked **GND** or the terminal marked **3V6-A** depending on the type of digital sensor used.

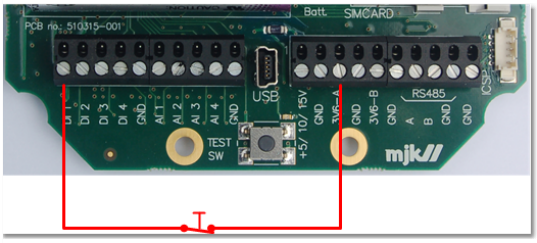
The other side of the digital sensor is connected to one of the terminals **DI 1**, **DI 2**, **DI 3** or **DI 4**

Mode	Normal state, no alarm or event	Active state, alarm or event
Normally open, a floating input is the normal state, an input connected to GND generates an event or alarm.		
Normally closed, an input connected to GND is the normal state, a floating input generates an event or alarm.		
Active high, a voltage less than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm.		
Active low, a voltage greater than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm.		
Active high, a voltage less than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm. The power supply for the alarm switch is provided by the Chatter™ Data Logger		

Active low, voltage greater than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm.

The power supply for the alarm switch is provided by the Chatter™ Data Logger





Take great care NOT to short-circuit the terminal 3V6-A to GND if you use it as a power source for the digital inputs. It will cause irreparable damage to the Chatter™ Data Logger

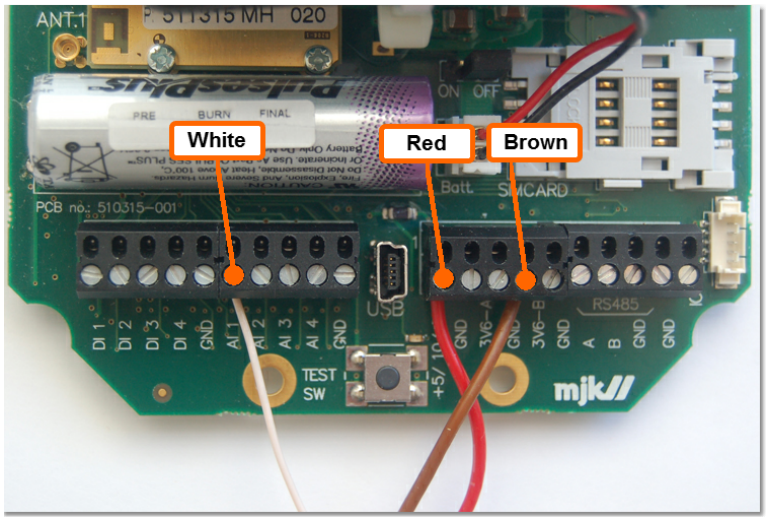
Analog sensors

General

Up to four analog sensors may be connected to the panel mount version of a Chatter™ Data Logger.

Connect the power supply leads - the red and brown wires - from all four sensors to the terminals in this way:

- Red wire - positive supply lead - to the terminal marked **+5 / 10 / 15V**
- Brown wire - negative supply lead - to one of the terminal marked **GND**



Connect the white wire - the signal lead - to one of the four terminals **AI 1**, **AI 2**, **AI 3** or **AI 4**

If you are using a level transmitter for relative measurements, you must take care not to damage the pressure relief tube inside the cable.

Take great care NOT to short-circuit the terminal 3V6-A to GND if you use it as a power source for the digital inputs. It will cause irreparable damage to the Chatter™ Data Logger

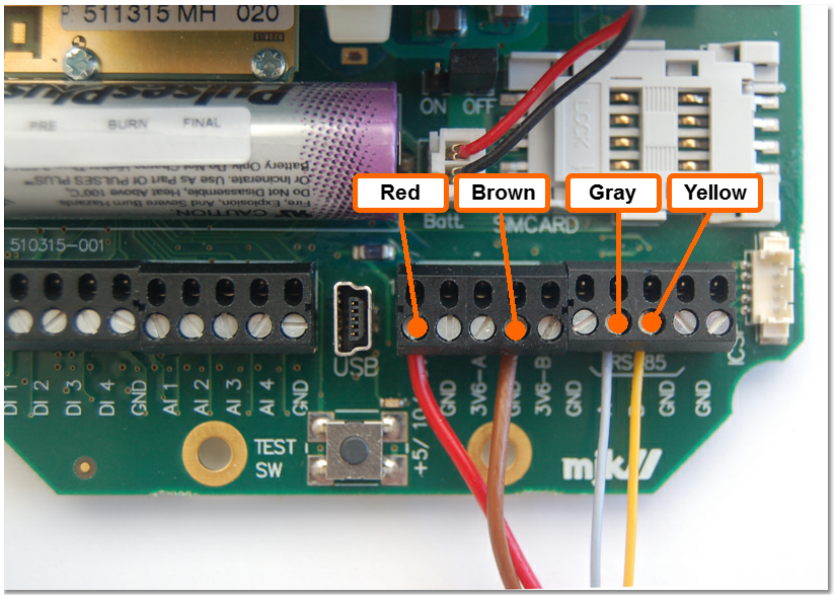
Instrument Net sensors

General

Up to four Instrument Net sensors may be connected to the panel mount version of a Chatter™ Data Logger.

Connect the power supply leads - the red and brown wires - from all four sensors to the terminals in this way:

- Red wire - positive supply lead - to the terminal marked **+5 / 10 / 15V**
- Brown wire - negative supply lead - to one of the terminal marked **GND**



Connect the signal leads - the grey and yellow wires - from all four sensors to the terminals in this way:

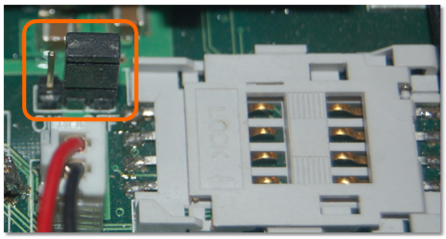
- Gray wire - signal lead A - to the terminal marked **RS485 - A**
- Yellow wire - signal lead B - to the terminal marked **RS485 - B**

If you are using a level transmitter for relative measurements, you must take care not to damage the pressure relief tube inside the cable.

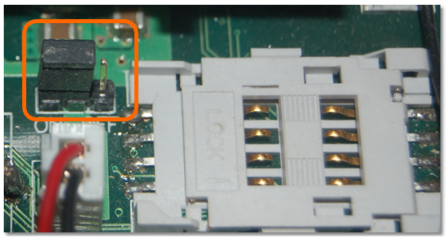
Take great care NOT to short-circuit the terminal 3V6-A to GND if you use it as a power source for the digital inputs. It will cause irreparable damage to the Chatter™ Data Logger

Turn on the Chatter Data logger

1. Locate the battery power jumper. When delivered, the battery power jumper connects the two **rightmost** pins - this is the **OFF**-position



2. Move the battery power jumper so it connects the two **leftmost** pins - this is the **ON**-position.

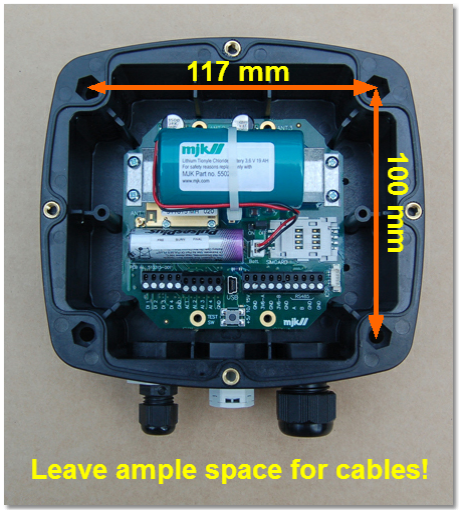


Mounting in the field

1 Drill four holes, spacing as shown to the right.

Use screws and other mounting material suited for the surface, on which the Chatter™ Data Logger will be mounted.

> Use some sort of strain relief for the sensor cable, the cable gland must **NOT** be the only support for the weight of the sensor and cable!



2 Place the lid on top of the housing, tighten all four screws.



Tube mount model



Package content

When you receive your Chatter™ Data Logger for tube mounting, the package contains:

- One Chatter™ Data Logger for mounting in the end of a vertical tube.



Identification

Your Chatter™ Data Logger can be identified by its unique MJK serial number. You will find the serial number on a label attached to the metal plate inside the cabinet.

Make a note of the serial number, you may need it you have to contact the support at MJK Automation ApS.

Additional information:
Support at MJK Automation ApS 6



Open the Chatter Data logger

1 Hold the black base, twist the green plastic housing counter clockwise



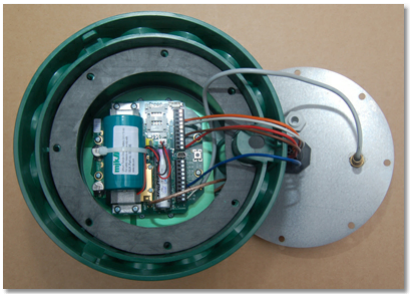
2 Turn the green plastic housing upside down, remove the screws at the circumference of the metal base plate. Retain all screws for later.



Tools

Type	Size
Philips screw driver	PZ 2

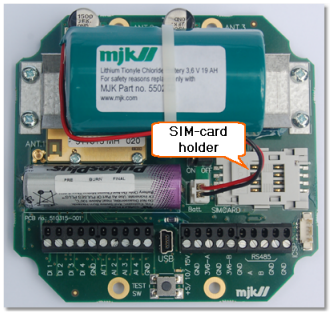
3 Remove the base plate to gain access to the internal components.



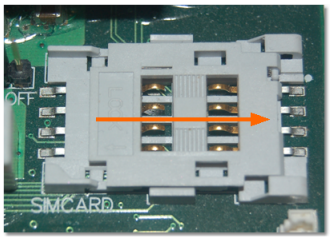
Take care not to damage the wiring from the connector strips to the base plate!

Insert a SIM-card

1. The holder for the SIM-card is on the right side of the printed circuit board.

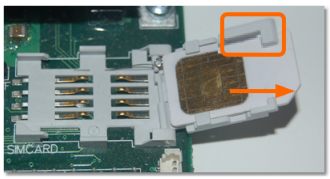


2. Push the SIM-card cover to the right to open it.

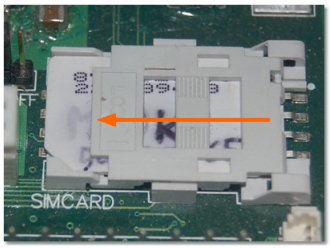


3. Insert the SIM-card into the holder.

   Make sure it is positioned correctly, see the markings in the picture..

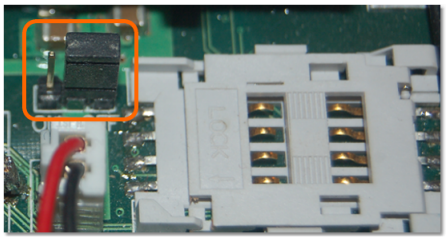


4. Close the cover and push the cover to the left to close it.

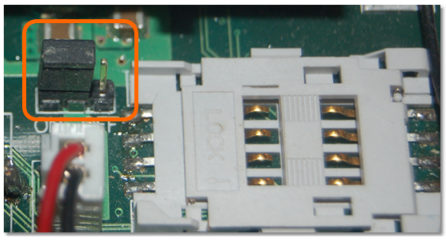


Turn on the Chatter Data logger

1. Locate the battery power jumper. When delivered, the battery power jumper connects the two **rightmost** pins - this is the **OFF**-position

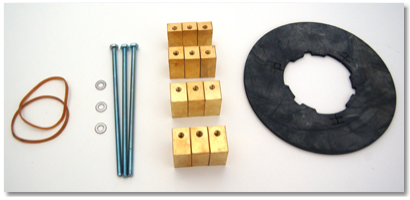


2. Move the battery power jumper so it connects the two **leftmost** pins - this is the **ON**-position.

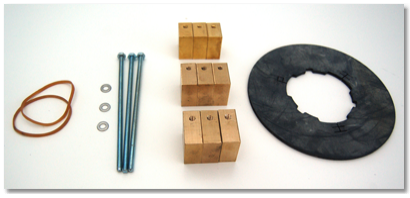


Mounting in the field

You will need a set of wedges for mounting the tube mount model in the end of a vertical tube. MJK Automation ApS supplies two different sets of wedges to fit tubes with different inner diameter.

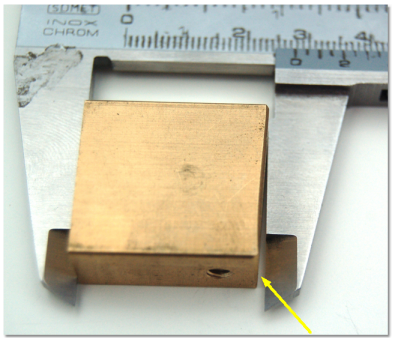
MJK Item	Description	
521751	Set of wedges for the Chatter™ Data Logger tube mount model. Contains wedges number 1, 2, 3 and 4.	

Set #	Minimum diameter	Maximum diameter
1	61 mm	70 mm
2	68 mm	76 mm
3	76 mm	83 mm
4	83 mm	90 mm

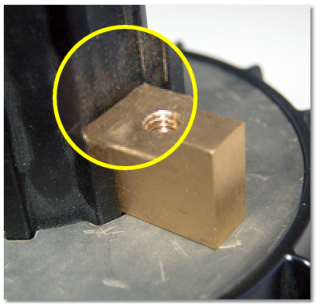
MJK Item	Description	
512751	Set of wedges for the Chatter™ Data Logger tube mount model. Contains wedges number 4, 5 and 6.	

Set #	Minimum diameter	Maximum diameter
4	83 mm	90 mm
5	89 mm	97 mm
6	97 mm	105 mm

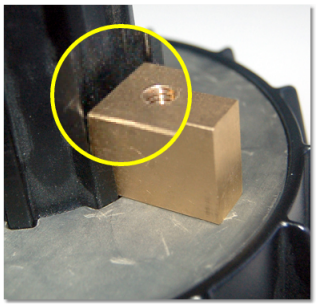
1. The wedges have a straight and a chamfered edge, the chamfered edge must be towards the groove in the black aluminium casting, the straight edge must be towards the inside of the tube.



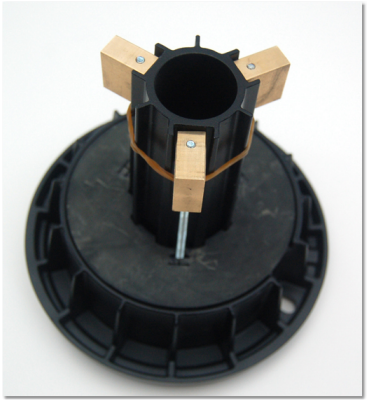
2. This wedge is mounted the right way round, there is no gap between the groove in the black aluminium casting and the wedge.



3. This wedge is mounted the **wrong** way, there is a visible gap between the groove in the black aluminium casting and the wedge.



4 Mount three wedges of the same size, use the rubber bands to keep them in position.



Additional information:
Accessories 178

Connect sensor

1 Mount the black aluminium base in the end of the tube using one set of wedges to fit the internal diameter of the tube.

Tools

Type	Size
Socket wrench	7 mm



2 Attach the safety wire to the black aluminium base using a screw and washer.

> Always use the safety wire. The cable connector is not designed to carry the weight of the sensor and the cable



3 Attach the plug on the cable to the receptacle on the base plate.

The connector is keyed, it will only fit in the correct position



4 Lower the sensor into the tube.

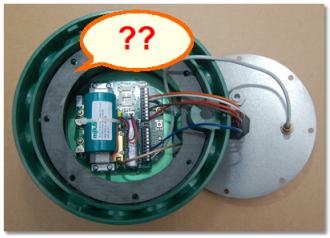
Do not just drop the sensor into the tube, lower it gently.



Re-assemble the Chatter Data logger

1 Make sure that the gasket is correctly placed in the green plastic housing, then put the base plate back in place.

> Ensure that none of the wires from the bas plate are trapped between the gasket and the baseplate.



2 Tighten all seven screws.

Tools

Type	Size
Philips screw driver	PZ 2

> Do not use excessive force when tightening the screws.



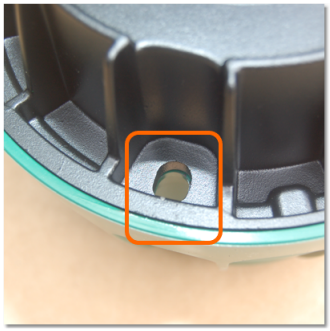
3 Turn the green plastic housing upside down, place the black base on top of it. Make sure that the black base is inserted correctly in the green plastic housing.



4 Hold the black base, twist the green plastic housing clockwise



5 Make sure that the hole for the padlock in the black base is aligned with the hole in the green plastic housing.



Start with the setup wizard

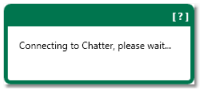
General

You can use a wizard to make the initial setup of your Chatter™ Data Logger. A wizard guides you through the necessary steps to ensure a simple, working configuration.

Two different wizards are available, one for a Chatter™ Data Logger using the RTU firmware and another if the Chatter™ Data Logger uses the e-mail firmware.

RTU wizard

1 The first step is to connect with a Chatter™ Data Logger

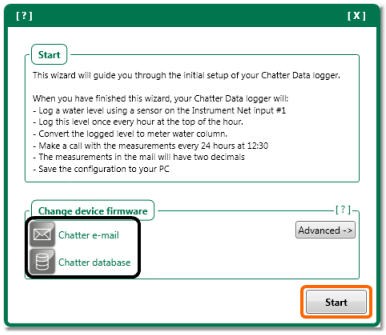


2 Click the button *Start*

You may change the built-in firmware 136 to:

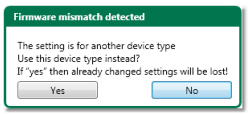
- e-mail version
- Database version

Select the firmware version you will change to.



> You may change the built-in firmware to a database version.
> The Chatter™ Link PC program does not support the setup of a Chatter™ Data Logger connected to a database.

3 This warning is shown if you are using the RTU wizard for a Chatter™ Data Logger with a non-RTU firmware.



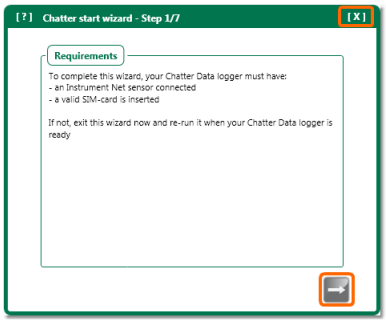
> There is a delay before the Yes-button will be active

4 The Chatter™ Data Logger must be connected to an InstrumentNet sensor and a valid SIM-card inserted.

If the InstrumentNet sensor and the SIM-card are missing, exit the wizard.

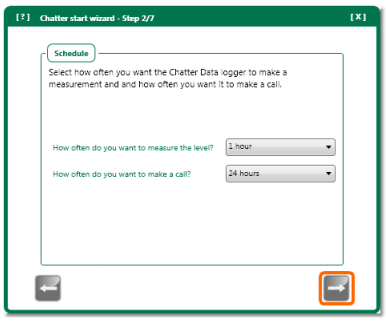
Connect the GE Proficy iFix version 5 Historian sensor and the SIM-card and start the wizard again.

Click the button with the arrow to continue.



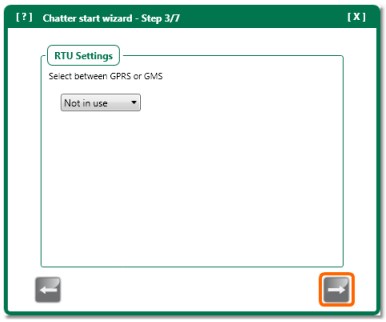
5 Select how often you want to measure the level using the InstrumentNet sensor and how often you want the Chatter™ Data Logger to make a call to deliver the measured data.

Click the button with the arrow to continue.



Additional information:
Data log schedule 103
Data call schedules 105

6 Select the method used to deliver the measured data.



- Select **Not in use** if you want no communication from the Chatter™ Data Logger
- Select **SMS** if the Chatter™ Data Logger will deliver measured data in an SMS message
- Select **SCADA GSM** if the Chatter™ Data Logger will deliver measured data using a dial-up connection
- Select **SCADA GPRS** if the Chatter™ Data Logger will deliver measured data using a TCP/IP data connection

Click the button with the arrow to continue.

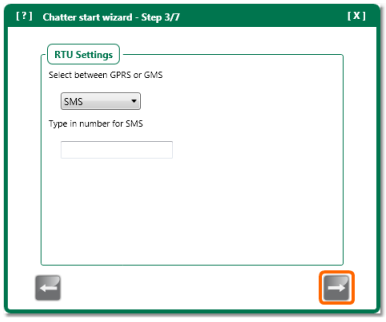
Additional information:

SMS wizard 35
SCADA GPRS wizard 37
SCADA GSM wizard 39

SMS

7 If you selected the *SMS* option, you must provide the telephone number for the telephone which will receive the SMS message.

Click the button with the arrow to continue.



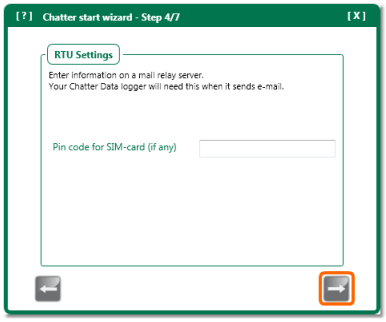
---

10 Enter the pin-code for the SIM-card is a pin-code is used.

Leave the field empty if you don't use a pin-code

Click the button with the arrow to continue.

Additional information:
GSM/GPRS setup 118



---

11 Select which sign you want to use as the decimal delimiter.

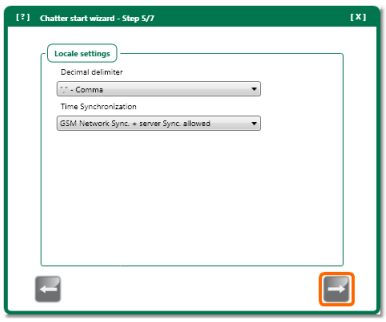
You can use either a comma or a decimal point.

Select the source for time synchronization.

The Chatter™ Data Logger can use either the GSM network or the server receiving date as the source for time synchronization.

Click the button with the arrow to continue

Additional information:
Locale settings 115

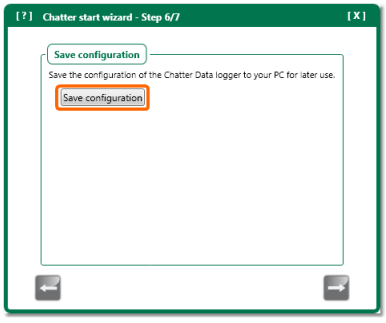


---

12 Save the configuration created by this wizard.

The configuration is saved as a file on your PC.

Click the button *Save configuration*

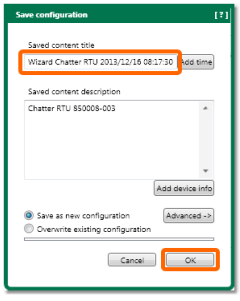


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1 A default file name is provided,

Change the file name and the description to suit your needs

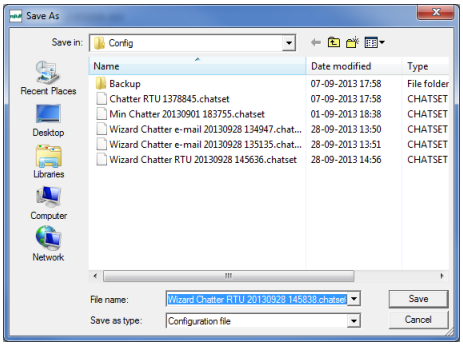
Click the button *OK*



---

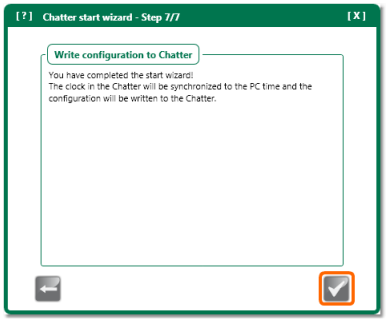
1 A standard Windows save file window,

Use it to specify where you want to save the configuration file.



1 The wizard is completed.

Click the button to close the wizard.



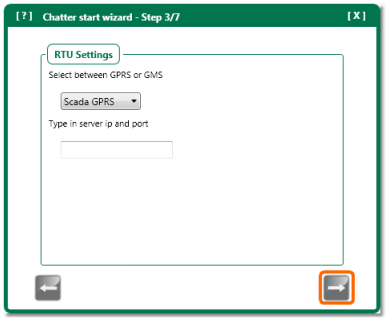
SCADA GPRS

1 If you selected the *SCADA GPRS* option, you must provide the IP address and the IP port number used by the SCADA system.

This must be in this form:

<address>:<port>, an example: **10.0.0.20:1025**

Click the button with the arrow to continue.



2 Enter the Access Point Name needed for GPRS communication. The APN depends on which GPRS network you will use. In general, there are two possibilities:

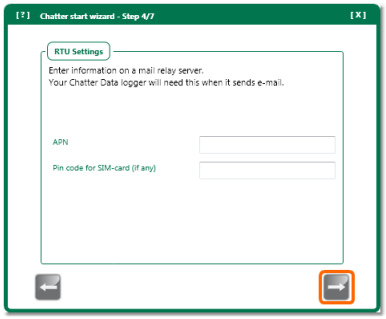
- If you are using a private network like MPLS, your network supplier will tell you which APN to use.
- If you are using a public network, your telecom supplier will tell you what their APN is.

Enter the pin-code for the SIM-card is a pin-code is used.

Leave the field empty if you don't use a pin-code

Click the button with the arrow to continue.

Additional information:
List of some known APNs 184



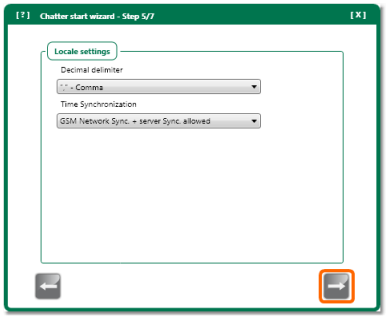
3 Select which sign you want to use as the decimal delimiter.

You can use either a comma or a decimal point.

Select the source for time synchronization.

The Chatter™ Data Logger can use either the GSM network or the server receiving date as the source for time synchronization.

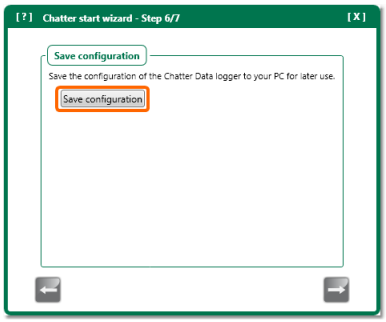
Click the button with the arrow to continue



4 Save the configuration created by this wizard.

The configuration is saved as a file on your PC.

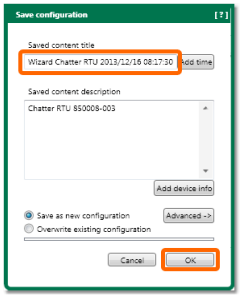
Click the button *Save configuration*



5 A default file name is provided,

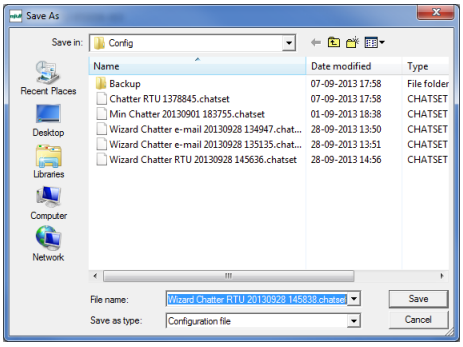
Change the file name and the description to suit your needs

Click the button *OK*



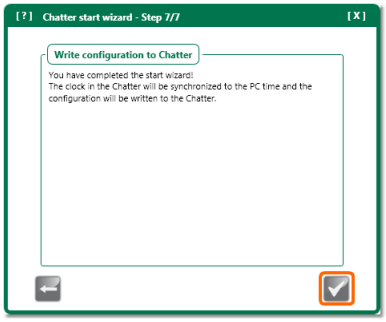
6 A standard Windows save file window,

Use it to specify where you want to save the configuration file.



7 The wizard is completed.

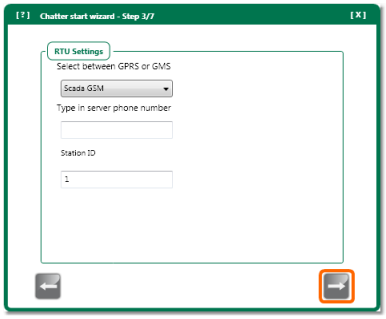
Click the button to close the wizard.



SCADA GSM

1 If you selected the *SCADA GSM* option, you must provide telephone number used by the SCADA system.

Click the button with the arrow to continue.



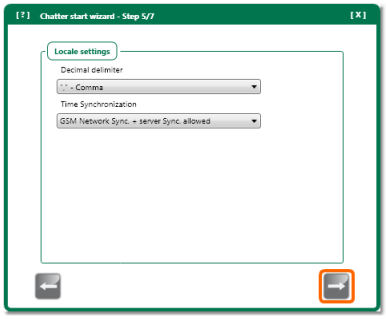
2 Select which sign you want to use as the decimal delimiter.

You can use either a comma or a decimal point.

Select the source for time synchronization.

The Chatter™ Data Logger can use either the GSM network or the server receiving date as the source for time synchronization.

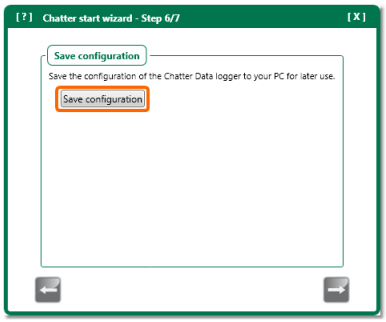
Click the button with the arrow to continue



3 Save the configuration created by this wizard.

The configuration is saved as a file on your PC.

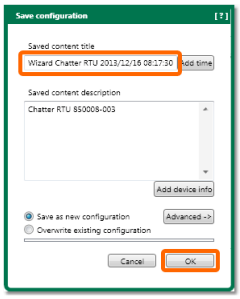
Click the button *Save configuration*



4 A default file name is provided,

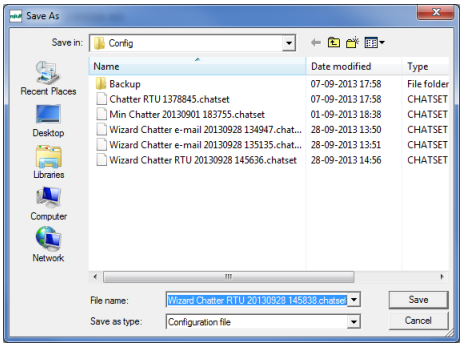
Change the file name and the description to suit your needs

Click the button *OK*



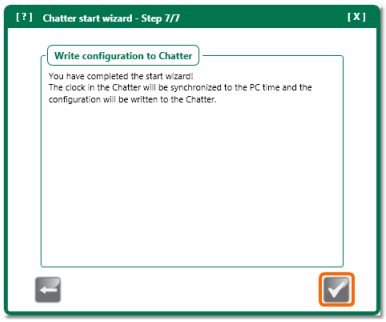
5 A standard Windows save file window,

Use it to specify where you want to save the configuration file.



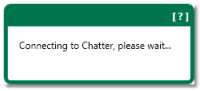
6 The wizard is completed.

Click the button to close the wizard.



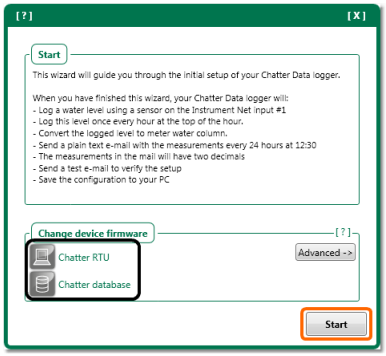
e-mail wizard

1 The first step is to connect with a Chatter™ Data Logger



---

1 Click the button *Start*



You may change the built-in firmware 136 to:

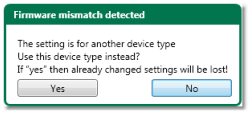
- RTU version
- Database version

Select the firmware version you will change to.

> You may change the built-in firmware to a database version.
> The Chatter™ Link PC program does not support the setup of a Chatter™ Data Logger connected to a database.

---

3 This warning is shown if you are using the e-mail wizard for a Chatter™ Data Logger with a non-e-mail firmware.



> There is a delay before the Yes-button will be active

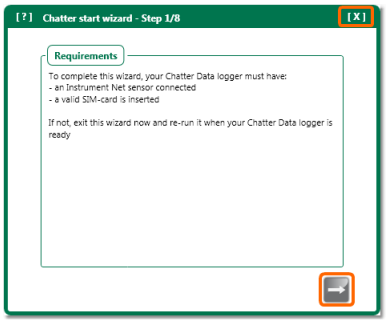
---

1 The Chatter™ Data Logger must be connected to an InstrumentNet sensor and a valid SIM-card inserted.

If the InstrumentNet sensor and the SIM-card are missing, exit the wizard.

Connect the GE Proficy iFix version 5 Historian sensor and the SIM-card and start the wizard again.

Click the button with the arrow to continue.



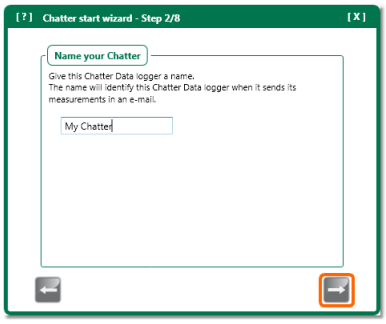
---

1 Enter a name for this low limit

The name is used to identify e-mails sent from this Chatter™ Data Logger

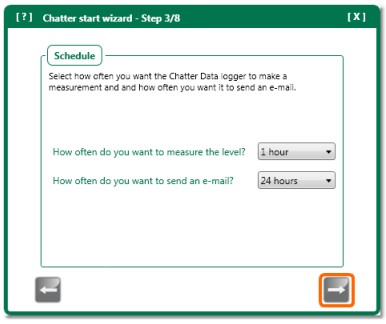
Click the button with the arrow to continue.

Additional information:
Chatter name 114



1 Select how often you want to measure the level using the InstrumentNet sensor and how often you want the Chatter™ Data Logger to send an e-mail to deliver the measured data.

Click the button with the arrow to continue.



Additional information:
Data log schedule 103
Data call schedules 105

1 You must provide a valid e-mail addresses for:

- The mailbox which will receive e-mails from this Chatter™ Data Logger
- This Chatter™ Data Logger. This e-mail address is used as the sender address.



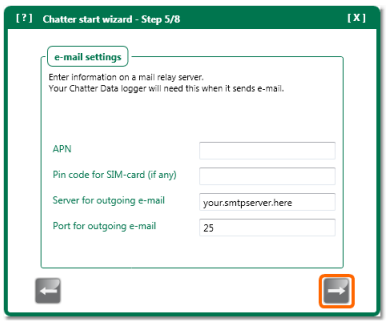
Ask your mobile telephone supplier which sender address you may use.

The text box turns red if an invalid the e-mail address is entered

Additional information:
e-mail setup 124

1 Enter the Access Point Name needed for GPRS communication. The APN depends on which GPRS network you will use. In general, there are two possibilities:

- If you are using a private network like MPLS, your network supplier will tell you which APN to use.
- If you are using a public network, your telecom supplier will tell you what their APN is.



Enter the pin-code for the SIM-card is a pin-code is used. Leave the field empty if you don't use a pin-code

Enter the server address for outgoing e-mail. This address will normally be provided by your mobile telecom provider.

The default port for e-mail traffic is 25, do not change this unless you are specifically instructed to do so

The modem built into the Chatter™ Data Logger does NOT support mail servers which requires a secure logon.

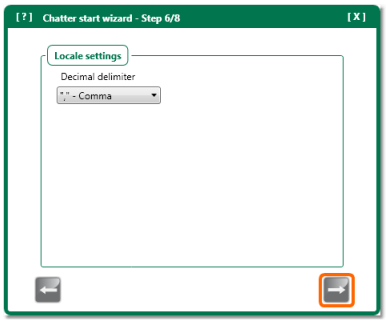
The text box turns red if an invalid the mail server address is used

Additional information:
Internet settings 119
GSM/GPRS setup 118
e-mail setup 124

1 Select which sign you want to use as the decimal delimiter.

You can use either a comma or a decimal point.

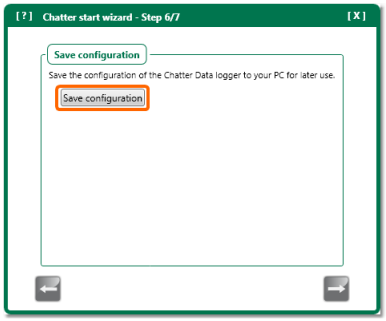
Additional information:
Locale settings 115



3 Save the configuration created by this wizard.

The configuration is saved as a file on your PC.

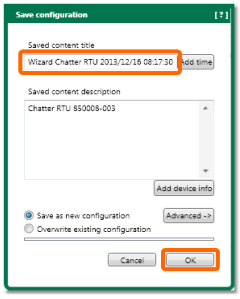
Click the button *Save configuration*



4 A default file name is provided,

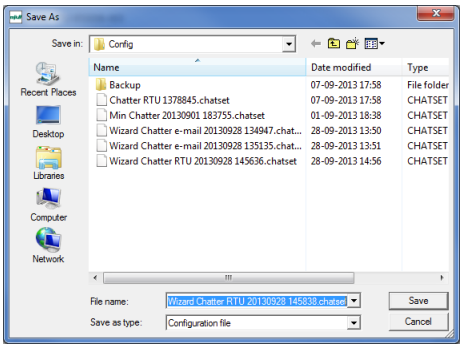
Change the file name and the description to suit your needs

Click the button *OK*



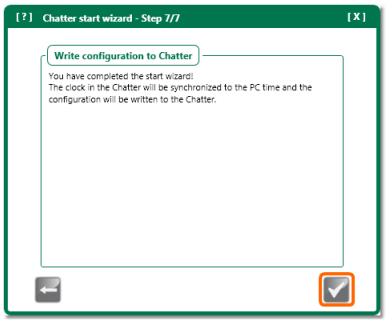
5 A standard Windows save file window,

Use it to specify where you want to save the configuration file.

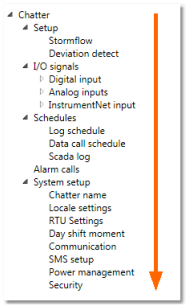


6 The wizard is completed.

Click the button to close the wizard.



Configuration with Chatter Link



MJK Automation ApS provides a PC-program, Chatter™ Link, as a part of the Chatter™ Data Logger package. You must use this program to do the initial setup and configuration of your Chatter™ Data Logger.

You can create a configuration i two different ways:

- Use the start wizard, it guides you through some easy steps to make a basic configuration.
- Use the Chatter™ Link to create a new configuration or modify an existing one manually

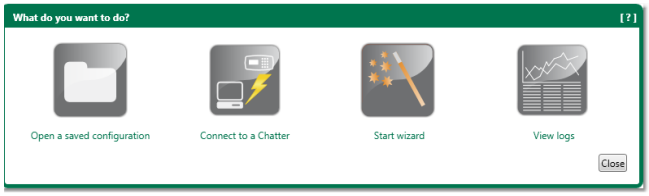
The sequence you must follow to get a proper configuration for a Chatter™ Data Logger is defined in the menu in the left pane. Start from the top and work your way down towards the bottom.

> You must read the current configuration from the Chatter™ Data Logger before the menu is displayed

Additional information:

Install the Chatter™ Link on your PC 180
Use the start wizard
Do configuration manually

1 The start menu provides four choices.



Additional information:

Open a configuration 45

RTU wizard 33
e-mail wizard 41
Logged data 142

Open a configuration

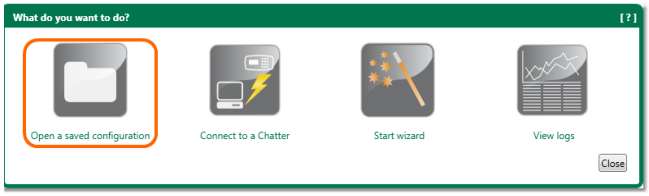
1 From the menu strip:

Click the button *Open a configuration*



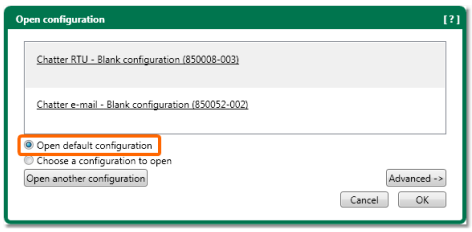
2 From the Start-menu:

Click the button *Open a saved configuration*



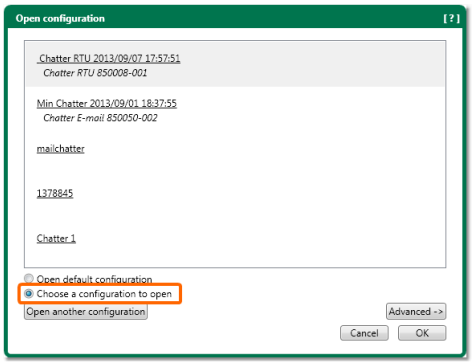
1 The standard option is to open a default configuration. Select one of the configurations in the list.

Click the button *OK*



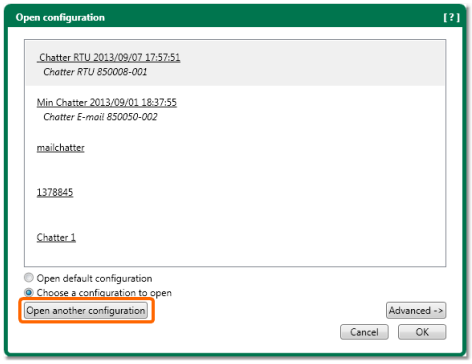
1 Click the button *Choose a configuration to open* if you want to open one of your own, saved configurations. Select one of the configurations in the list.

Click the button *OK*

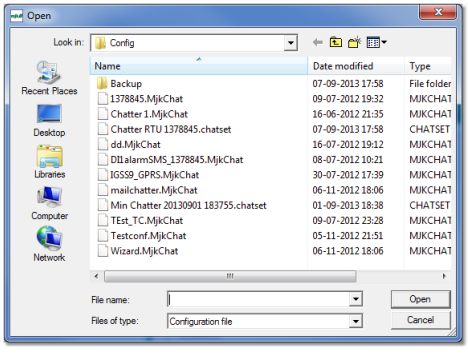


1 Click the button *Open another configuration* if you want to open a saved configuration.

Click the button *OK*



1 Navigate to your saved configuration file using the normal *File Open* dialogue



Advanced

Read the current configuration

1 From the Start-menu:

Click the button Connect to a Chatter



> Your PC must be connected to the Chatter™ Data Logger with a USB-cable.

2 From the menu strip:

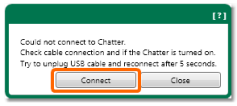
Click the button Connect to a Chatter



3 The connection is in progress



4 If you get this warning, re-connect the USB cable and try once more.



5 You should also check that the red light next to the switch on the Chatter™ Data Logger printed circuit board is on.

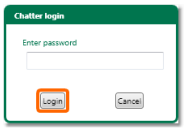
If not, press the switch once to turn on the Chatter™ Data Logger



6 When the Chatter™ Data Logger is connected, click the button *Read from Chatter*



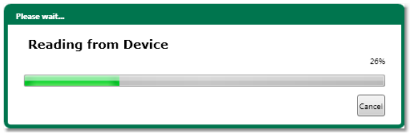
7 If the USB connection is secured with a password, you must enter this password before you can change the current configuration from the Chatter™ Data Logger



> You can read and display the current configuration if you enter **any** number as password. You must, however, enter the correct numeric password if you want to change the current configuration.

Additional information:
Security 134

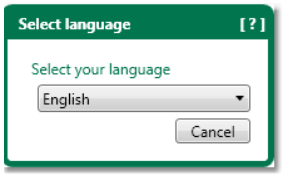
8 You can follow the progress in this windows.



Select language



Use this window to select the language you want Chatter™ Link to use.



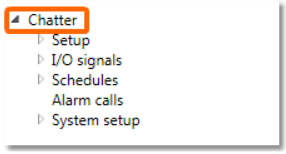
See below for a detailed description of each part in this pane.

Select your language

Select between the available languages.

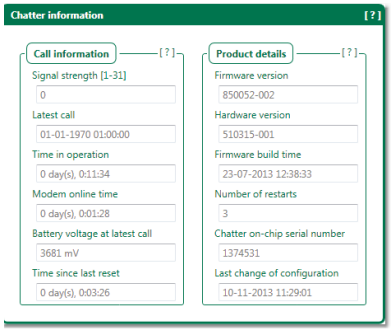
Chatter™ Link must restart before your choice of language will be effective. Any changes in a configuration which are not saved will be **lost!**

Chatter information window



Use this window to get some general information about your Chatter™ Data Logger

> The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger

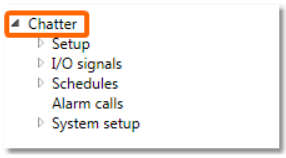


See the detailed description for each pane:

Additional information:

Call information pane 50
Product details pane 52

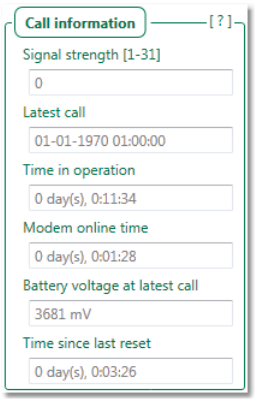
Call information pane



This pane shows data related to calls made by the Chatter™ Data Logger.

> The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Signal strength [1-31]

Holds the GSM signal strength measured during the most recent call made by the Chatter™ Data Logger. The signal strength is for your information only, you cannot change it.

The signal strength is a number from 1 to 31 where:

Signal strength	Description
1 - 14	The GSM signal strength is marginal
15 - 19	The GSM signal strength is reasonably good
20 - 24	The GSM signal strength is good
25 - 31	The GSM signal strength is excellent

Additional information:
Location in register list 188

Latest call

Holds the time for the most recent call made by the Chatter™ Data Logger. The time is displayed in your local time.

The latest call time is for your information only, you cannot change it.

Additional information:
Time and time zones 161

Time in operation

Holds the number of days, hours, minutes and seconds, the Chatter™ Data Logger has been operating. The time in operation is for your information only, you cannot change it.

Additional information:
Location in register list 188

Modem online time

Holds the number of days, hours, minutes and seconds, the built in GSM modem has been online. The modem online time is for your information only, you cannot change it.

Additional information:
Location in register list 188

Battery voltage at latest call

Holds the voltage from the Chatter™ Data Loggers internal battery, measured during the most recent call. The battery voltage is for your information only, you cannot change it.

Additional information:

Battery life expectancy 162
Replacing the battery 163
Location in register list 188

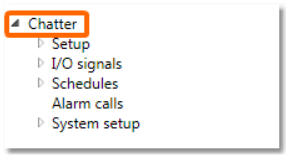
Time since last reset

Shows the time elapsed since last soft reset or power application to the Chatter™ Data Logger. This time is for your information only, you cannot change it.

Additional information:

Location in register list 188

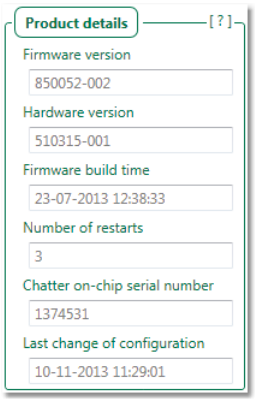
Product details pane



This pane shows data related to the Chatter™ Data Logger.

> The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Firmware version

The Chatter™ Data Logger has its current firmware version number embedded in one of its chip. It is for your information only, you cannot change it.

Additional information:
Location in register list 188

Hardware version

The Chatter™ Data Logger has its hardware version number embedded in one of its chip. It is for your information only, you cannot change it.

Additional information:
Location in register list 188

Firmware build time

Show when the firmware currently in the Chatter™ Data Logger was built.

> You must provide this information if you are requesting support from MJK Automation ApS

Number of restarts

Shows how many times the Chatter™ Data Logger has restarted. It is for your information only, you cannot change it.
The Chatter™ Data Logger does not normally restart, but cycling power or replacing the battery will make the Chatter™ Data Logger restart.

Additional information:
Location in register list 188

Chatter on-chip serial number

Each Chatter™ Data Logger has a serial number embedded in one of its chip. It is for your information only, you cannot change it.

Additional information:
Location in register list 188

Last change of configuration

Shows the last time when the configuration for this Chatter™ Data Logger was saved.

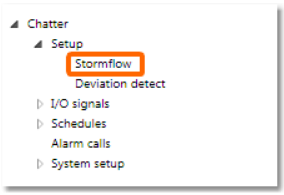
This value is updated every time a configuration is written to the Chatter™ Data Logger even if no changes are made to the configuration

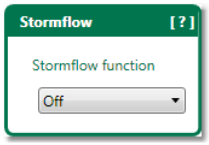
Additional information:

Location in register list 188

Function setup

Stormflow

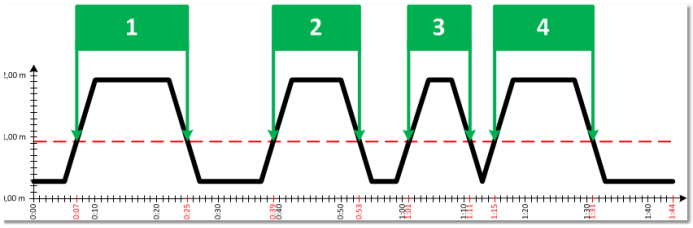




General

A stormflow is a condition where water is spilled over a crest with a known geometry. The Chatter™ Data Logger can detect stormflows and calculate the amount of water spilled over the crest. The Chatter™ Data Logger handles stormflow conditions in five different ways.

1 **Recording** counts how many times a stormflow is detected

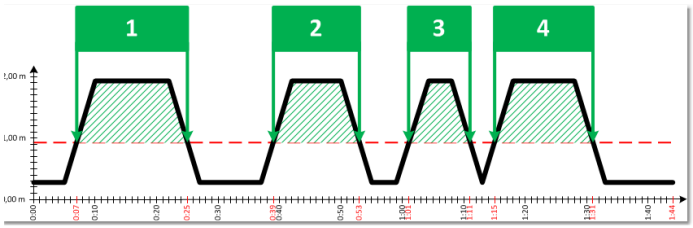


The following data are logged by the Chatter™ Data Logger:

- Number of stormflows detected today
- Number of stormflows detected yesterday
- Total duration of all detected stormflows
- Total duration of detected stormflows today
- Total duration of detected stormflows yesterday

---

2 **Standard** calculates how much water is spilled regardless of the duration of the stormflow

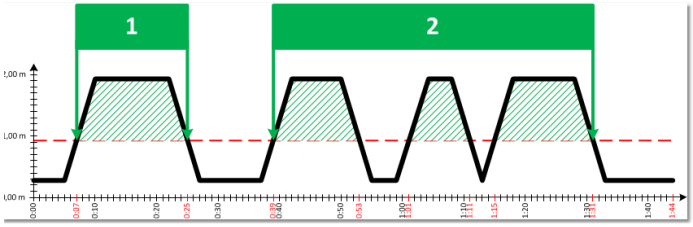


The following data are logged by the Chatter™ Data Logger:

- Number of stormflows detected today
- Number of stormflows detected yesterday
- Total duration of all detected stormflows
- Total duration of detected stormflows today
- Total duration of detected stormflows yesterday
- Total volume in all stormflows, the green shaded area.
- Total volume in all stormflows today
- Total volume in all stormflows yesterday

---

3 **Conditional** calculates how much water is spilled, but certain conditions must be met before it is accepted as a stormflow:



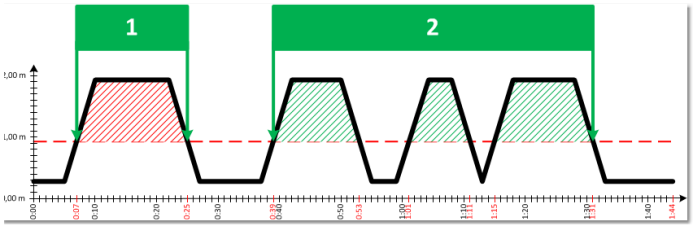
- The first spill must last longer than a minimum start time before it is accepted as a stormflow.
- After the last spill, the spill must be off longer than a minimum stop time before the stormflow is accepted as ended.

The following data are logged by the Chatter™ Data Logger:

- Number of stormflows detected today
- Number of stormflows detected yesterday
- Start- and stop time for the last 10 stormflows
- Total duration of all detected stormflows

- Total duration of detected stormflows today
- Total duration of detected stormflows yesterday
- Total volume in all stormflows, the green shaded area.
- Total volume in all stormflows today
- Total volume in all stormflows yesterday

4 **Conditional with start volume** calculates how much water is spilled, but certain conditions must be met before it is accepted as a stormflow:



- The first spill must last longer than a minimum start time before it is accepted as a stormflow.
- The first spill must be of a certain magnitude before it is accepted as a stormflow , the red shaded area
- After the last spill, the spill must be off longer than a minimum stop time before the stormflow is accepted as ended

The following data are logged by the Chatter™ Data Logger:

- Number of stormflows detected today
- Number of stormflows detected yesterday
- Start- and stop time for the last 10 stormflows
- Total duration of all detected stormflows
- Total duration of detected stormflows today
- Total duration of detected stormflows yesterday
- Total volume in all stormflows, the green and red shaded area.
- Total volume in all stormflows today
- Total volume in all stormflows yesterday

5 **Always on**

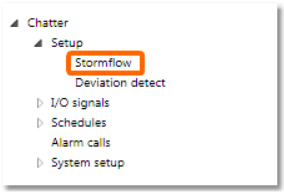
Stormflow function

Select between six different modes of stormflow functions.

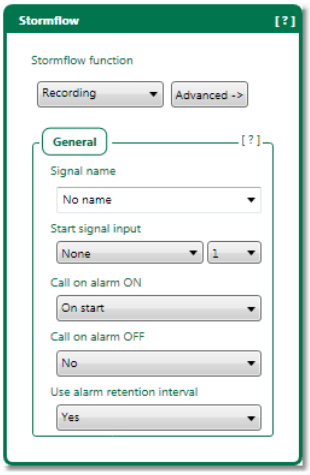
The Chatter™ Data Logger will not process stormflows if you select Off.???

Additional information:
Stormflow general 57

General



Use this window to set the way stormflow detection and recording will operate.



Signal name

Select an existing signal name or enter a new signal name.

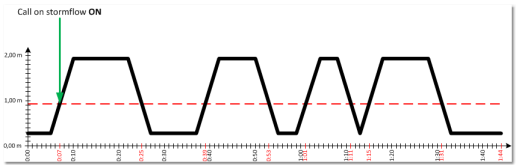
The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this Chatter™ Data Logger

Additional information:
Signal names explained 160

Start signal input

Select which input you want to use to detect stormflows. Stormflows will not be recorded if you select **None**.

Call on alarm ON



Select between four different alarm call types. If you select

- **None**, the Chatter™ Data Logger will not make an alarm call when it detects a stormflow.
- **On start**, the Chatter™ Data Logger will make an alarm call when it detects a stormflow
- **On volume limit**, the Chatter™ Data Logger will make an alarm call when it detects a stormflow and the volume limit is reached
- **On start and volume limit**, the Chatter™ Data Logger will make an alarm call when it detects a stormflow and a new alarm call when the volume limit is reached.

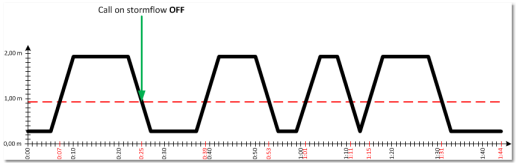
The Chatter™ Data Logger will call all entries in the Alarm call list, starting with the first entry.

Additional information:
Volume limit
Call lists 167
Setting the alarm call list 111

Call on alarm OFF

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call when the stormflow condition no longer exists. It will call all entries in the Alarm call list, starting with the first entry.



Additional information:

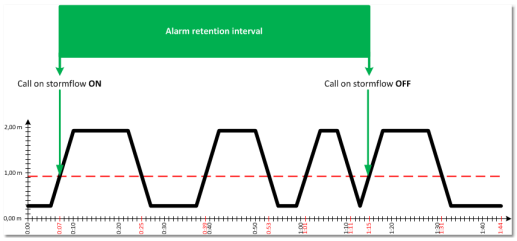
Call lists 167
Setting the alarm call list 111

Use alarm retention interval

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call using the Alarm call list when an stormflow is detected. It will **not** react to new alarms before the Alarm retention interval runs out.

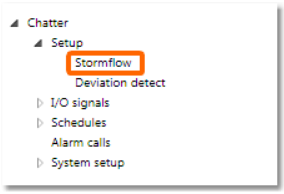
If you select **No**, the Chatter™ Data Logger will make an alarm call when a new stormflow is detected



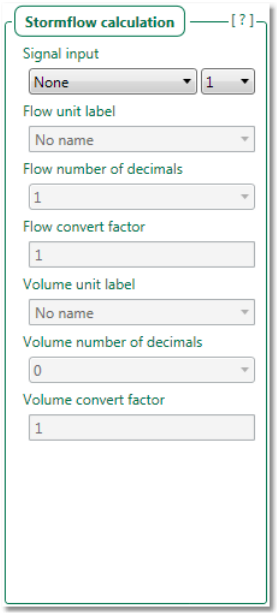
Additional information:

Setting the alarm retention interval 112
Setting the alarm call list 111

Stormflow calculation



Use this window to set the way stormflow calculations will operate.



Signal input

Select the input which will supply the level measurement needed for the stormflow calculation

> You must select both an input type, InstrumentNet or Analog **and** the input number between one and four.

Flow unit label

Select an existing flow unit label or enter a new flow unit label. The unit label is appended to the calculated values.

Flow number of decimals

This setting determines how many decimals you will see in the flow values

Select the number of decimals you need, you can select from zero to eight digits after the decimal point.

> The Chatter™ Data Logger stores the measured value internally with the maximum precision regardless of this setting.

Flow convert factor

The current flow will be multiplied with the number entered in this field. Use it for converting the flow from one unit, **m^3/h**, to an other unit, **l/s**

> The resulting value - current flow multiplied by the Flow convert factor - is only used for displaying the value in SMS message or e-mail sent from this Chatter™ Data Logger. The value logged by the Chatter™ Data Logger is NOT affected.

Volume unit label

Select an existing volume unit label or enter a new volume label. The unit label is appended to the calculated values.

Volume number of decimals

This setting determines how many decimals you will see in the volume values

Select the number of decimals you need, you can select from zero to eight digits after the decimal point.

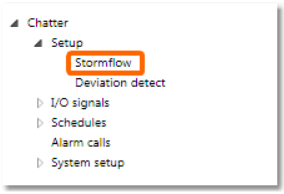
> The Chatter™ Data Logger stores the measured value internally with the maximum precision regardless of this setting.

Volume convert factor

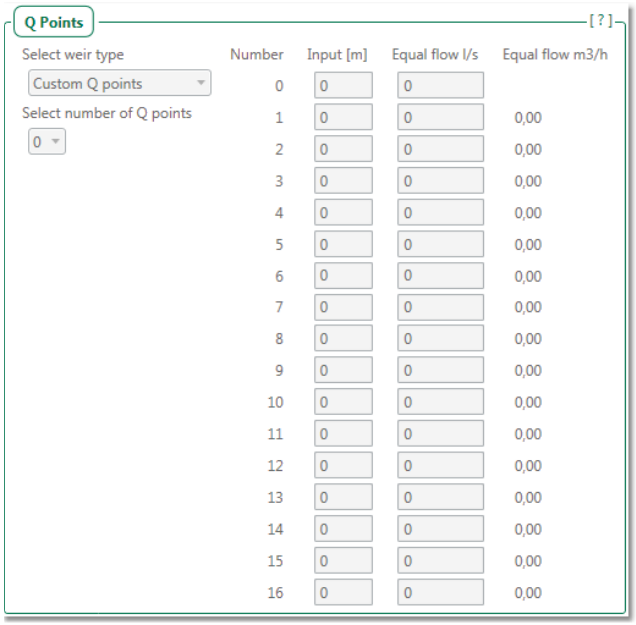
The calculated volume will be multiplied with the number entered in this field. Use it for converting the flow from one unit, **m^3/h**, to an other unit, l**/s**

> The resulting value - calculated volume multiplied by the Volume convert factor - is only used for displaying the value in SMS message or e-mail sent from this Chatter™ Data Logger. The value logged by the Chatter™ Data Logger is NOT affected.

Q points



Use this window to set the way stormflow calculations will operate.



Weir type

Select between the supported weir types

Additional information:
Supported weir types 65

Select number of Q points

Select the number of Q points you want to use. You can select up ro 16 Q points

> This setting is valid for custom Q ponts only

Max head, h [m]

Enter the maximum head, **h**, for the selected weir measured in meters

> It is impossible to calculate the amount of spill if the actual head is greater than the maximum head. In such a situation, the spill value will be the value corresponding to the maximum head.

Additional information:
Supported weir types 65

Weir width, b [m]

Enter the width, **b**, for the selected weir measured in meters

> The **Weir width** is only available if you select a rectangular weir.

Additional information:
Supported weir types 65

Depth below edge

Enter the depth from the crest to the bottom of the weir, **p**,, measured in meters

The **Depth below edge** is only available if you select a rectangular weir.

Additional information:
Supported weir types 65

Calculate Q points

Use this button to calculate the actual Q points corresponding to the selected weir type

Select number of Q points

Select which input you want to use to detect stormflows. Stormflows will not be recorded if you select **None**.

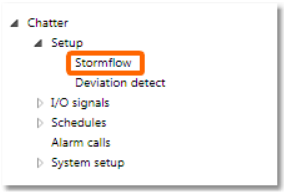
sss

Q points

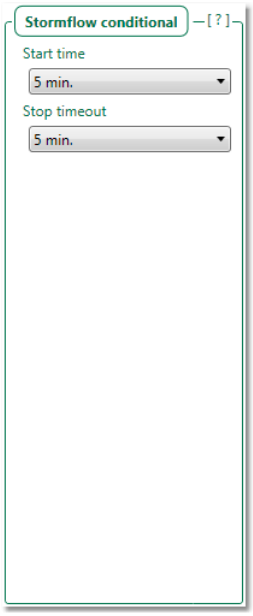
A Q point consist of two related values:

- an input value, the actual head, measured in meters
- a flow value for this head, measured in litres per second

Stormflow conditional

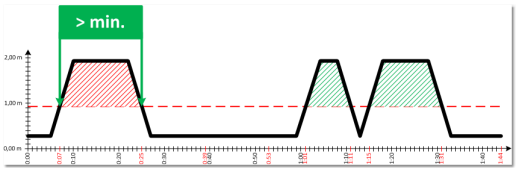


Use this window to set the way stormflow detection and recording will operate.



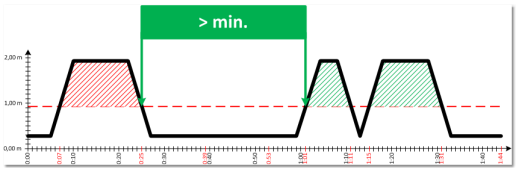
Start time

Select how many minutes the first spill must be above the set limit before it is accepted as a stormflow.



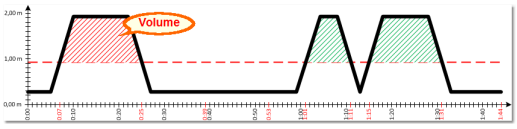
Stop timeout

Select how many minutes the level must be below the set limit before it is accepted as a terminated stormflow.



Start volume

Enter how many litres litres the first spill must contain before it is accepted as a stormflow.



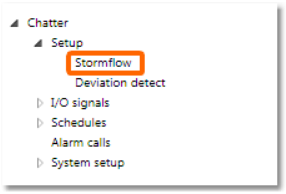
Signal name

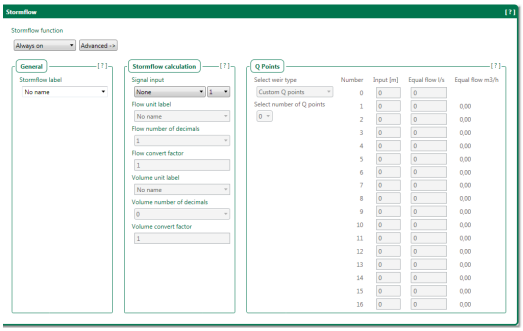
Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this Chatter™ Data Logger

Additional information:
Signal names explained 160

Stormflow always on

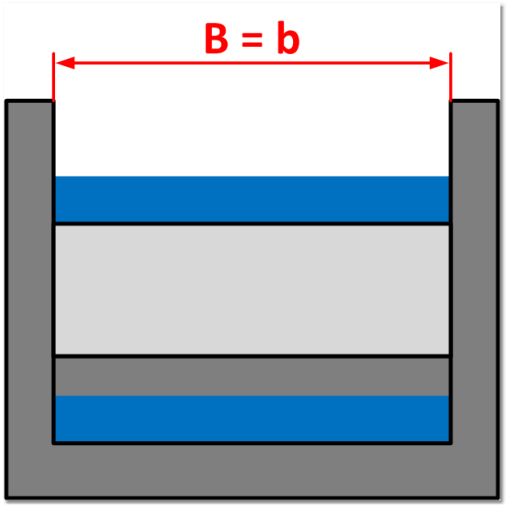




Supported weir types

Rectangular full width weir, front elevation.

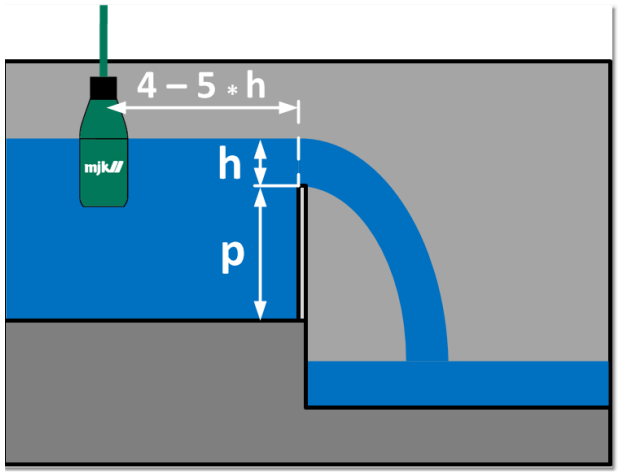
The notch width, **b**, equals the total weir width, **B,** both measured in meters



Rectangular full width weir, side elevation

h is actual head, measured in meters

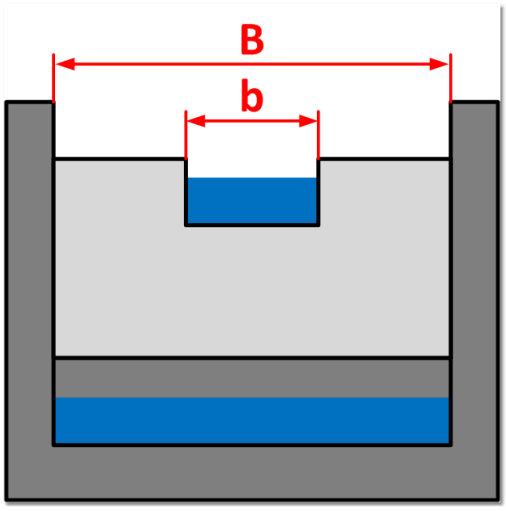
p is the depth from the crest to the bottom of the weir measured in meters



Rectangular notch weir, front elevation

b is the notch width, measured in meters

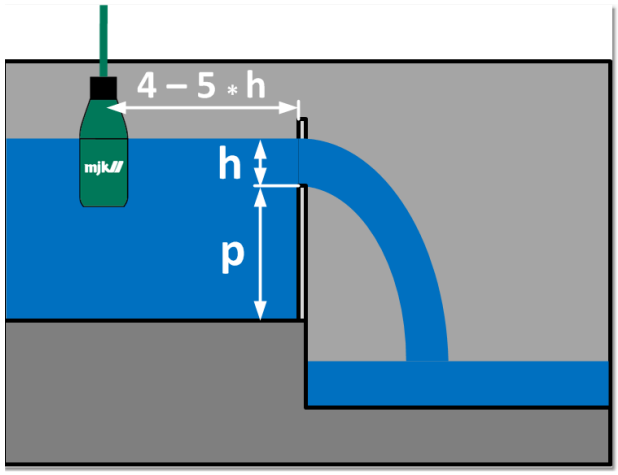
B is the total weir width, measured in meters



Rectangular full width weir, side elevation

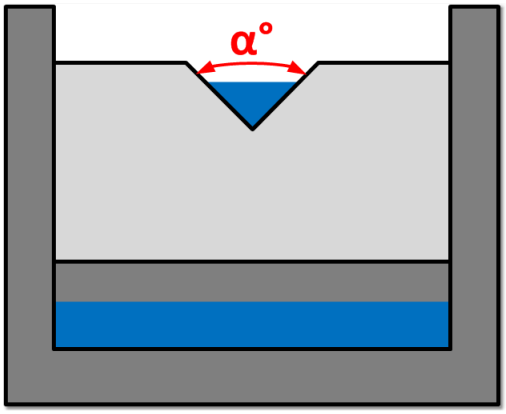
h is actual head, measured in meters

p is the depth from the crest to the bottom of the weir measured in meters



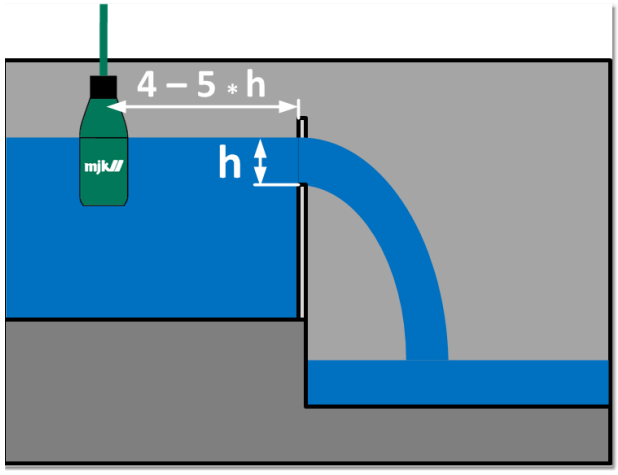
Triangular V-notch weir, front elevation

αis the actual notch angle, measured in degrees

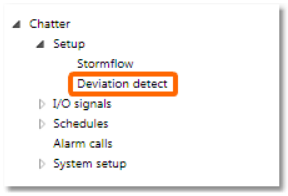


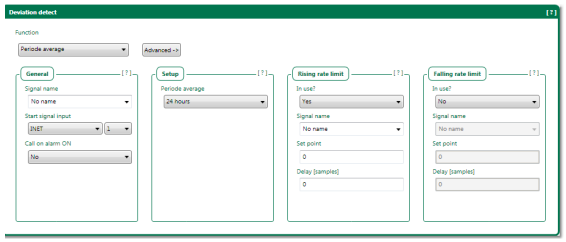
Triangular V-notch weir, side elevation

h is actual head, measured in meters

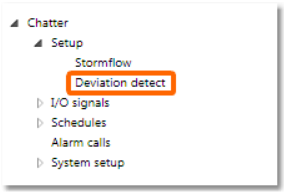


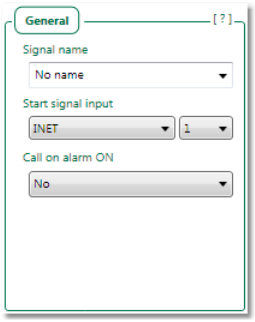
Deviation detect



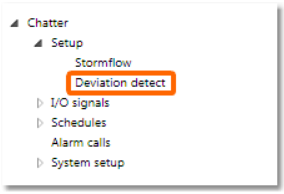


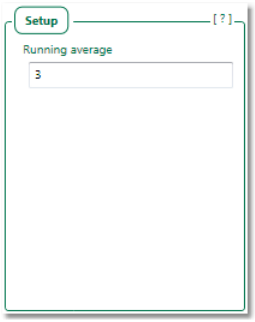
General


Chatter
Setup
Stormflow
Deviation detect
I/O signals
Schedules
Alarm calls
System setup

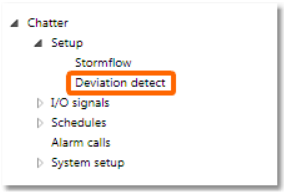

General
[?]
Signal name
No name
Start signal input
INET
1
Call on alarm ON
No

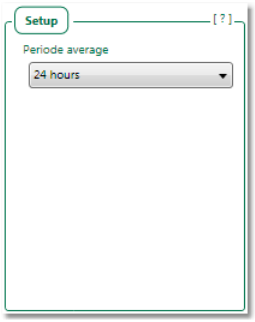
Setup - Running avarage



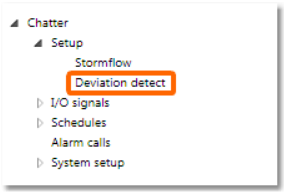


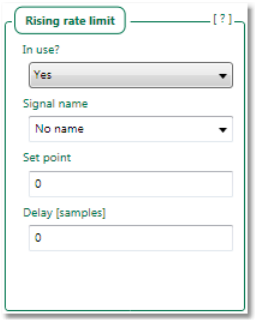
Setup - Periode avarage





Rising rate limit





In use?

Select between **No** and **Yes**.

Select if the rising rate limit is in use or not in use.

Signal name

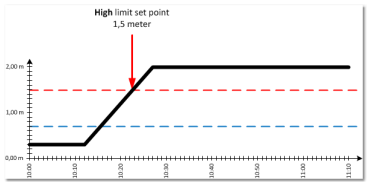
Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for rising rate limit, inserted into any SMS messages and e-mails sent from this Chatter™ Data Logger

Additional information:
Signal names explained 160

Set point

Enter the value you want to use as the rising rate limit

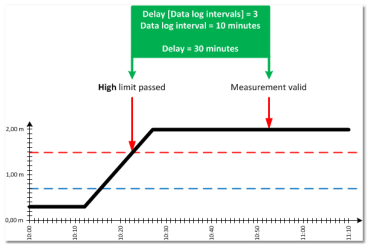


Passing this limit will either put the Chatter™ Data Logger into event mode if *Event mode* is enabled or start an alarm if *Call on alarm ON* is enabled.

Additional information:
Working in event mode 171

Delay [Samples]

Enter the number of samples, you want the signal on the rising rate limit to be above the limit before the measurement is considered valid.



The delay can be between 0 and 250 samples.

Additional information:
Setting the data log interval

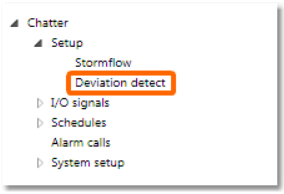
> The actual delay time varies, it depends on the what the Chatter™ Data Logger is doing right now:
>
> - If the Chatter™ Data Logger is in working in Event mode, the sample time is the Event log interval
>
> *Additional information:*
> Working in event mode 171
>
> - If the Chatter™ Data Logger is working in normal mode, the sample time is the Data

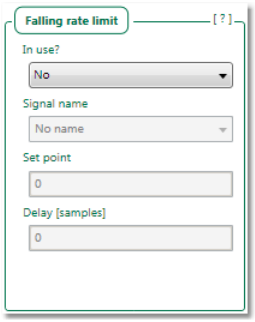
log interval

Additional information:
Working in normal mode 170

As you can specify a data log interval of 24 hours and a delay of 250 data log intervals, the result can be a **very** long delay!

Falling rate limit





In use?

Select between **No** and **Yes**.

Select if the falling rate limit is in use or not in use.

Signal name

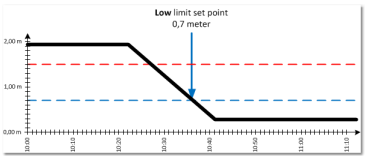
Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this analog input

Additional information:
Signal names explained 160

Set point

Enter the value you want to use as the falling rate limit.

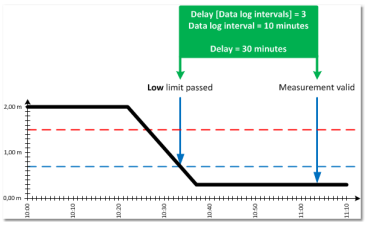


Passing this limit will either put the Chatter™ Data Logger into event mode if *Event mode* is enabled or start an alarm if *Call on alarm ON* is enabled

Additional information:
Working in event mode 171

Delay [Samples]

Enter the number of samples, you want the signal on the falling rate limit to be below the limit before the measurement is considered valid.



The delay can be between 0 and 250 samples,

Additional information:
Setting the data log interval

The actual delay time varies, it depends on the what the Chatter™ Data Logger is doing right now:

- If the Chatter™ Data Logger is in working in Event mode, the sample time is the Event log interval

  Additional information:
  Working in event mode 171
  Setting the event log interval

- If the Chatter™ Data Logger is working in

normal mode, the sample time is the Data log interval

Additional information:

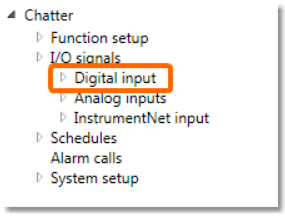
Working in normal mode 170

Setting the data log interval

As you can specify a data log interval of 24 hours and a delay of 250 data log intervals, the result can be a **very** long delay!

I/O signals menu

Digital inputs

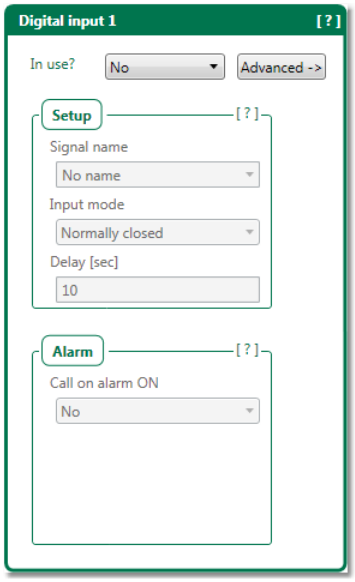


Use this window to set the way each of the four digital input will operate.

The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger

Additional information:

Setup pane 77
Alarm pane 79
Advanced pane 81

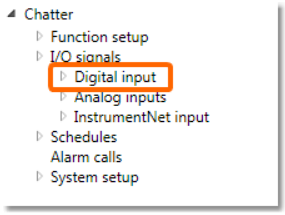


In use?

Select between **No** and **Yes**.

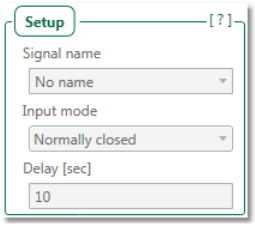
Select if this digital input is in use or not in use.

Setup



Use this window to set the way each of the four digital input will operate.

> The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger



Additional information:
Alarm pane 79
Advanced pane 81

Signal name

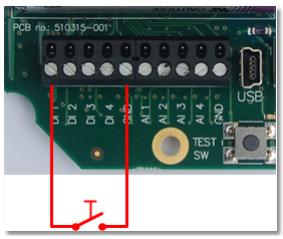
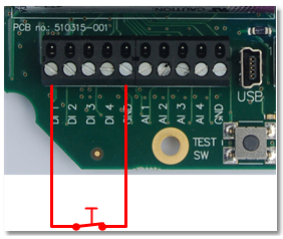
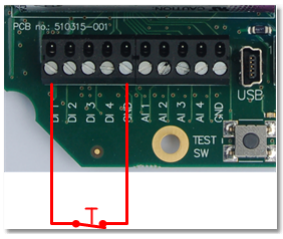
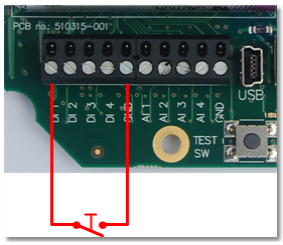
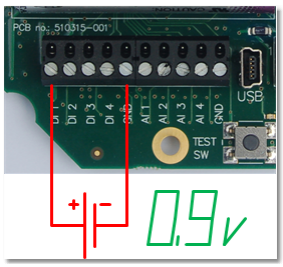
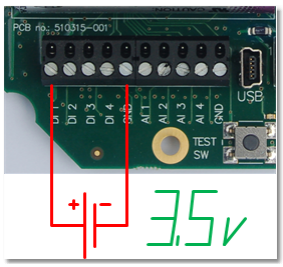
Select an existing signal name or enter a new signal name.

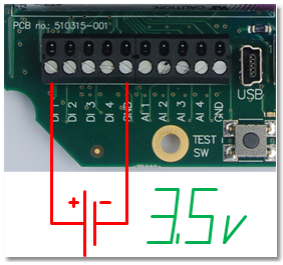
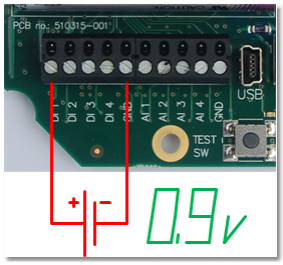
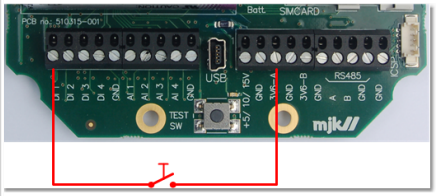
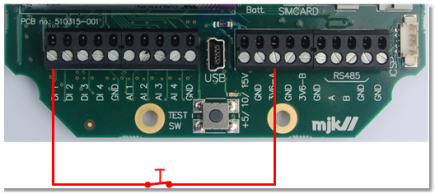
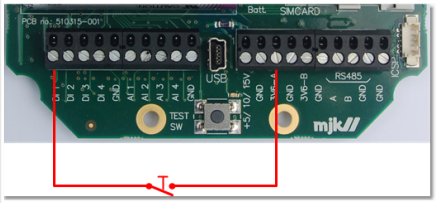
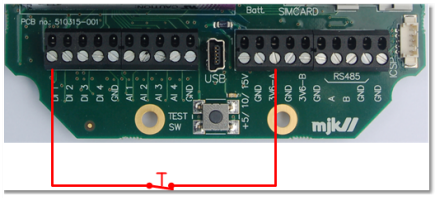
The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this digital input.

Additional information:
Signal names explained 160

Input mode

Select between **Normally open**, **Normally closed**, **Active high** and **Active low**.

Mode	Normal state, no alarm or event	Active state, alarm or event
Normally open, a floating input is the normal state, an input connected to GND generates an event or alarm.		
Normally closed, an input connected to GND is the normal state, a floating input generates an event or alarm.		
Active high, a voltage less than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm.		

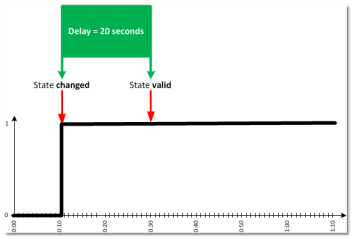
Active low, a voltage greater than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm.		
Active high, a voltage less than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm. The power supply for the alarm switch is provided by the Chatter™ Data Logger		
Active low, voltage greater than 2 V relative to GND is the normal state, a voltage between 2 V and 5 V relative to GND generates an event or alarm. The power supply for the alarm switch is provided by the Chatter™ Data Logger		

Take great care NOT to short-circuit the terminal 3V6-A to GND if you use it as a power source for the digital inputs. It will cause irreparable damage to the Chatter™ Data Logger

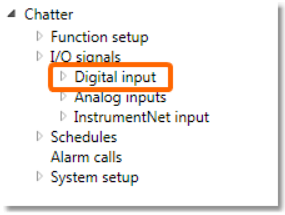
Delay [sec]

Enter the number of seconds, you want the signal on the digital input to be stable before the state is considered valid.

The delay can be between 0 and 250 seconds.

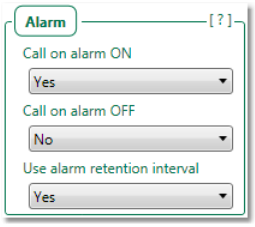


Alarm



Use this window to set the way each of the four digital input will operate.

> The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger

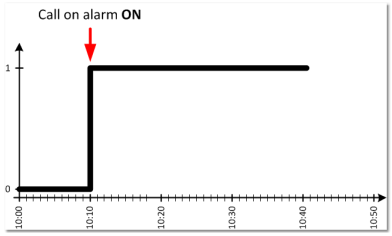


Additional information:
Setup pane 77
Advanced pane 81

Call on alarm ON

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call when it encounters an alarm condition. It will call all entries in the Alarm call list, starting with the first entry.

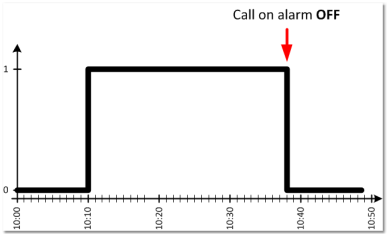


Additional information:
Call lists 167
Setting the alarm call list 111

Call on alarm OFF

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call when the alarm condition no longer exists. It will call all entries in the Alarm call list, starting with the first entry.



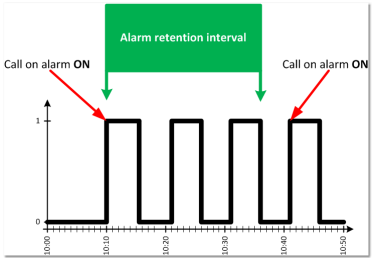
Additional information:
Call lists 167
Setting the alarm call list 111

Use alarm retention interval

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call using the Alarm call list when an alarm condition exists. It will **not** react to new alarms from this digital input before the Alarm retention interval runs out.

If you select **No**, the Chatter™ Data Logger will make an alarm call for every new alarm on this digital input.

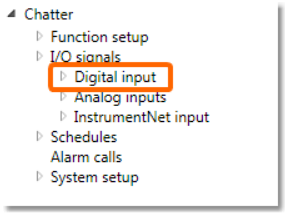


> You **will** get repeated alarms from this input if an alarm is started on another input before the alarm retention time runs out.. Any new alarm on an input calls all entries in the Alarm call list and delivers alarm status for all inputs to the recipients.

Additional information:
Setting the alarm retention interval 112

Setting the alarm call list 111

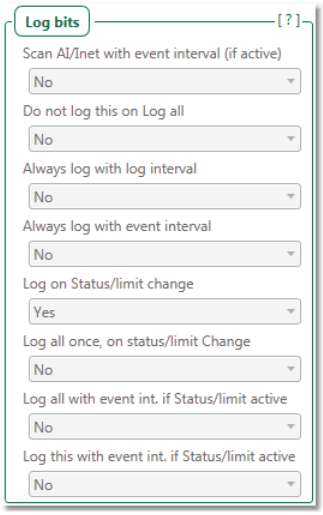
Advanced



Use this window to set the way each of the four digital input will operate.

> The data shown are only accurate when your PC is connected to the Chatter™ Data Logger with a USB-cable, otherwise it will show the data from the last time, you were connected to the Chatter™ Data Logger

Additional information:
Setup pane 77
Alarm pane 79



Scan AI/INET with event interval (if active)
Select between **No** and **Yes**.
If you select **Yes**,

Do not log this on Log all
Select between **No** and **Yes**.
If you select **Yes**,

Always log with log interval
Select between **No** and **Yes**.
If you select **Yes**,

Always log with event interval
Select between **No** and **Yes**.
If you select **Yes**, this input will set the Chatter™ Data Logger to event mode when it is activated..

Additional information:
Working in event mode 171
Log schedule 103

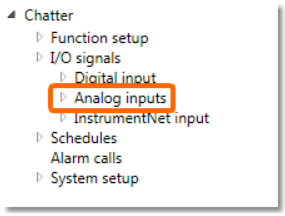
Log on Status/Limit change
Select between **No** and **Yes**.
If you select **Yes**, the

Log all once on Status/Limit change
Select between **No** and **Yes**.
If you select **Yes**,

Log all with event int. if Status/Limit active
Select between **No** and **Yes**.
If you select **Yes**,

Log this with event int. if Status/Limit active
Select between **No** and **Yes**.
If you select **Yes**,

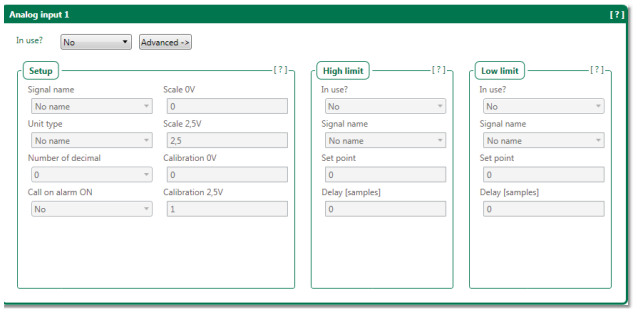
Analog inputs



Use this window to set the way each of the four analog input will operate,

Additional information:

Setup pane 84
High limit pane 87
Low limit pane 89
Advanced pane 91

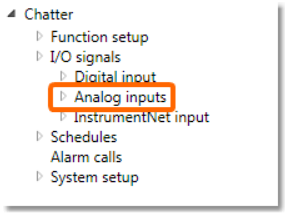


In use?

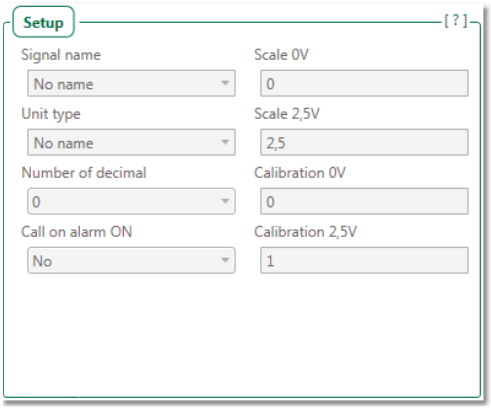
Select between **No** and **Yes**.

If you select ***Yes***, this input will either log a measurement according to the log interval, act as an alarm input or act as an event input

Setup



Use this pane to set the way each of the four analog input will operate. See below for a detailed description of each part in this pane.



Signal name

Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for this input. It is inserted into any SMS messages and e-mails sent from this analog input.

Additional information:
Signal names explained 160

Unit type

Select an existing unit type or select an empty position in the list and enter a new unit type.

The unit type will act as an identifier for the measured value. It is inserted into any SMS messages and e-mails sent from this analog input.

Additional information:
Measuring units

Number of decimals

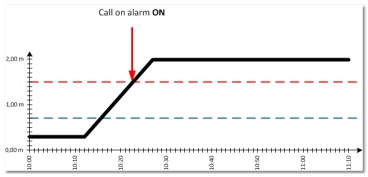
This setting determines how many decimals you will see in an SMS message or e-mail sent from this analog input.

Select the number of decimals you need, you can select from zero to eight digits after the decimal point.

> The Chatter™ Data Logger stores the measured value internally with the maximum precision regardless of this setting.

Call on alarm ON

Select between **No** and **Yes**.



If you select ***Yes***, the Chatter™ Data Logger will make an alarm call when the high limit is passed on a **rising** slope **and** the *Delay [Samples]* is over

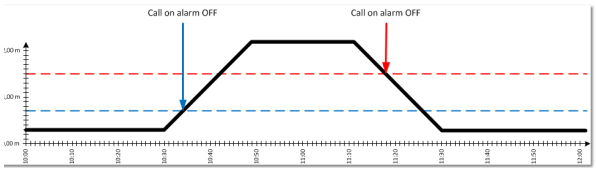
It will call all entries in the Alarm call list, starting with the first entry.

Additional information:
Call lists 167
Setting the alarm call list 111

Call on alarm OFF

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call using the Alarm call list when an alarm condition no longer exists.



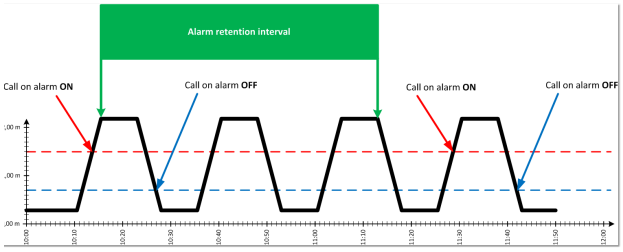
Additional information:
Setting the alarm call list 111

Use alarm retention interval

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call using the Alarm call list when an alarm condition exists. It will not react to **new** alarms from this analog input before the Alarm retention interval runs out.

If you select ***No***, the Chatter™ Data Logger will make an alarm call for every new alarm on this analog input.



> You **will** get repeated alarms from this input if an alarm is started on another input before the alarm retention time runs out.. Any new alarm on an input calls all entries in the Alarm call list and delivers alarm status for **all** inputs to the recipients.

Additional information:
Setting the alarm retention interval 112
Setting the alarm call list 111

Scale 0V

The default value is **0**, please read about Scaling and Calibration before you change this value.

Additional information:
Scaling and calibration 172
Changing output values 175

Scale 2,5V

The default value is **2,5**, please read about Scaling and Calibration before you change this value.

Additional information:
Scaling and calibration 172
Changing output values 175

Calibration 0V

The default value is **0**, please read about Scaling and Calibration before you change this value.

Additional information:
Scaling and calibration 172
Changing output values 175

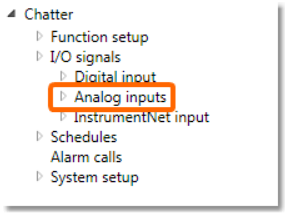
Calibration 2,5V

The default value is **2,5**, please read about Scaling and Calibration before you change this value.

Additional information:

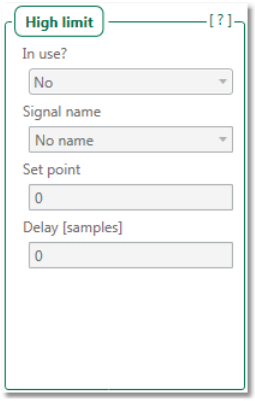
Scaling and calibration 172
Changing output values 175

High limit



Use this pane to set the way each of the four analog input will react when the high limit is passed on either on a rising slope or on a falling slope.

See below for a detailed description of each part in this pane.



In use?

Select if this input will react when the high limit is passed on either a rising slope or a falling slope.

Signal name

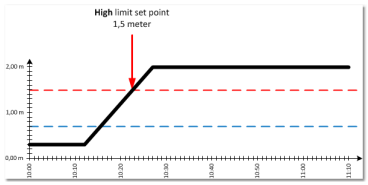
Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this analog input

Additional information:
Signal names explained 160

Set point

Enter the value you want to use as the high limit.

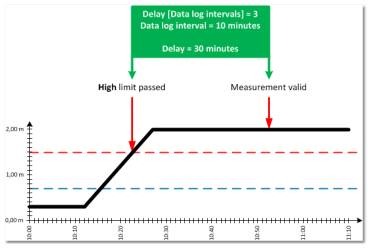


Passing this limit will either put the Chatter™ Data Logger into event mode if *Event mode* is enabled or start an alarm if *Call on alarm ON* is enabled.

Additional information:
Working in event mode 171

Delay [Samples]

Enter the number of samples, you want the signal on the analog input to be above the high limit before the measurement is considered valid.



The delay can be between 0 and 250 samples.

Additional information:
Setting the data log interval

The actual delay time varies, it depends on the what the Chatter™ Data Logger is doing right now:

- If the Chatter™ Data Logger is in working in Event mode, the sample time is the Event log interval

  Additional information:
  Working in event mode 171

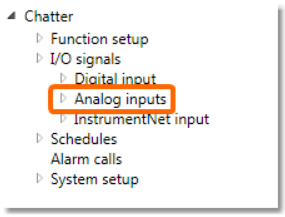
- If the Chatter™ Data Logger is working in

normal mode, the sample time is the Data log interval

Additional information:
Working in normal mode 170

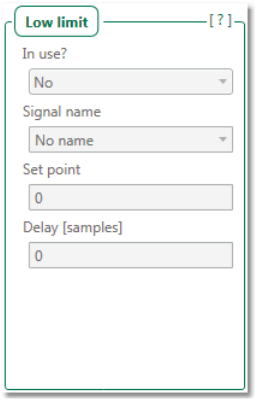
As you can specify a data log interval of 24 hours and a delay of 250 data log intervals, the result can be a **very** long delay!

Low limit



Use this pane to set the way each of the four analog input will react when the low limit is passed on either on a rising slope or on a falling slope.

See below for a detailed description of each part in this pane.



In use?

Select if this input will react when the high limit is passed on either a rising slope or a falling slope.

Signal name

Select an existing signal name or enter a new signal name.

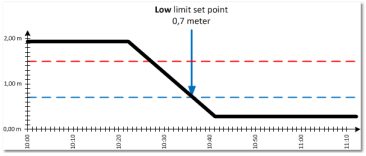
The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this analog input

Additional information:
Signal names explained 160

Set point

Enter the value you want to use as the low limit.

Passing this limit will either put the Chatter™ Data Logger into event mode if *Event mode* is enabled or start an alarm if *Call on alarm ON* is enabled

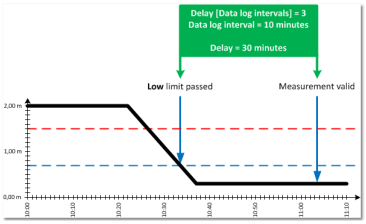


Additional information:
Working in event mode 171

Delay [Samples]

Enter the number of samples, you want the signal on the analog input to be above the high limit before the measurement is considered valid.

The delay can be between 0 and 250 samples,



Additional information:
Setting the data log interval

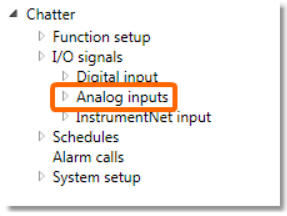
> The actual delay time varies, it depends on the what the Chatter™ Data Logger is doing right now:
>
> - If the Chatter™ Data Logger is in working in Event mode, the sample time is the Event log interval
>
> *Additional information:*
> Working in event mode 171
> Setting the event log interval

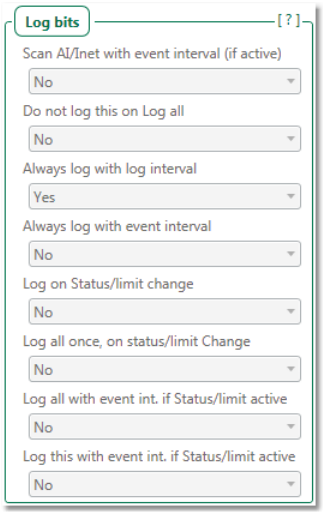
- If the Chatter™ Data Logger is working in normal mode, the sample time is the Data log interval

  Additional information:
  Working in normal mode 170
  Setting the data log interval

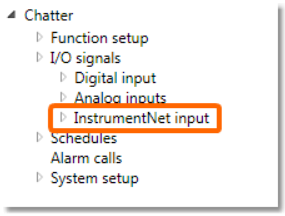
As you can specify a data log interval of 24 hours and a delay of 250 data log intervals, the result can be a **very** long delay!

Advanced


Chatter
Function setup
I/O signals
Digital input
Analog inputs
InstrumentNet input
Schedules
Alarm calls
System setup

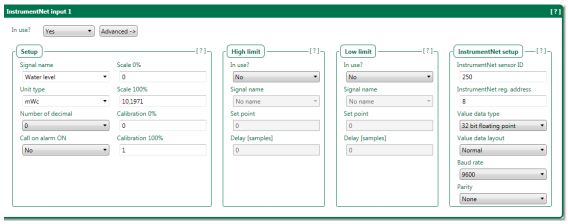

Log bits
[?]
Scan AI/Inet with event interval (if active)
No
Do not log this on Log all
No
Always log with log interval
Yes
Always log with event interval
No
Log on Status/limit change
No
Log all once, on status/limit Change
No
Log all with event int. if Status/limit active
No
Log this with event int. if Status/limit active
No

InstrumentNet inputs



Use this window to set the way each of the four Instrument Net inputs will operate.

See below for a detailed description of each part of this window.



Additional information:

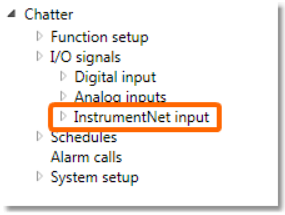
Setup pane 93
High limit pane 96
Low limit pane 98
InstrumentNet setup pane 101

In use?

Select between **No** and **Yes**.

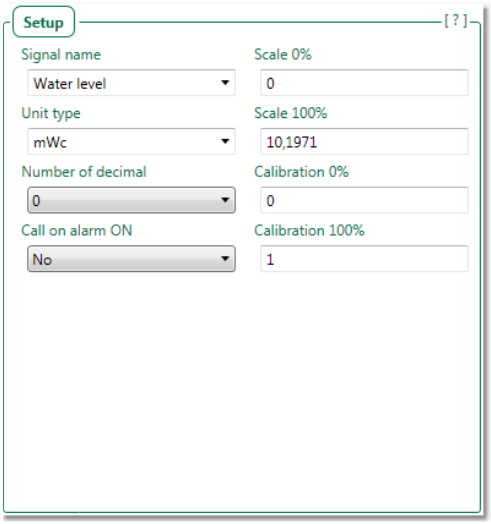
If you select ***Yes***, this input will either log a measurement according to the log interval, act as an alarm input or act as an event input

Setup



Use this pane to set the way each of the four Instrument Net inputs will operate.

See below for a detailed description of each part in this pane.



Signal name

Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for this input. It is inserted into any SMS messages and e-mails sent from this Instrument Net input.

Additional information:
Signal names explained 160

Unit type

Select an existing unit type or select an empty position in the list and enter a new unit type.

The unit type will act as an identifier for the measured value. It is inserted into any SMS messages and e-mails sent from this Instrument Net input.

Additional information:
Measuring units

Number of decimals

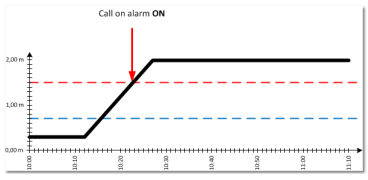
This setting determines how many decimals you will see in an SMS message or e-mail sent from this Instrument Net input.

Select the number of decimals you need, you can select from zero to eight digits after the decimal point.

> The Chatter™ Data Logger stores the measured value internally with the maximum precision regardless of this setting.

Call on alarm ON

Select between **No** and **Yes**.



If you select **Yes**, the Chatter™ Data Logger will make an alarm call when the high limit is passed on a rising slope and the Delay [Samples] is over

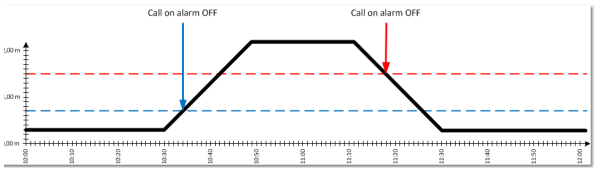
It will call all entries in the Alarm call list, starting with the first entry.

Additional information:
Call lists 167
Setting the alarm call list 111

Call on alarm OFF

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call using the Alarm call list when an alarm condition no longer exists



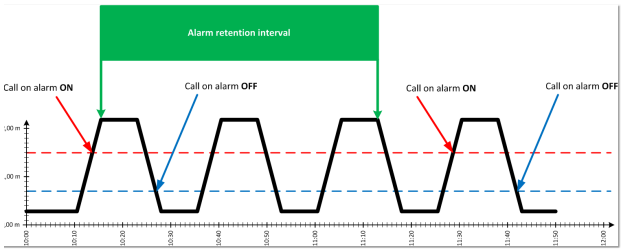
Additional information:
Setting the alarm call list 111

Use alarm retention interval

Select between **No** and **Yes**.

If you select **Yes**, the Chatter™ Data Logger will make an alarm call using the Alarm call list when an alarm condition exists. It will not react to **new** alarms from this Instrument Net input before the Alarm retention interval runs out.

If you select ***No***, the Chatter™ Data Logger will make an alarm call for every new alarm on this Instrument Net input.



> You **will** get repeated alarms from this input if an alarm is started on another input before the alarm retention time runs out.. Any new alarm on an input calls all entries in the Alarm call list and delivers alarm status for **all** inputs to the recipients.

Additional information:
Setting the alarm retention interval 112
Setting the alarm call list 111

Scale 0%

The default value is **0**, please read about Scaling and Calibration before you change this value.

Additional information:
Scaling and calibration 172
Changing output values 175

Scale 100%

The default value is **1**, please read about Scaling and Calibration before you change this value.

Additional information:
Scaling and calibration 172
Changing output values 175

Calibration 0%

The default value is **0**, please read about Scaling and Calibration before you change this value.

Additional information:
Scaling and calibration 172
Changing output values 175

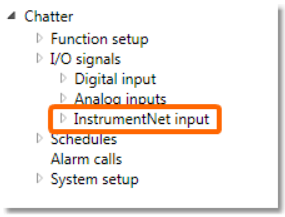
Calibration 100%

The default value is **1**, please read about Scaling and Calibration before you change this value.

Additional information:

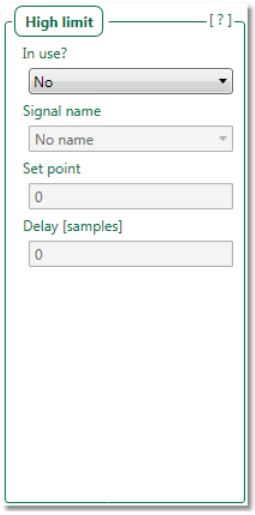
Scaling and calibration 172
Changing output values 175

High limit



Use this pane to set the way each of the four Instrument Net inputs will react when the high limit is passed on either on a rising slope or on a falling slope.

See below for a detailed description of each part in this pane.



In use?

Select if this input will react when the high limit is passed on either a rising slope or a falling slope.

Signal name

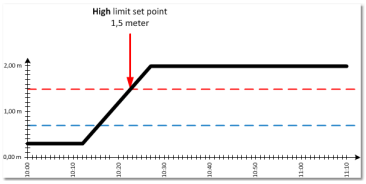
Select an existing signal name or enter a new signal name.

The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this analog input

Additional information:
Signal names explained 160

Set point

Enter the value you want to use as the high limit.

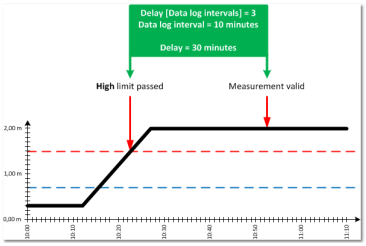


Passing this limit will either put the Chatter™ Data Logger into event mode if *Event mode* is enabled or start an alarm if *Call on alarm ON* is enabled.

Additional information:
Working in event mode 171

Delay [Samples]

Enter the number of samples, you want the signal on the analog input to be above the high limit before the measurement is considered valid.



The delay can be between 0 and 250 samples.

Additional information:
Setting the data log interval

The actual delay time varies, it depends on the what the Chatter™ Data Logger is doing right now:

- If the Chatter™ Data Logger is in working in Event mode, the sample time is the Event log interval

  Additional information:

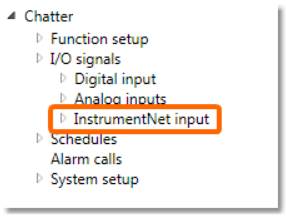
Working in event mode 171

- If the Chatter™ Data Logger is working in normal mode, the sample time is the Data log interval

  Additional information:
  Working in normal mode 170

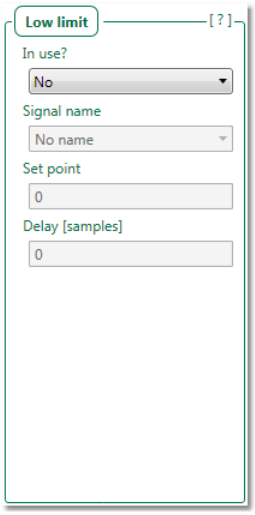
As you can specify a data log interval of 24 hours and a delay of 250 data log intervals, the result can be a **very** long delay!

Low limit



Use this pane to set the way each of the four Instrument Net inputs will react when the low limit is passed on either on a rising slope or on a falling slope.

See below for a detailed description of each part in this pane.



In use?

Select if this input will react when the high limit is passed on either a rising slope or a falling slope.

Signal name

Select an existing signal name or enter a new signal name.

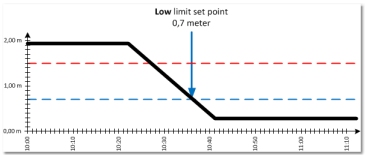
The signal name will act as an identifier for this input, inserted into any SMS messages and e-mails sent from this analog input

Additional information:
Signal names explained 160

Set point

Enter the value you want to use as the low limit.

Passing this limit will either put the Chatter™ Data Logger into event mode if *Event mode* is enabled or start an alarm if *Call on alarm ON* is enabled

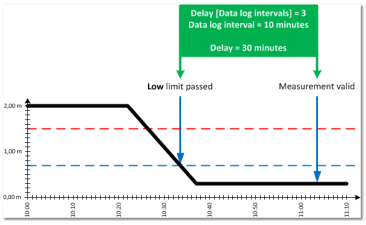


Additional information:
Working in event mode 171

Delay [Samples]

Enter the number of samples, you want the signal on the analog input to be above the high limit before the measurement is considered valid.

The delay can be between 0 and 250 samples,



Additional information:
Setting the data log interval

The actual delay time varies, it depends on the what the Chatter™ Data Logger is doing right now:

- If the Chatter™ Data Logger is in working in Event mode, the sample time is the Event log interval

  Additional information:

Working in event mode 171
Setting the event log interval

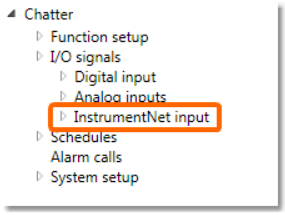
- If the Chatter™ Data Logger is working in normal mode, the sample time is the Data log interval

Additional information:

Working in normal mode 170
Setting the data log interval

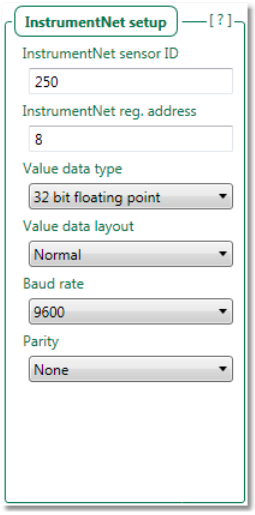
As you can specify a data log interval of 24 hours and a delay of 250 data log intervals, the result can be a **very** long delay!

InstrumentNet setup



Use this pane to set the way each of the four Instrument Net sensors are configured.

See below for a detailed description of each part in this pane.



Instrument Net sensor ID

Enter the Instrument Net device ID for the Instrument Net sensor connected to this input. If the sensor is an MJK Expert™ 7060/7070 Level transmiter, the standard ID is **250**.

If more than one Instrument Net sensor is connected to this Chatter™ Data Logger, the Instrument Net device Ids **must** be unique.

Instrument Net reg. address

Enter the address corresponding to the value you want from this Instrument Net sensor. If the sensor is an MJK Expert™ 7060/7070 Level transmiter, the pressure measurement is in Instrument Net register address **2**, the temperature measurement is in Instrument Net register address **8**.

Value data type

Select the value data type to match the data supplied by the sensor connected to this input. If the sensor is an MJK Expert™ 7060/7070 Level transmiter, the standard value data type is **32 bit floating point**.

Additional information:
Value types and layout 164

Value data layout

Select the value data layout to match the data supplied by the sensor connected to this input. If the sensor is an MJK Expert™ 7060/7070 Level transmiter, the standard value data layout is **Normal**.

Additional information:
Value types and layout 164

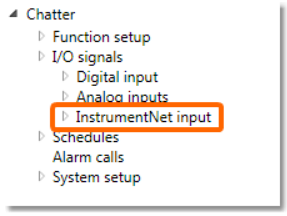
Baud rate

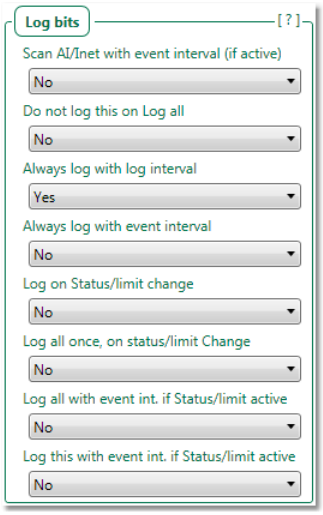
Select the communication speed to match the sensor connected to this input. If the sensor is an MJK Expert™ 7060/7070 Level transmiter, the standard baud rate is **9600**.

Parity

Select the parity to match the sensor connected to this input. If the sensor is an MJK Expert™ 7060/7070 Level transmiter, the standard parity is **None**.

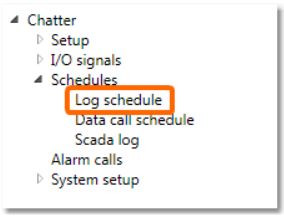
Advanced

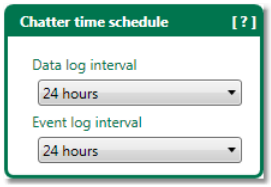

Chatter
Function setup
I/O signals
Digital input
Analog inputs
InstrumentNet input
Schedules
Alarm calls
System setup


Log bits
[?]
Scan AI/Inet with event interval (if active)
No
Do not log this on Log all
No
Always log with log interval
Yes
Always log with event interval
No
Log on Status/limit change
No
Log all once, on status/limit Change
No
Log all with event int. if Status/limit active
No
Log this with event int. if Status/limit active
No

Schedules

Log schedule





Data log interval

Select how often you want the Chatter™ Data Logger to make measurements. You can select intervals from 1 minute to 24 hours. The actual log time is relative to midnight.

If you select every 12 hours, the actual log times will be at 00:00 Unicersal Time Coordinated and 12:00 Unicersal Time Coordinated.

The log interval affects the expected battery life time. Smaller log intervals forces the Chatter™ Data Logger to 'wake up' more often, thus using more energy.

Additional information:

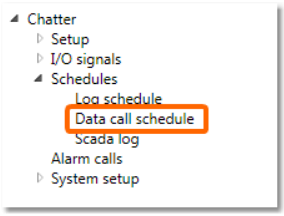
Battery lifetime 162
Time and time zones explained 161

Event log interval

Help text goes here.

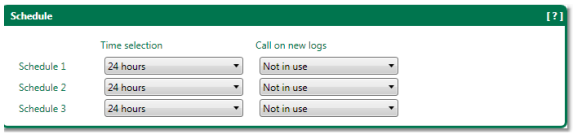
Data call schedule

Schedule



Use this pane to set the way you want this Chatter™ Data Logger to deliver its logged data to a recipient.

See below for a detailed description of each part in this pane.



Time selection

Three identical schedules are provided. This enables you to set up different calling 'patterns'

Select how often you want the Chatter™ Data Logger to make a call to a recipient to deliver data. The call time is relative to midnight.

If you select every 12 hours, the actual call times will be at 00:00 Unicersal Time Coordinated and 12:00 Unicersal Time Coordinated.

> The call schedule affects the expected battery life time. Smaller call schedules forces the Chatter™ Data Logger to 'wake up' more often, thus using more energy.

Additional information:

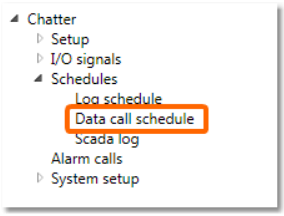
Battery lifetime 162
Time and time zones explained 161
Scheduling calls 166

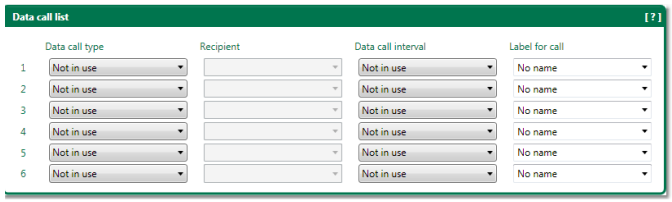
Call on new logs

You may add a number of logged measurements to the log data call schedule.
Select the number of logged measurements to suit your requirements

> The Chatter™ Data Logger will allays make a call if the scheduled time interval is reached. It will make an additional call if the number of logged measurements are reached before the scheduled time interval is reached.

Data call list





Data call type

You must select one of the four call types:

If the Chatter™ Data Logger is using the e-mail firmware:

Call type	Description
Not in use	This entry in the call list is not used
SMS message	This Chatter™ Data Logger sends logged data in an SMS message to the phone number in the field Recipient
CSV e-mail	This Chatter™ Data Logger sends logged data to an e-mail address as an attached CSV file
Clear text e-mail	This Chatter™ Data Logger sends logged data to an e-mail as ordinary text
Data file e-mail	This Chatter™ Data Logger sends logged data to an e-mail address as an attached binary data file

If the Chatter™ Data Logger is using the RTU firmware:

Call type	Description
Not in use	This entry in the call list is not used
SMS message	This Chatter™ Data Logger sends logged data in an SMS message to the phone number in the field Recipient
SCADA via GPRS	This Chatter™ Data Logger sends logged data to a SCADA system at the IPv4 address in the field Recipient
SCADA via dial up	This Chatter™ Data Logger sends logged data to a SCADA system via a dial up connection to the phone number in the field Recipient

Additional information:
Call lists explained 167

Recipient

Select an existing recipient or select an empty position in the list and enter a new recipient.

If the Chatter™ Data Logger is using the e-mail firmware:

Recipient	Description
SMS message phone number	A maximum of four telephone numbers for recipients of SMS messages. The phone number can be an international number, +4599999999, or a domestic number, 99999999. The phone number can not be longer than 32 characters Select an existing telephone number or select an empty position in the list and enter a new telephone number.
e-mail address	Type a valid e-mail address.

If the Chatter™ Data Logger is using the RTU firmware:

Recipient	Description
SMS message phone number	A maximum of four telephone numbers for recipients of SMS messages. The phone number can be an international number, +4599999999, or a domestic number, 99999999. The phone number can not be longer than 32 characters Select an existing telephone number or select an empty position in the list and enter a new

	telephone number.
SCADA via GPRS	One or two IPv4 addresses for the SCADA system. The address must be in the form like this: 192.168.1.100:5001, the :5001 identifies the TCP-port at the address 192.168.1.100 where the SCADA system listens for data. This IPv4 address can be either a public or a private address, depending on the network you want to access, If you are using two IPv4 addresses for SCADA via GPRS, you cannot use the SCADA via dial up function.
SCADA via dial up	One or two telephone numbers for the SCADA system modem. The phone number can be an international number, +4599999999, or a domestic number, 99999999. The phone number can not be longer than 32 characters Select an existing telephone number or select an empty position in the list and enter a new telephone number If you are using two telephone numbers for SCADA via dial up, you cannot use the SCADA via GPRS function.

Additional information:
Recipients explained 168

Data call interval

Select one of the three call intervals.

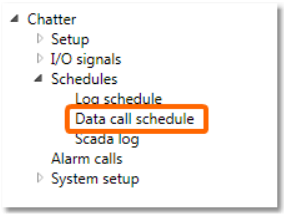
Additional information:
Schedule pane 105

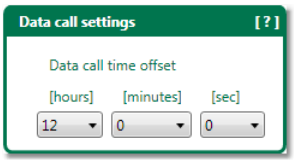
Label for call

Select an existing labels or select an empty position in the list and enter a new label.

The label will act as an identifier for this data call, inserted into any e-mail sent from this Instrument Net input.

Data call settings





Data call settings

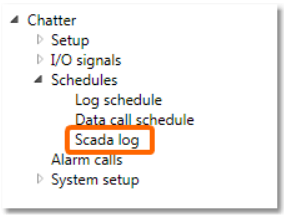
You can select a call time offset, ranging from nothing to 24 hours. The call time offset is applied to all three call intervals.

The time for any call is calculated from 00:00 Unicersal Time Coordinated, midnight	You want your Chatter™ Data Logger to call in every four hours at minutes 0:30	Set up a call schedule with a call interval of four hours, the first call will be 04:00 Unicersal Time Coordinated	Set the call time offset to 30 minutes	Your Chatter™ Data Logger is now preset to call every four hours, starting at 04:30 Unicersal Time Coordinated
				

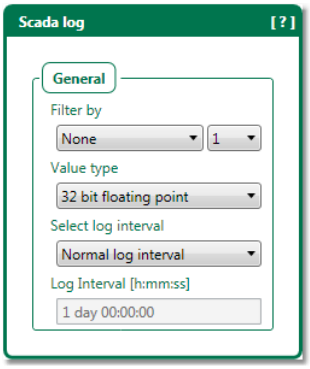
Additional information:

Scheduling calls 166
Time and time zones explained 161

SCADA log



4 identical logs



Filter by

Select which input is logged in this SCADA system log

Value type

Help text goes here.

Select log interval

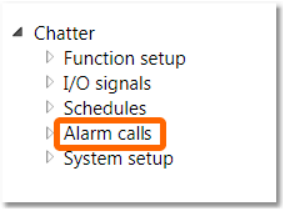
Help text goes here.

Log interval [h:mm:ss]

Help text goes here.

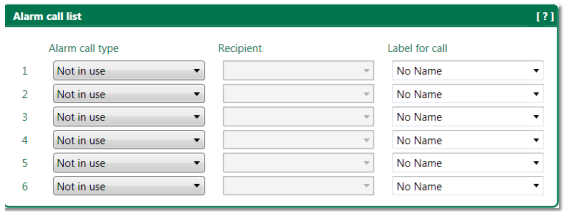
Alarm calls

Alarm call list



Use this window to set the way you want this Chatter™ Data Logger to deliver alarms to a recipient.

See below for a detailed description of each part in this pane.



Alarm call type

You must select one of the four call types:

Call type	Description
Not in use	This entry in the call list is not used
SMS message	This Chatter™ Data Logger sends alarms in an SMS message to the phone number in the field Recipient number or IP address
SCADA via GPRS	This Chatter™ Data Logger sends alarms to a SCADA system at the IP-address in the field Recipient number or IP address
SCADA via dial up	This Chatter™ Data Logger sends alarms to a SCADA system via a dial up connection to the phone number in the field Recipient number or IP address

Additional information:
Call lists explained 167.

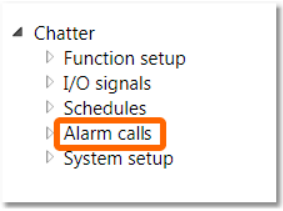
Recipient number or IP address

Select an existing recipient or select an empty position in the list and enter a new recipient.

Recipient	Description
SMS message phone number	A maximum of four telephone numbers for recipients of SMS messages. The phone number can be an international number, +4599999999, or a domestic number, 99999999. The phone number can not be longer than 32 characters Select an existing telephone number or select an empty position in the list and enter a new telephone number.
SCADA via GPRS	One or two IPv4 addresses for the SCADA system. The address must be in the form like this: 192.168.1.100:5001, the :5001 identifies the TCP-port at the address 192.168.1.100 where the SCADA system listens for data. This IPv4 address can be either a public or a private address, depending on the network you want to access, If you are using two IPv4 addresses for SCADA via GPRS, you cannot use the SCADA via dial up function.
SCADA via dial up	One or two telephone numbers for the SCADA system modem. The phone number can be an international number, +4599999999, or a domestic number, 99999999. The phone number can not be longer than 32 characters Select an existing telephone number or select an empty position in the list and enter a new telephone number If you are using two telephone numbers for SCADA via dial up, you cannot use the SCADA via GPRS function.

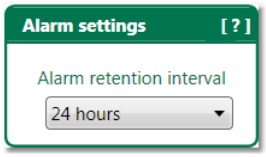
Additional information:
Recipients explained 168

Alarm settings



Use this window to set the way you want this Chatter™ Data Logger to deliver alarms to a recipient.

See below for a detailed description of each part in this pane.



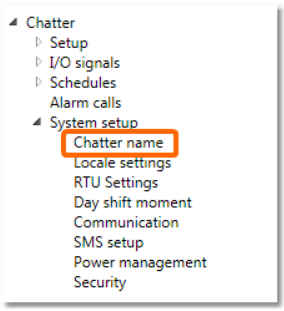
Alarm retention interval

Select the time, which must run out, before the Chatter™ Data Logger will make a new alarm call on an **existing** alarm.

> The Chatter™ Data Logger **will** repeat alarms from an input if an alarm is started on another input before the alarm retention time runs out.. Any new alarm on an input calls all entries in the Alarm call list and delivers alarm status for **all** inputs to the recipients.

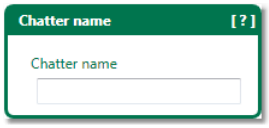
System setup menu

Chatter name



This pane shows data related to the Chatter™ Data Logger. The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable

See below for a detailed description of each part in this pane.



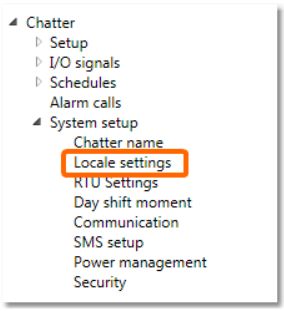
Chatter name

Enter the name, you want to assign to this Chatter™ Data Logger. You can change the name at will. The name can no be longer than 20 characters.

This name must be unique if you want to distinguish between e-mail sent from different Chatter™ Data Loggers

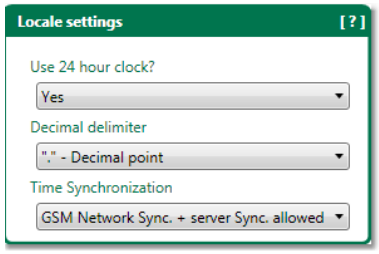
This name must be unique if your Chatter™ Data Logger will deliver data to a SCADA system. It is used by the SCADA system to identify this Chatter™ Data Logger.

Locale settings



This pane shows data related to the Chatter™ Data Logger. The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable

See below for a detailed description of each part in this pane.



Use 24 hour clock?

The Chatter™ Data Loggers internal clock may display the time in either of these formats:

- 24 hour: **HH:MM:SS**, an example is **18:45:30**
- 12 hour: **HH:MM:SS**, an example is **6:45:30**

Decimal delimiter

Select between a **comma** and a **decimal point**.

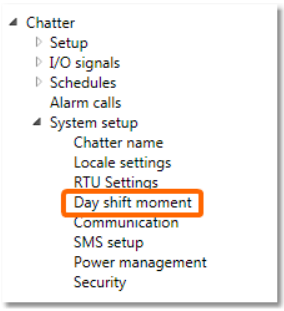
- Comma: **12,34**
- Decimal point: **12.34**

Time synchronization

Select between two different methods of time synchronization:.

- **GSM Network Sync or Server sync**. This setting tries to synchronize first with the GSM network, then with the server this Chatter™ Data Logger is delivering data to.
- **Only server sync**. When you are using this, the Chatter™ Data Logger only synchronizes time settings with the server it is delivering data to

Day shift moment

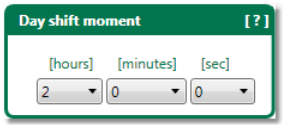


Use this window to set when today becomes yesterday. Normally a day starts at midnight, but you can shift this to make your day start at any time you want.

When today becomes yesterday, all *day counter* values are moved from the today-part to the yesterday part

It affects log times as Data log interval and Event log interval is 'shifted' from midnight by this amount

See below for a detailed description of each part in this pane.



[hours]

Select the number of hours to offset your day start time. The reference time for the offset is midnight, UTC

[minutes]

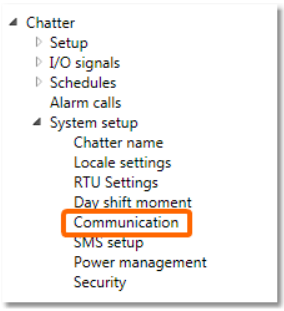
Select the number of minutes to offset your day start time. The reference time for the offset is midnight, UTC

[sec]

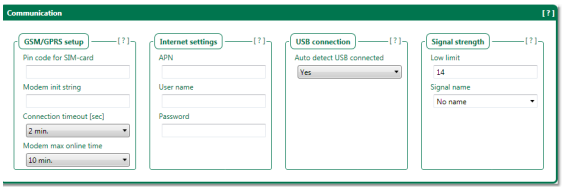
Select the number of seconds to offset your day start time. The reference time for the offset is midnight, UTC

The Chatter™ Data Logger does not recognize time zones. This results in a time shift when Daylight Saving Time goes into or out of use!

Communication



Use this window to set the parameters necessary for communicating via GSM or GPRS with the built-in modem.



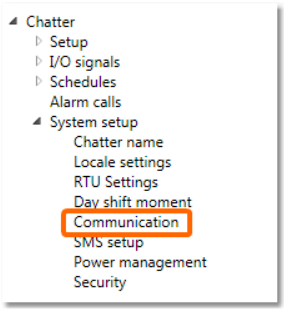
> The **Signal strength** pane is only visible if the Chatter™ Data Logger is using the RTU firmware

See below for a detailed description of each part in this pane.

Additional information:

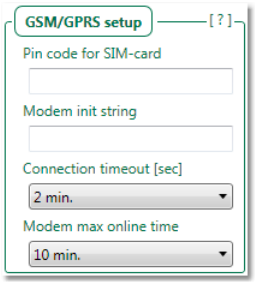
GSM/GPRS setup 118
Internet settings 119
USB connection 120
Signal strength 121

GSM/GPRS setup



Use this window to set the parameters necessary for communicating via GSM or GPRS with the built-in modem.

See below for a detailed description of each part in this pane.



Pin code for SIM-card

If the SIM-card for this Chatter™ Data Logger has a pin code you must enter it here. The pin code for the SIM-card can not be longer than 10 characters.

Modem init string

Enter the command used by the internal GSM modem for setting up communication in special situations.

The default value is blank.

Connection timeout [sec]

Enter the number of seconds the modem can be online without sending or receiving data before it hangs up.

The default value is 120 seconds.

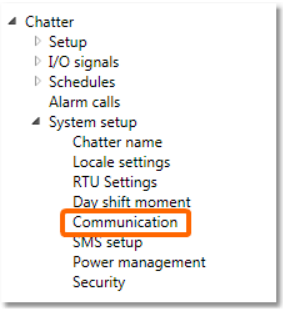
Modem max. online time

Select the number of minutes the modem in the Chatter™ Data Logger is allowed to be online at during a single data- or alarm call.

The default value is 10 minutes, this prevents the modem from being online forever.

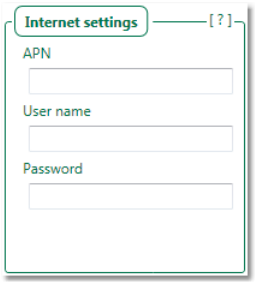
> The modem in the Chatter™ Data Logger is forcibly disconnected when the Max. online time is reached. This prevents the modem from staying online indefinitely in case of an error.

Internet settings



Use this window to set the parameters necessary for communicating via the internet with the built-in modem.

See below for a detailed description of each part in this pane.



APN

Enter the Access Point Name needed for GPRS communication. The APN depends on which GPRS network you will use. In general, there are two possibilities:

- If you are using a private network like MPLS, your network supplier will tell you which APN to use.
- If you are using a public network, your telecom supplier will tell you what their APN is.

Additional information:
List of some known APNs 184

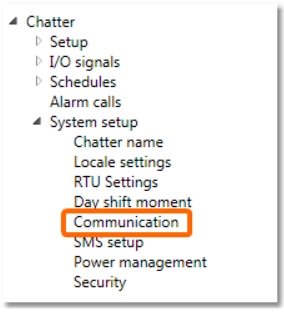
User name

Leave this field empty unless your telecom supplier provides you with a user name

Password

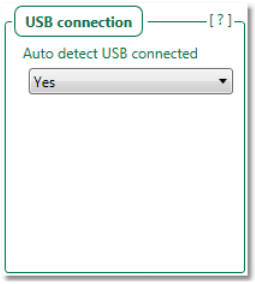
Leave this field empty unless your telecom supplier provides you with a password

USB connection



Use this window to set the parameters for when a low battery condition occurs for this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



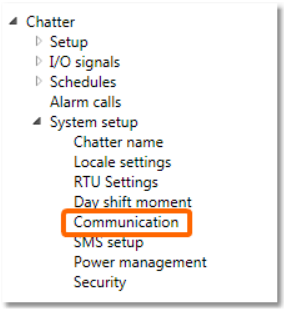
Auto detect USB connected

Select between **No** and **Yes**.
If you select **Yes**, the Chatter™ Data Logger detects when a USB connection between the Chatter™ Data Logger and a PC is established.The Chatter™ Data Logger then automatically goes into configuration mode.



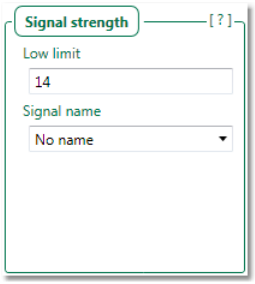
Configuration mode is signalled by a red light next to the USB connector. You can force the Chatter™ Data Logger into configuration mode with the switch next to the USB connector.

Signal strength



Use this window to set the parameters for when a low battery condition occurs for this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Low limit

Help text goes here

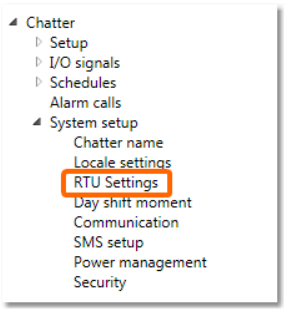
Signal name

Select an existing signal name or enter a new signal name.
The signal name will act as an identifier for signal strength, inserted into any SMS messages and e-mails sent from this Chatter™ Data Logger.

Additional information:

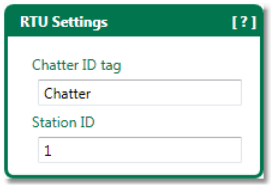
Signal names explained 160
SMS setup 130

RTU settings



This pane shows data related to the Chatter™ Data Logger. The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable

See below for a detailed description of each part in this pane.



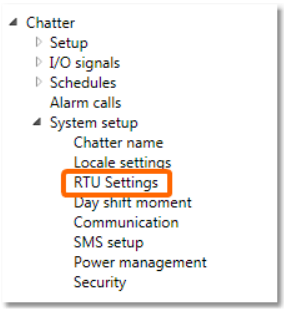
Chatter ID tag

Text here

Station ID

Text here

e-mail setup

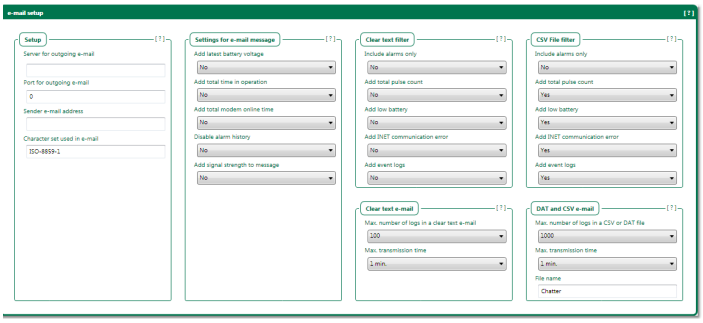


Use this window to set the parameters necessary for sending e-mails via the internet with the built-in modem.

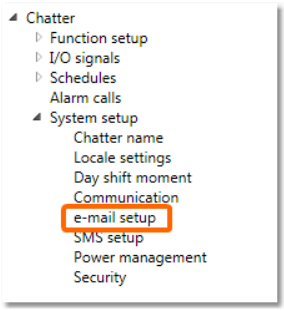
See below for a detailed description of each part in this pane.

Additional information:

Setup 124
Settings 125
Clear text filter 126
Clear text e-mail 127
CSV file filter 128
DAT and CSV e-mail 129

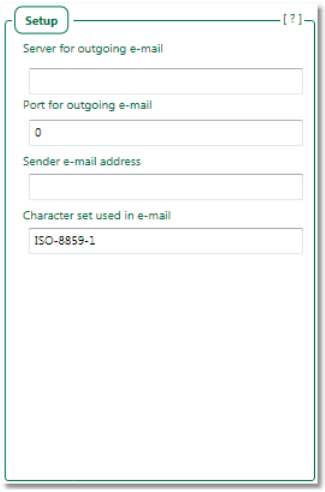


Setup



Use this window to set the parameters for sending e-mails from this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Server for outgoing e-mail

When the Chatter™ Data Logger sends mail, it must send it via an external mail server. Normally this mail server is a part of your mobile telephone package.

Contact your mobile telephone supplier for information on a usable SMTP relay server.

The modem built into the Chatter™ Data Logger does NOT support mail servers which requires a secure logon.

Port for outgoing e-mail

Normally e-mails are sent via TCP/IP port 25.

Do **not** change this setting unless you are specifically told to do so

Sender e-mail address

Any mail sent must have a sender address. Ask your mobile telephone supplier which sender address you may use.

You can combine the Chatter on-chip serial number with a mail domain to get distinct mail addresses for more Chatter™ Data Logger

Additional information:

Product details pane 52

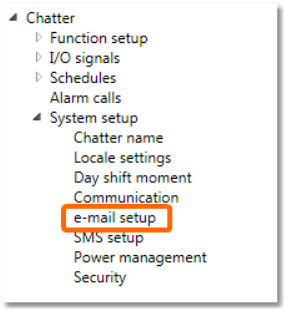
Character set used in e-mail

Normally the standard character set, ISO-8859-1, will be the one to use. If you need special accented characters, you can change to another character set

Additional information:

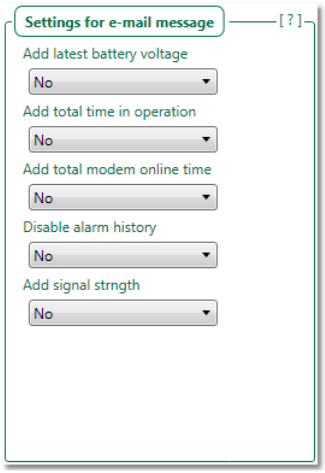
Character sets explained 185

Settings



Use this window to set the parameters for sending e-mails from this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Add latest battery voltage

Select between **No** and **Yes**.
If you select **Yes**, the latest battery voltage measurement will be added to the e-mail sent from this Chatter™ Data Logger

Additional information:
Battery life expectancy 162

Add total time in operation

Select between **No** and **Yes**.
If you select **Yes**, the total time this Chatter™ Data Logger has been powered up will be added to the e-mail sent from this Chatter™ Data Logger

Additional information:
Call information pane 50

Add total modem online time

Select between **No** and **Yes**.
If you select **Yes**, the total time the GSM modem in this Chatter™ Data Logger has been powered up will be added to the e-mail sent from this Chatter™ Data Logger

Additional information:
Call information pane 50

Disable alarm history

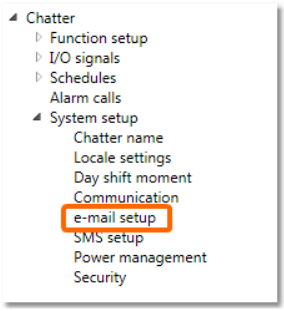
Help text goes here

Add signal strength to message

Select between **No** and **Yes**.
If you select **Yes**, the GSM signal strength for this call will be added to the e-mail sent from this Chatter™ Data Logger

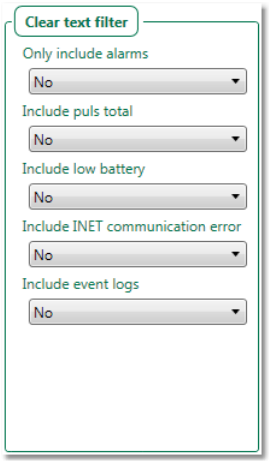
Additional information:
Call information pane 50

Clear text filter



Use this window to set the parameters for sending e-mails from this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Only include alarms

Select between **No** and **Yes**.

Include total pulse count

Select between **No** and **Yes**.

Include low battery

Select between **No** and **Yes**.

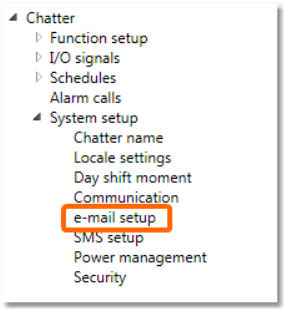
Include INET communication error

Select between **No** and **Yes**.

Include event logs

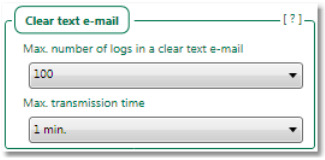
Select between **No** and **Yes**.

Clear text e-mail



Use this window to set the parameters for sending e-mails from this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Max. number of logs in a clear text e-mail

Select the maximum number of measurements or alarms, the Chatter™ Data Logger may send in a single e-mail.

If the Chatter™ Data Logger is instructed to send too many measurements or alarms in a single e-mail, it may exceed the Max. transmission time.

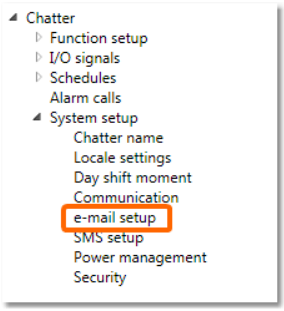
Additional information:
Modem max online time 118

Max. transmission time

Select the number of minutes the modem in the Chatter™ Data Logger is allowed to be online while it sends an e-maill.

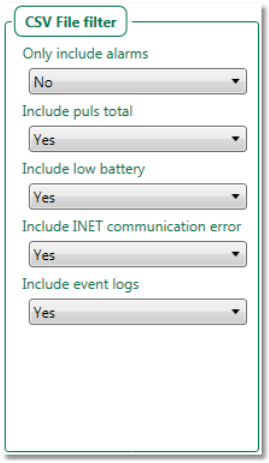
The modem in the Chatter™ Data Logger is forcibly disconnected when the Max. online time is reached. This prevents the modem from staying online indefinitely in case of an error.

CSV file filter



Use this window to set the parameters for sending e-mails from this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Only include alarms

Select between **No** and **Yes**.

Include total pulse count

Select between **No** and **Yes**.

Include low battery

Select between **No** and **Yes**.

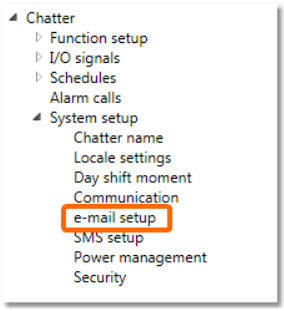
Include INET communication error

Select between **No** and **Yes**.

Include event logs

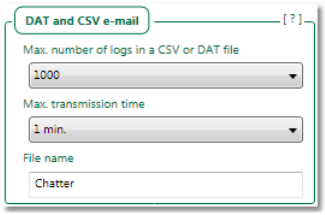
Select between **No** and **Yes**.

DAT and CSV e-mail



Use this window to set the parameters for sending e-mails from this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Max. number of logs in a CSV or DAT file

Select the maximum number of measurements or alarms, the Chatter™ Data Logger may send in attached file in a single e-mail.

If the Chatter™ Data Logger is instructed to send too many measurements or alarms in a single e-mail, it may exceed the Max. transmission time.

Additional information:
Modem max online time 118

Max. transmission time

Select the number of minutes the modem in the Chatter™ Data Logger is allowed to be online while it sends an e-maill.

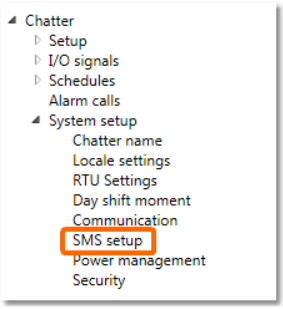
The modem in the Chatter™ Data Logger is forcibly disconnected when the Max. online time is reached. This prevents the modem from staying online indefinitely in case of an error.

File name

The DAT or CSV file attached to the e-mail sent from this Chatter™ Data Logger must have a name. Enter this name here.

The file name be a standard Windows file name. Do not use characters which are not allowed in a Windows file name.

SMS setup



This pane shows data related to the Chatter™ Data Logger. The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable

See below for a detailed description of each part in this pane.



Add battery voltage to message

When the Chatter™ Data Logger sends an SMS message, it can add the current battery voltage to the SMS message

- Select **No** if you don't want the battery voltage to be a part of the text in the SMS message
- Select **Yes** if you want the battery voltage to be a part of the text in the SMS message

Add start/stop times to message

Help text goes here

Add signal strength to message

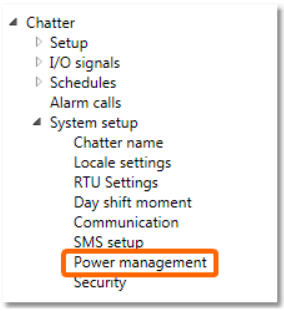
When the Chatter™ Data Logger sends an SMS message, it can add the current signal strength to the SMS message

- Select **No** if you don't want the battery voltage to be a part of the text in the SMS message
- Select **Yes** if you want the battery voltage to be a part of the text in the SMS message

Additional information:

Location in register list 188

Power management

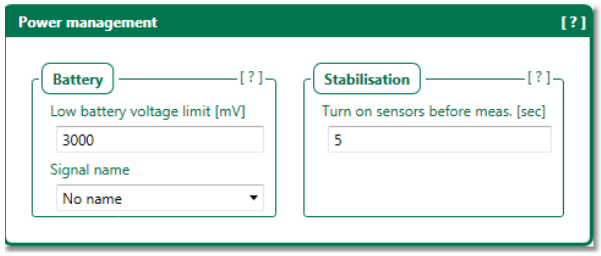


This pane shows data related to the Chatter™ Data Logger. The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable

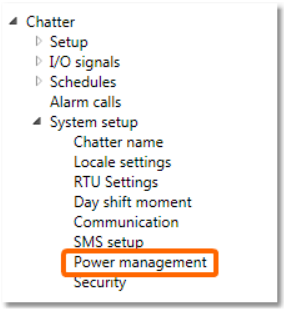
See below for a detailed description of each part in this pane.

Additional information:

Battery settings 132
Stabilisation settings 133

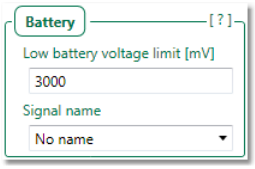


Battery pane



Use this window to set the parameters for when a low battery condition occurs for this Chatter™ Data Logger

See below for a detailed description of each part in this pane.



Low battery voltage limit [mV]

Enter the minimum acceptable voltage for the internal battery. When the battery voltage drops below this limit, a notification appears in the e-mail sent by this Chatter™ Data Logger

MJK Automation ApS recommends that the low battery voltage limit is set to 3.100 mV.

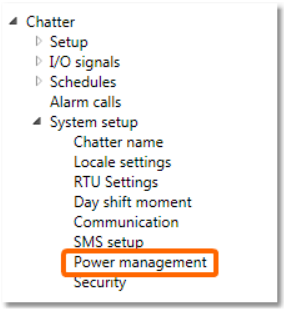
Signal name

Select an existing signal name or enter a new signal name.

The signal name will act as an identifier the low battery voltage condition, inserted into any SMS messages sent from this Instrument Net input.

Additional information:
Signal names explained 160

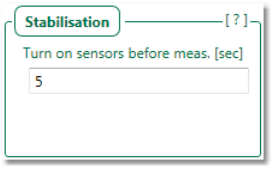
Stabilisation pane



Use this window to set how long time before a measurement the sensor should be turned on.

See below for a detailed description of each part in this pane.

Click an arrow to expand a topic. Click here to expand all topics now.



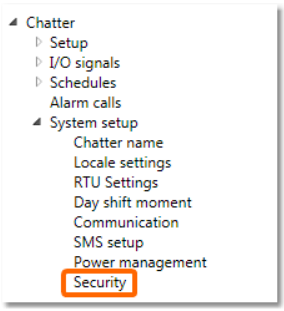
Turn on sensors before meas [sec.]

The sensors need to stabilise before they make an accurate measurement.

Enter the number of seconds you want the sensor turned on before the measurement is done. Select between two and 60 seconds, for most applications a time of two seconds will be adequate,

> The minimum delay is always two seconds even if you select a delay of less than two seconds.

Security



This pane shows data related to the Chatter™ Data Logger. The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable

See below for a detailed description of each part in this pane.



Password protect USB

Select between **No** and **Yes**.
If you select **Yes**, the current configuration is protected against changes by the password

Password protect modem

Select between **No** and **Yes**.
If you select **Yes**, the modem and call list part of the current configuration is protected against changes by the password.

Session timeout [min.]

Help text goes here

New password [0-9]

Enter a password if you want to protect either the entire configuration or the the modem and call list settings only.

The password can only contains numbers.
Leading zeroes are stripped from the password. If you are using **012345** as the password, the password will be truncated to **12345**

Function windows

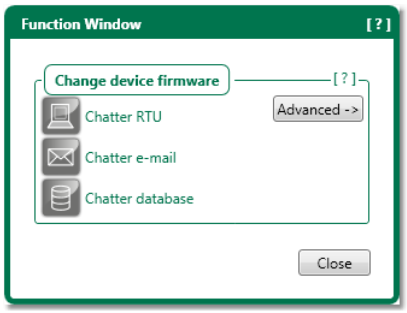


The Functions window provides a number of tools. The window content depends on whether you has connected to the Chatter™ Data Logger with a USB-cable or not.

1 This window in displayed when there is no connection between the Chatter™ Data Logger and the PC

Additional information:

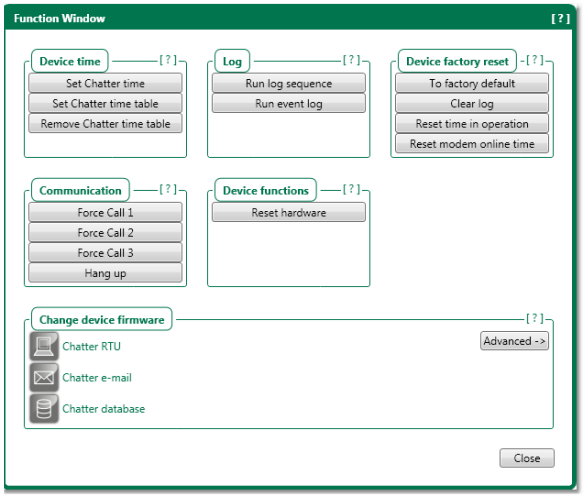
Change device firmware 136



2 This window in displayed when there is a connection between the Chatter™ Data Logger and the PC

Additional information:

Change device firmware 136
Device time 137
Log 138
Device factory reset 139
Communication 140
Device function 141



Change device firmware

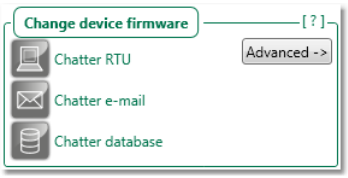
General

Firmware is the program built in to one of the chips in the Chatter™ Data Logger, Three different types of firmware exists:
Chatter™ Data Logger RTU firmware for data loggers supplying data directly to some sort of SCADA system
Chatter™ Data Logger e-mail firmware for data loggers supplying data to a user via a standard e-mail or as a SMS message
Chatter™ Data Logger database firmware for data loggers supplying data to a special MJK Automation ApS Chatter™ Data Logger database

You may change the actual running firmware to one of the other variants to suit your needs.

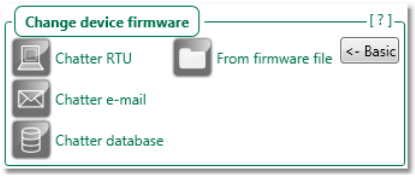
1 Select the firmware version you want to replace the running firmware.

> The firmware is a part of the Chatter™ Link program.



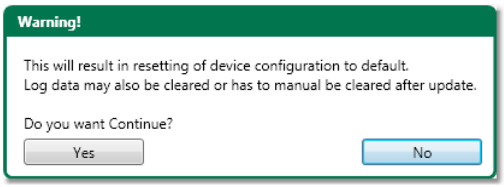
2 If the firmware for the Chatter™ Data Logger is supplied as a file,

ADVANCED



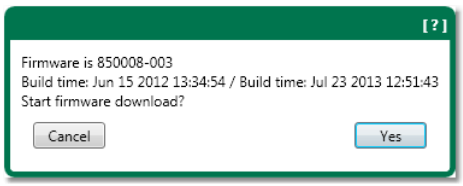
3 A warning. The yes-button will be active after a short delay.

> Changing the devise firmware removes any configuration and any logged data stored in the Chatter™ Data Logger. There is no way to restore the removed data!

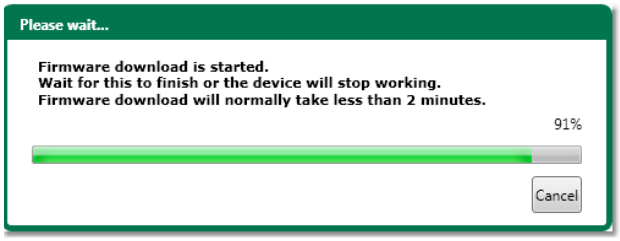


4 This windows shows information on the firmware you are about to send to theChatter™ Data Logger.

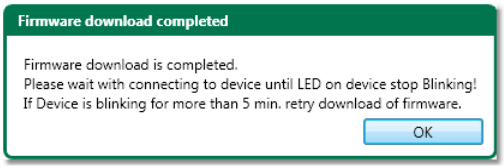
> If you answer Yes at this point, the firmware change procedure is started.



5 You can follow the firmware download process here.

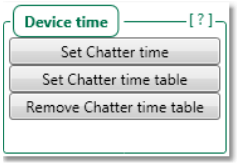


6 The firmware in the Chatter™ Data Logger has been changed.



Device time





Set Chatter time

Sets the internal clock in the Chatter™ Data Logger to the time from your PC

Additional information:
Setting your PC time 183

Set Chatter time tablle

Reads the time zone information from your PC and sends it to the Chatter™ Data Logger. The time table is then used for converting the UTC time in the Chatter™ Data Logger to the time in uour local time zone.

This converted time is only used as a time stamp for messages sent from the Chatter™ Data Logger. Internally, the Digital operates with UTC-time

If this time table has not been set, all messages sent from this Chatter™ Data Logger will be in UTC. The time stamp you will see is e-mails and SMS messages will have the text 'UTC' added to the time.

Additional information:
Setting your PC time 183
Time and time zones 161

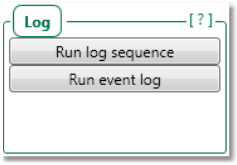
Remove Chatter time tablle

This will remove any time conversion table you may have added to the Chatter™ Data Logger. The time stamp you will see is e-mails and SMS messages will have the text 'UTC' added to the time.

Additional information:
Setting your PC time 183

Log





Run log sequence

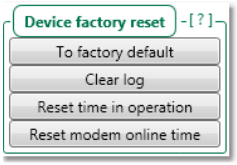
Help text here

Run event log

Help text here

Device factory reset





To factory defaults

Click the button to reset the Chatter™ Data Logger to a factory default state.

> This operation can not be reverted. If you choose to reset the Chatter™ Data Logger to factory defaults, all stored configurations, measurements and alarms are erased permanently

Clear log

Click the button to remove all stored measurements and alarms from the internal memory in the Chatter™ Data Logger

> This operation can not be reverted. If you choose to clear the log, all stored measurements and alarms are erased permanently

Reset time in operation

Click the button to reset the time in operation to zero hours.

Additional information:

Call information pane 50

Reset modem online time

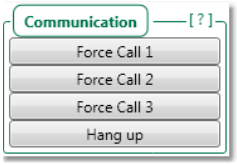
Click the button to reset the modem online time to zero hours.

Additional information:

Call information pane 50

Communication





Force call 1

Click the button to command the Chatter™ Data Logger to execute the call specified in Data call schedule 1 now.

Additional information:
Data call schedule 105

Force call 2

Click the button to command the Chatter™ Data Logger to execute the call specified in Data call schedule 2 now.

Additional information:
Data call schedule 105

Force call 3

Click the button to command the Chatter™ Data Logger to execute the call specified in Data call schedule 3 now.

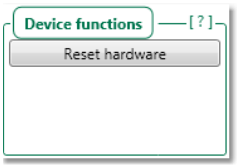
Additional information:
Data call schedule 105

Hang up

Click the button to command the Chatter™ Data Logger to terminate any call in progress now.

Device function





Reset hardware

Click the button to command the Chatter™ Data Logger to perform a software reset. The effect of a software reset is equal to powering off the Chatter™ Data Logger and powering it on again.

> Data in the Chatter™ Data Logger, that is configuration data and measurement data, are not affected by this function

Logged data

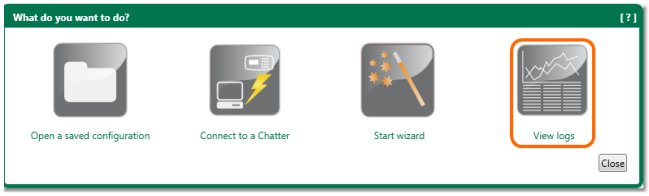
1 From the menu strip:

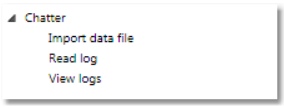
Click the button Read data logs



2 From the Start-menu:

Click the button Connect to a Chatter





This section of the Chatter™ Link program lets you read, save and display the data logged by a Chatter™ Data Logger.

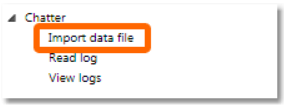
The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

See below for a detailed description of each part in this pane.

Additional information:

Import data file 143
Read log 144
View logs 145

Import data file

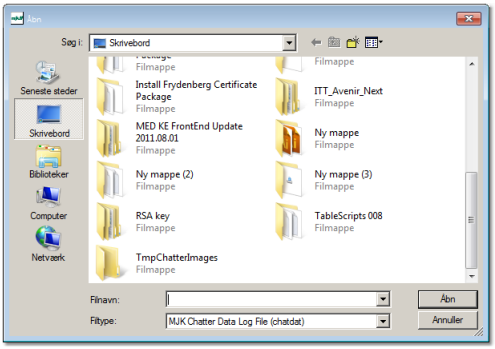


Use this to import a previously saved data file containing log data from a Chatter™ Data Logger

1 Click the button *Select log data file*



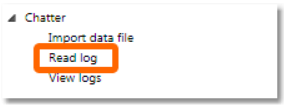
2 Navigate to your saved log data file using the normal *File Open* dialogue



3 Return to Chatter™ Link main window using this button in the menu strip



Read log



Use this to read logged data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

1 Select the amount of logs, you want to read from the Chatter™ Data Logger.
You can select:

- A number of logs
- Logs from a specific time interval.

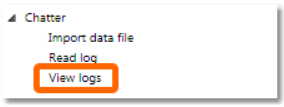
Click the button *Download Logs* to continue



2 Return to Chatter™ Link main window using this button in the menu strip



View logs



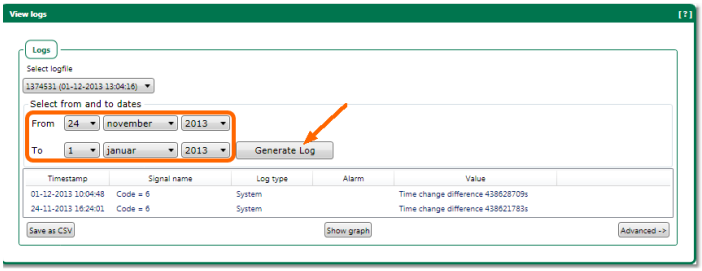
Use this to display logged data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

1 Select the interval from which you want to see the logged data.

Click the button *Generate log*

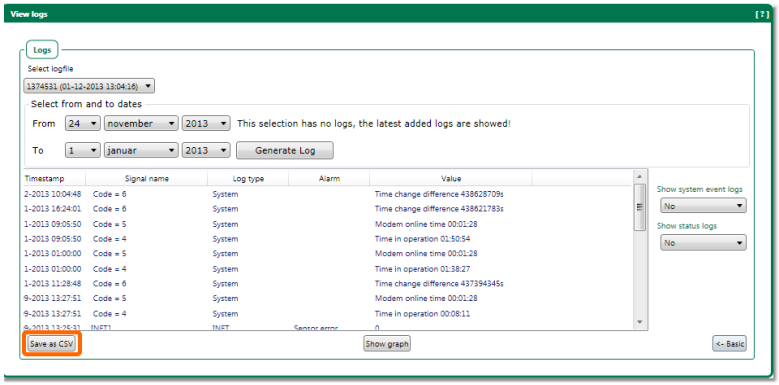
The selected logs are displayed in a table format.



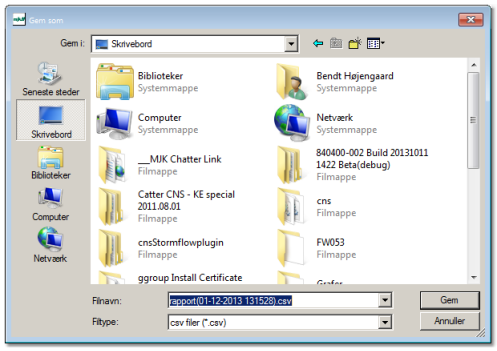
2 Click the button *Advanced* and you may add or subtract system event logs and status logs to the log data displayed.

Click the button *Basic* to return to the normal window

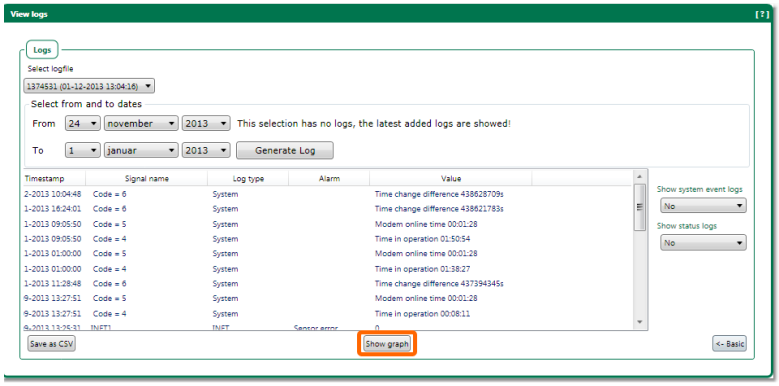
Click the button Save as CSV to save the displayed log data to file as semicolon separated data.



3 Navigate to where you want to save the log data file using the normal *File Save* dialogue

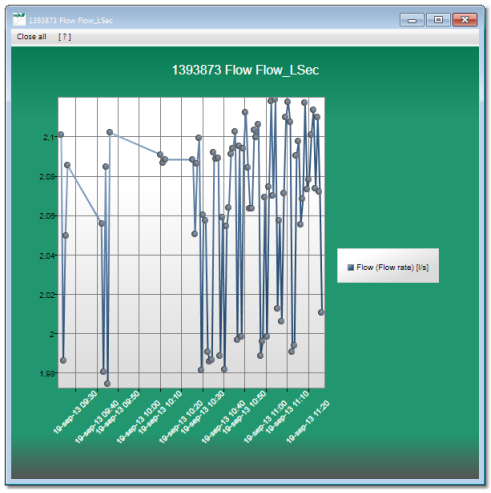


4 Click the button *Show graph* to display the logged measurement data in a graph view.



5 When done, close the window with the *Close all* menu.

> If measurements from different inputs are present in the log data file, a graph for each type of measurement is displayed.



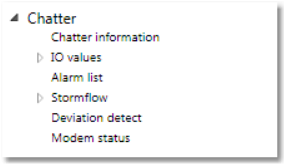
6 Return to Chatter™ Link main window using this button in the menu strip



Live data

1 Start the live data view with the View newest values button in the menu strip.





This section of the Chatter™ Link program lets you read the current data from a Chatter™ Data Logger.

The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

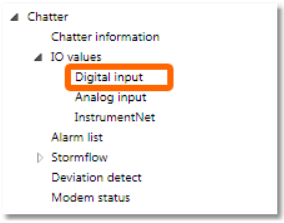
See below for a detailed description of each part in this pane.

Additional information:

Digital inputs 149
Analog inputs 150
InstrumentNet inputs 151
Alarm list 152
Stormflow status 154
Stormflow counters 155
Stormflow conditional log 156
Deviation detect 157
Modem status 158

I/O values

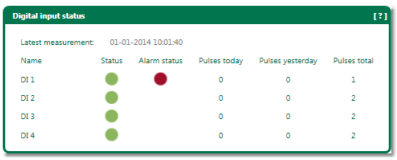
Digital inputs



Use this to display live data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

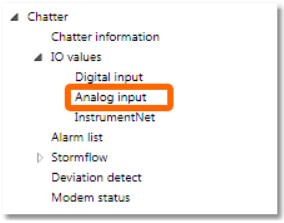
1. The current data from the digital inputs are shown in this window



2. Return to Chatter™ Link main window using this button in the menu strip



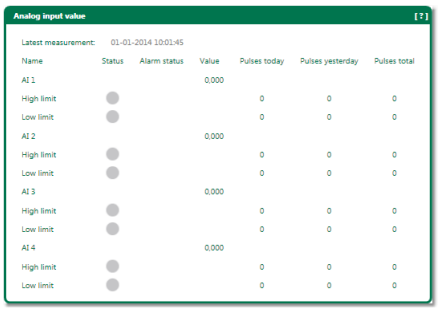
Analog inputs



Use this to display live data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

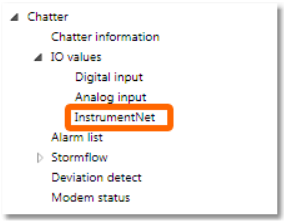
1 The current data from the analog inputs are shown in this window



2 Return to Chatter™ Link main window using this button in the menu strip



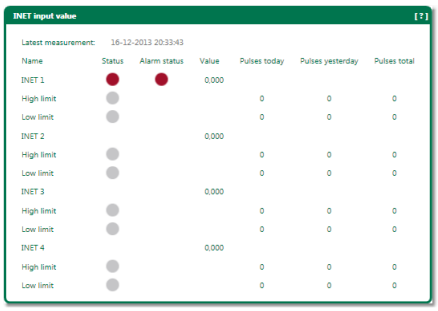
InstrumentNet inputs



Use this to display live data from a Chatter™ Data Logger.

The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

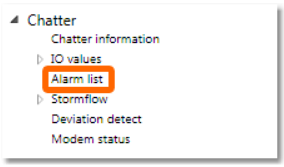
1 The current data from the InstrumentNet inputs are shown in this window



2 Return to Chatter™ Link main window using this button in the menu strip



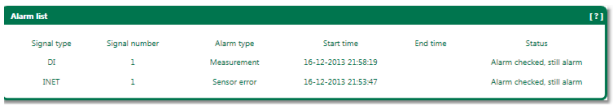
Alarm list



Use this to display live data from a Chatter™ Data Logger.

The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

1 The current alarm list is shown in this window, one line for each active alarm

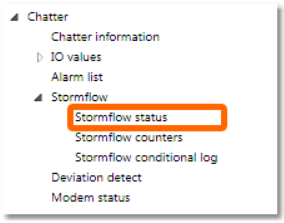


2 Return to Chatter™ Link main window using this button in the menu strip



Stormflow

Stormflow status

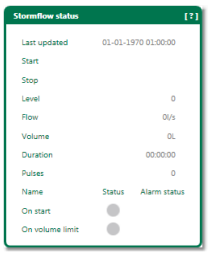


Use this to display live data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

---

1 The current data for stormflow status are shown in this window

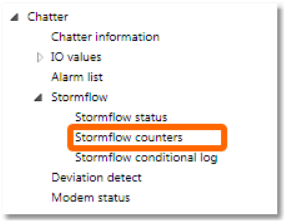


---

2 Return to Chatter™ Link main window using this button in the menu strip



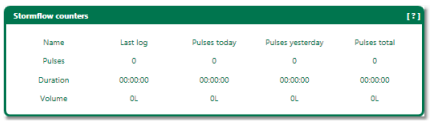
Stormflow counters



Use this to display live data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

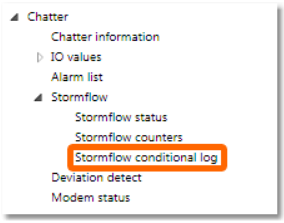
1. The current data for stormflow counters are shown in this window



2. Return to Chatter™ Link main window using this button in the menu strip



Stormflow conditional log



Use this to display live data from a Chatter™ Data Logger.

The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

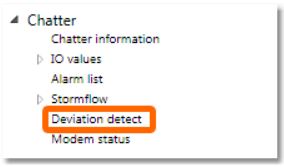
1 The current data for stormflow log are shown in this window



2 Return to Chatter™ Link main window using this button in the menu strip



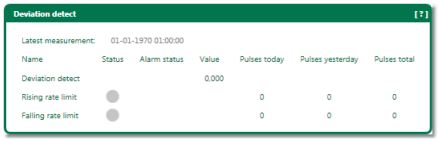
Deviation detect



Use this to display live data from a Chatter™ Data Logger.

> The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

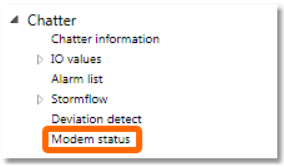
1 The current data for deviation detect are shown in this window



2 Return to Chatter™ Link main window using this button in the menu strip



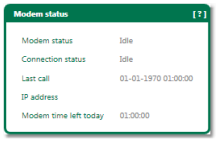
Modem status



Use this to display live data from a Chatter™ Data Logger.

The data is only available when your PC is connected to the Chatter™ Data Logger with a USB-cable.

1 The current data for modem status are shown in this window



2 Return to Chatter™ Link main window using this button in the menu strip



Technical reference

Signal names

Signal names are texts you can use to identify an input or a signal. You can create up to 40 signal names, each with a length of 32 characters.

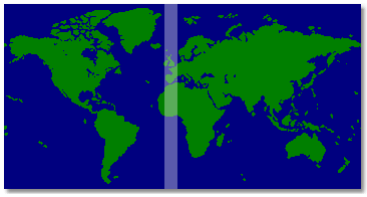
A signal name can be assigned to one or more inputs or signals according to your needs.

The signal names are used in SMS messages sent by the Chatter™ Data Logger, in this example the signal name 'Tamper' has been assigned to the digital input number 1.



Signal names are combined. If the Chatter™ Data Logger has a device name, an input has a name attached and a limit is identified with a name, the SMS message could look like this.

Time and time zones



Internally, the Chatter™ Data Logger uses Unicersal Time Coordinated as its time zone. Unicersal Time Coordinated equals Greenwich Mean Time without Daylight Saving Time.

Unicersal Time Coordinated is perfect for machines, but a bit impractical for humans, as the time in Unicersal Time Coordinated seldom matches the time in your local time zone

The PC program Chatter™ Link takes care of this, it converts time from your local time zone to Unicersal Time Coordinated before sending it to the Chatter™ Data Logger.

When Chatter™ Link reads data from the Chatter™ Link, it does the opposite conversion, thus displaying time stamps in your local time zone.

Chatter™ Link uses the time settings from your PC to do this conversion.

> The Chatter™ Data Logger does not recognize time zones. This results in a time shift when Daylight Saving Time goes into or out of use!

Additional information:
Setting your PC time 183

How Chatter™ Data Logger uses time

You want the Chatter™ Data Logger to make a daily call at 15:00 local time. Your Chatter™ Data Logger is set up in Denmark and Daylight Saving Time is in operation when you make this setting



The PC program Chatter™ Link first converts the time from Daylight Saving Time to a time without Daylight Saving Time, the interim time is 14:00



The PC program Chatter™ Link then converts the interim time to Unicersal Time Coordinated, this equals 13:00

This is the time sent to the Chatter™ Data Logger



The Chatter™ Data Logger will make the call when its internal clock reaches 13:00 Unicersal Time Coordinated.

13:00 Unicersal Time Coordinated equals 15:00 during the summer season where Daylight Saving Time is in use



The Chatter™ Data Logger will make the call when its internal clock reaches 13:00 Unicersal Time Coordinated.

13:00 Unicersal Time Coordinated equals 14:00 during the winter season where Daylight Saving Time is **not** in use



Battery life expectancy

Calculating the battery life is complicated, a lot of different factors are involved. The battery has an initial capacity of 19 Ah or 19.000 mAh. To make allowance for ageing, environment and variations between batteries, the capacity used for calculating battery life expectancy is set to 17 Ah or 17.000 mAh. Below is a table showing the 'cost' of different operations.

Operation	Cost
Send an alarm to a SCADA system or as a SMS message	5 mAh
Make one log, send data to a SCADA system or as a SMS message	5 mAh
Make four logs, send data to a SCADA system or as a SMS message	6 mAh
Make one level measurement, save data in the log, 10 seconds measurement delay	0,15 mAh
Make one level measurement, save data in the log, one seconds measurement delay	0,1 mAh
Make four level measurements, save data in the log, 10 seconds measurement delay	0,3 mAh
Make four level measurements, save data in the log, one seconds measurement delay	0,2 mAh
Make one measurement without saving data in the log - event logging	0,02 mAh

An example:

Operation	Measurement	Transmitting
A Chatter™ Data Logger measures a level with a 10 seconds measurement delay and saves the result in the log once every hour. It connects to a SCADA system once every 12 hours:	Measurement and logging of data: 24 × 0,15 mAh = 3,6 mAh	Transmitting data to a SCADA system: 2 × 5 mAh = 10 mAh

This totals 13,6 mAh every day.
Life expectancy is thus 17.000 mAh / 13,6 mAh = 1.250 days or **a little less than 3½ years**

An other example:

Operation	Measurement	Transmitting
A Chatter™ Data Logger measures a level with a one seconds measurement delay and saves the result in the log once every 24 hours. It connects to a SCADA system once every 24 hours:	Measurement and logging of data: 1 × 0,1 mAh = 0,1 mAh	Transmitting data to a SCADA system: 1 × 5 mAh = 5 mAh

This totals 5,1 mAh every day.
Life expectancy is thus 17.000 mAh / 5,1 mAh = 3.333 days or **a little more than 9 years**

Replacing the battery

Reporting battery voltage, change when approaching 3,1 V is recommended,

Battery information

MJK Item	Description
550246	Battery for Chatter™ Data Logger, 3,6 V, 19 Ah

Additional information:
Battery life expectancy 162

Remember to set the clock! It will start from January 1st, 2000 when the battery is removed!

Value types and layout

Different Instrument Net sensors may supply their data in different formats. The Chatter™ Data Logger supports the following data types and data type layouts:

Data type	Possible values
16 bit unsigned integer	0 to 65.535 or 0 to 2^{15} –1
16 bit signed integer	–32.768 to 32.767 or –(2^{15}) to 2^{15} –1
32 bit unsigned integer	0 to .4.294.967.295 or 2^{32}–1
32 bit signed integer	–2.147.483.648 to 2.147.483.647 or –(2^{31}) to 2^{31}–1
32 bit floating point	±~$10^{-44.85}$ to ~$10^{38.53}$
64 bit unsigned integer	0 to 18.446.744.073.709.551.615 or 2^{64}–1
64 bit signed integer	–9.223.372.036.54.775.808 to 9.223.372.036.854.775.807 or –(2^{63}) to 2^{63} –1

Managing calls

General

All calls made by a Chatter™ Data Logger are managed via call lists. A call list is a combination of a call type and a recipient. Two different call list exists, one for scheduled data calls and another for alarm calls. Each of these call lists handles six calls.

Alarm calls are executed immediately when an alarm condition is detected. All entries in the alarm call list are called starting with the first entry.

Data calls are scheduled. They execute at an interval, not at specific times. If more than one data call is scheduled for the same time, they are executed in sequence, staring with the lowest numbered call interval.

If a call is unsuccessful, the Chatter™ Data Logger will wait two minutes before retrying. A total of two retries will be attempted. If the call still is unsuccessful, no further calls to the failed entry in the call list will be attempted until the next scheduled call time. The Chatter™ Data Logger will continue with the next entry in the call list.

This retry method applies to data calls as well as alarm calls

Additional information:

Data call list 106
Alarm call list 111

Scheduling calls

General

You can preset three different call schedules for a Chatter™ Data Logger. The preset call schedules will be used in the Data call list. The call schedules governs how often the Chatter™ Data Logger will send data to a recipient. You can select intervals between 10 minutes and 24 hours.

Additional information:
Data call lists 106

The Chatter™ Data Logger does not recognize time zones. This results in a time shift when Daylight Saving Time goes into or out of use!

Additional information:
Time and time zones 161

Call schedules and log schedule are 'linked'.
It makes no sense to schedule calls with a 10 minutes interval and - at the same time - use a log schedule with a log interval set to 1 hour. The Chatter™ Data Logger will only send data in every sixth call.

Call schedules with a frequent call pattern will have a huge impact on the battery life expectancy!

Additional information:
Battery lifetime 162

The time for any call is calculated from 00:00 Unicersal Time Coordinated, midnight



You want your Chatter™ Data Logger to make a call every four hours at minutes 0:30



Set up a call schedule with a call interval of four hours. The first call will be 04:00 Unicersal Time Coordinated.

Additional information:
Data call settings 108



Set the call time offset at 30 minutes

Additional information:
Data call settings 108



Your Chatter™ Data Logger will now call every four hours, starting at 04:30 Unicersal Time Coordinated.



Call lists

General

The Chatter™ Data Logger uses two call list to deliver data or alarms to recipients:

- The data call list is used to deliver logged data from the Chatter™ Data Logger to one or more recipients.
- The alarm call list is used to deliver alarms from the Chatter™ Data Logger to one or more recipients.

Data calls

The data call list are based on intervals between calls, not exact call times of day. These intervals are defined in three separate data call intervals 106
Those call lists acts as a sort of directory, telling the Chatter™ Data Logger who to call.
The data call list shares a common set of recipients 168 with the alarm call list
The same data are delivered to all recipients in a call list

Initiating a call

When a call list interval is reached, any call list using this interval will initiate its call. If more than one call list uses this interval, the call lists will initiate their calls, one after another, starting with call numbers of the lowest value. If several intervals is reached at the same time, interval 1 will start as the first, interval 2 will initiate its call immediately after.

Failing calls

If a call fails for some reason that call will be retried after a two minute modem power off followed by an initialisation. Calls will be retried two times, after which the call is completely given up until the next interval is reached. If a single call fails completely, the remaining call will still try to execute.

Alarm calls

In case of an alarm, an alarms calls will be initiated. Alarm calls works like data calls, with the exception that no scheduled interval exists. An alarm is the trigger for alarm calls. Alarm calls will be retried two times, after which the call is completely given up. If a single alarm call fails completely, the remaining call will still try to execute.

Recipients

General

The Chatter™ Data Logger can deliver logged data or alarms to three different recipient types:

- Mobile phones which will receive logged data or alarms as SMS messages.
- SCADA system which will receive logged data or alarms via a GPRS connection.
- SCADA system which will receive logged data or alarms via a dial up connection from the GSM modem in the Chatter™ Data Logger.

The Chatter™ Data Logger can handle a total of six different recipients:

- Four SMS message recipients, defined by a telephone number, either domestic or international
- Two SCADA system recipients, defined by either an IPv4 address and a TCP-port or by a telephone number, either domestic or international

All recipients will receive the same logged data or alarms.

Modes of operation

Normal mode

General

Normal mode is in operation when the Chatter™ Data Logger is not in event mode..

Additional information:
Event mode 171

Operation

The normal mode of operation for a Chatter™ Data Logger is:

- Sleeping to conserve power
- Waking up with a set log interval and makes the specified measurements, then going back to sleep
- Waking up with a set log interval and makes a call, then going back to sleep

Event mode

General

Event mode is in operation if an event log interval is selected. When the Chatter™ Data Logger is in event mode, all inputs where event logging is enabled, will be logged when the event interval runs out.

If event is enabled on a digital input, an analog input or a Instrument Net input, the Chatter™ Data Logger wakes up every event interval to check if either a high limit or a low limit is reached. If the level is not reached, the Chatter™ Data Logger just goes back to sleep. If the level is reached, the Chatter™ Link will start logging data for all inputs in use with the event log interval.

Additional information:

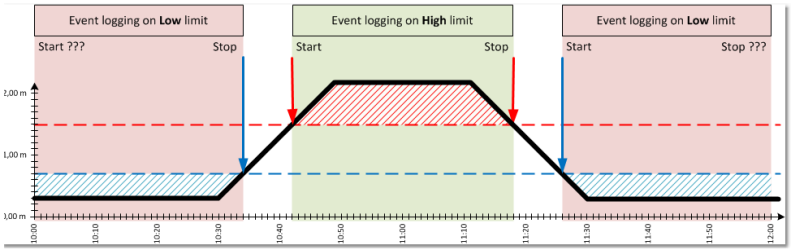
Log schedule 103
Advanced, settings, digital input 81
Advanced, settings, analog input 91
Advanced, settings, InstrumentNet 101

Operation

A Chatter™ Data Logger working in event mode is:

- Sleeping to conserve power
- Waking up with a set event interval and checks if a level is passed.
- Going back to sleep if the level is not passed
- Logging selected inputs constantly with event log interval if level is passed.

The green field shows what happens if an input is set to log on event interval and a high limit is reached



Event logging starts when the high limit is reached, logging commences with the event log interval until the high limit is crossed 'on the way down'.

In this example, the Chatter™ Data Logger uses power for event logging in 36 minutes. This i a normal and recommended setup.

The red fields shows the opposite situation, an input is set to log on event interval when a low limit is reached

Event logging starts when the low limit is crossed 'on the way down' but nothing stops the event

In this example, the Chatter™ Data Logger uses power for event logging in an undefined number of minutes

This is a critical configuration, use it only if you must, you must be aware of the effect it has on the battery life.

Additional information:

Battery life expectancy 162

Scaling and Calibration

General
Scaling and calibration is a way to change the sensor output from the measured value to another value.

Scaling
Scaling will multiply - or divide - any measured value by a fixed value. Use calibration if you want to change the output from one measuring unit to another, for example from bar to meter water column.

Calibration
Calibration will add a fixed amount to - or subtract a fixed amount from - any measured value. Use scaling to correct errors if the input signal has a constant positive or negative offset

When to use it?
You will use scaling and calibration when you want to:
- Get the level measurement in other units than Bar
- Get a temperature measurement i degrees Fahrenheit
- If you want to know the Depth to water instead of the level above the pressure transmitters measuring cell.

How does it work?
The output value from the sensor is applied to a mathematical function. Two different functions are used, one for sensors on an Instrument Net interface and one for sensors on an analog input.

Instrument Net interface:

$$\text{Output value} = (\text{Scale } 100\% * \text{Calibration } 100\% * \text{Sensor value}) + (\text{Scale } 0\% + \text{Calibration } 0\%)$$

Analog interface:

$$\text{Output value} = (\text{Scale } 2{,}5\text{V} * \text{Calibration } 2{,}5\text{V}) * (2{,}5\text{V} + \text{Sensor value}) + (\text{Scale } 0\text{V} + \text{Calibration } 0\text{V})$$

Why two sets of variables?
Two sets of variables are used, Scaling and Calibration. They both perform the same function, but MJK Automation ApS recommends that you use them for different purposes. You can combine the values for scaling and calibration into one, but it will be difficult to 'decipher' the function at a later date.

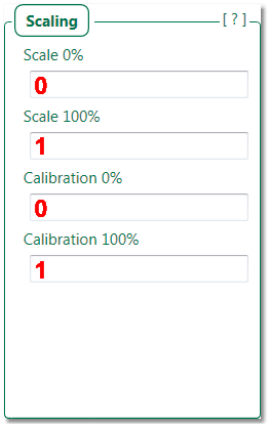
INET and analog

Examples

Below are some examples, showing what happens to the output when different values for scaling and calibration are applied to an InstrumentNet sensor.

Never use equal values in Scale Max or Scale Zero. It will result in an illegal mathematical operation, divide by zero!

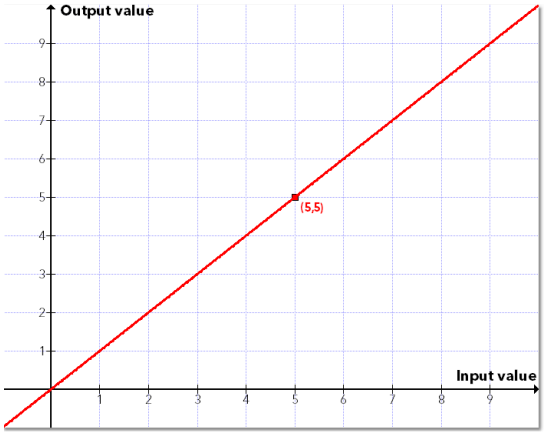
No scaling and no calibration



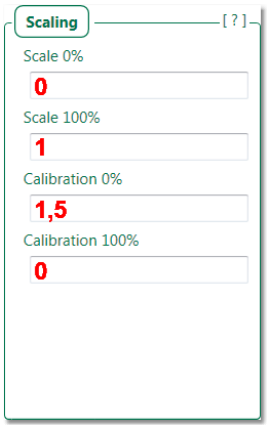
Output value = (1 * 0 * Sensor value) + (0 + 0)

⇓

Output value = Sensor value



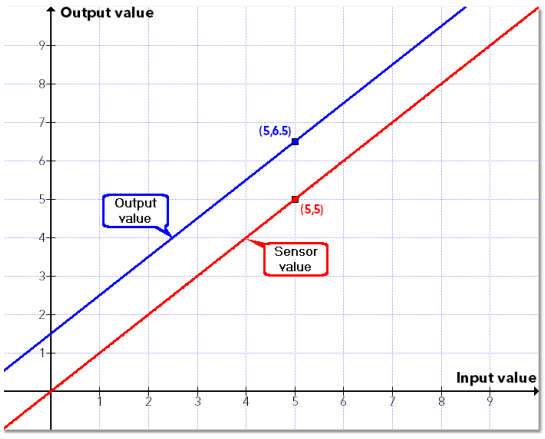
Output is calibrated, 1,5 is added to the input value



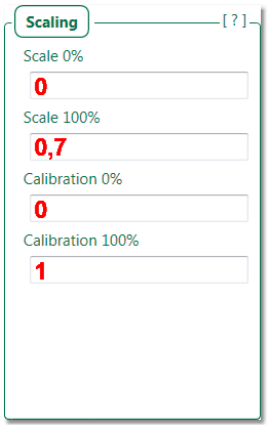
Output value = (1 * 0 * Sensor value) + (0 + 1,5)

⇓

Output value = Sensor value + 1,5



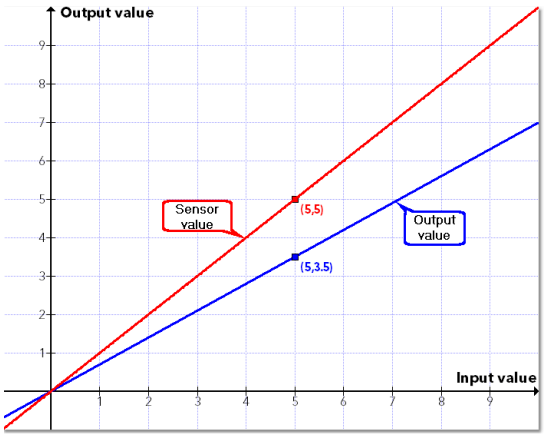
Output is scaled, the input value is multiplied by 0,7



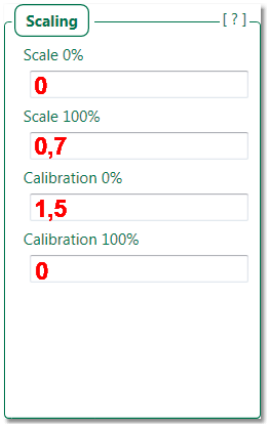
Output value = (0,7 * 1 * Sensor value) + (0 + 0)

⇓

Output value = Sensor value * 0,7



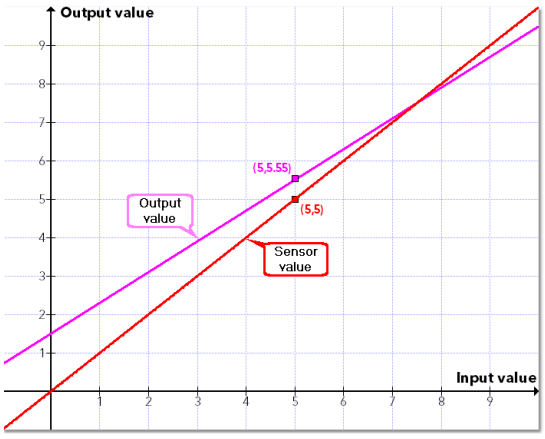
Output is scaled and calibrated, the input value is multiplied by 0,7 and 1,5 is added



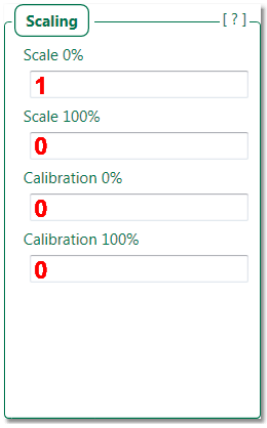
Output value = (0,7 * 0 * Sensor value) + (0 + 1,5)

⇓

Output value = Sensor value * 0,7 + 1,5



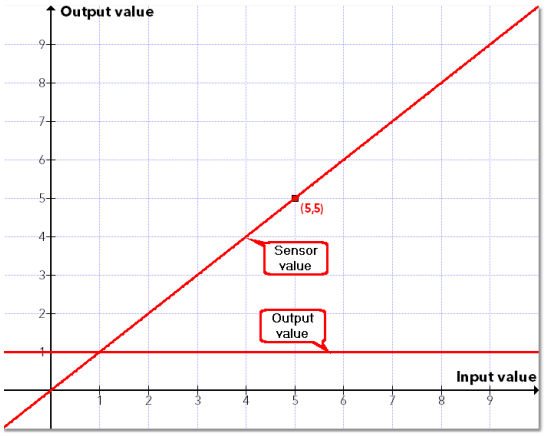
This is an error, the output is always 1



Output value = (0 * 0 * Sensor value) + (1 + 0)

⇓

Output value = 1



Additional information:

Instrument Net Setup pane

Analog Setup pane

Changing output values 175

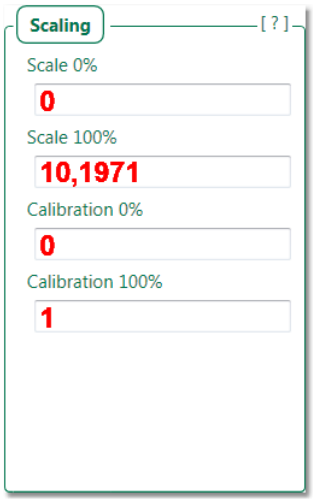
Changing output values

Examples

Below are some examples, showing what happens to the output when different values for scaling and calibration are applied.

Never use equal values in Scale Max or Scale Zero. It will result in an illegal mathematical operation, divide by zero!

Change the output unit from bar to meter water column

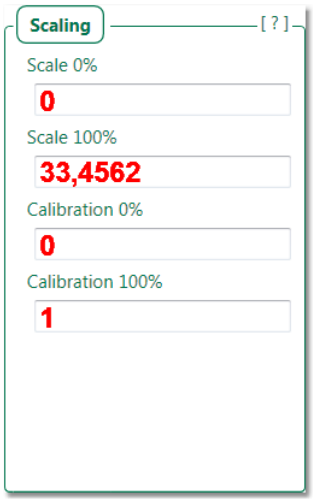


$$\text{Output value} = (10{,}1971 * 1 * \text{Sensor value}) + (0 + 0)$$

$$\Downarrow$$

$$\text{Output value} = \text{Sensor value} * 10{,}1971$$

Change the output unit from bar to feet of water column

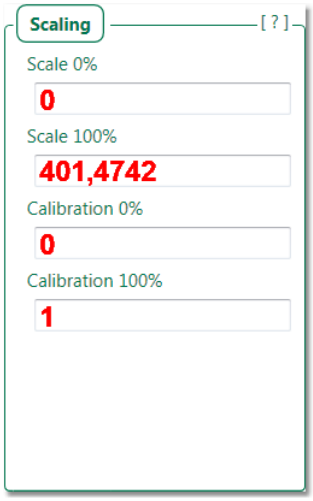


$$\text{Output value} = (33{,}4562 * 1 * \text{Sensor value}) + (0 + 0)$$

$$\Downarrow$$

$$\text{Output value} = \text{Sensor value} * 33{,}4562$$

Change the output unit from bar to inches of water column

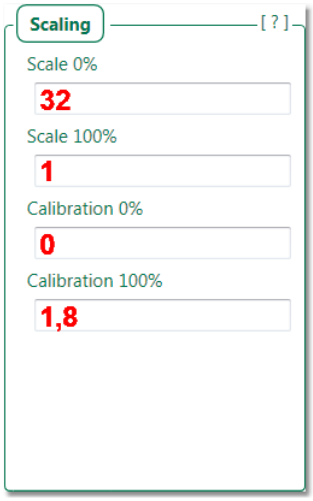


$$\text{Output value} = (401{,}4742 * 1 * \text{Sensor value}) + (0 + 0)$$

$$\Downarrow$$

$$\text{Output value} = \text{Sensor value} * 401{,}4742$$

Change the output unit from °Celsius to °Fahrenheit



$$\text{Output value} = (1 * 1{,}8 * \text{Sensor value}) + (32 + 0)$$

$$\Downarrow$$

$$\text{Output value} = \text{Sensor value} * 1{,}8 + 32$$

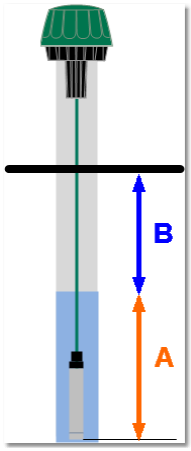
Change the output from level above sensor to depth to water surface

The standard setting for the Chatter™ Data Logger is to measure the water level above the pressure transmitter, **A** in the drawing to the right

If you need to get the depth to water instead, **B** in the drawing to the right, you will have to change the settings.

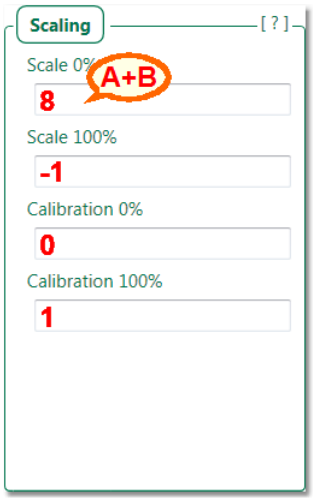
You must know the sum of **A** and **B**, it equals the depth of the sensor tip measured from the soil surface.

In the examples below, A is set to 3 meters and B is set to 5 meters, the sum is 8 meters.



The depth to water surface is always a **negative** number!

Output value unit is in bar

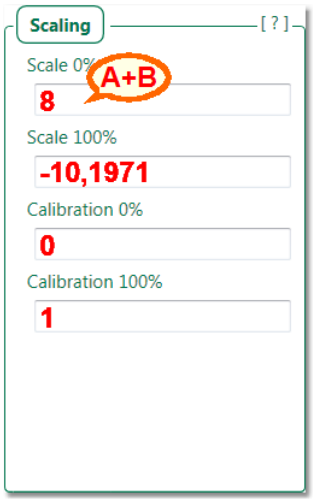


$$\text{Output value} = (-1 * 1 * \text{Sensor value}) + ((3 + 5) + 0)$$

$$\Downarrow$$

$$\text{Output value} = (-1) * \text{Sensor value} + 8$$

Output value unit is in meter water column



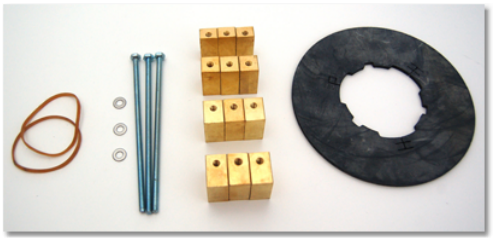
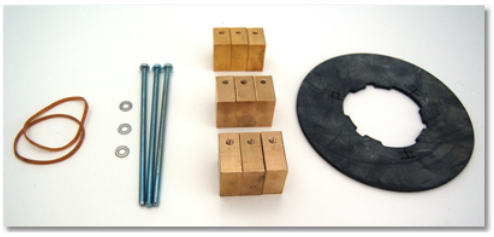
$$\text{Output value} = (-10{,}1971 * 1 * \text{Sensor value}) + ((3 + 5) + 0)$$

$$\Downarrow$$

$$\text{Output value} = (-10{,}1971) * \text{Sensor value} + 8$$

Accessories

Accessories

MJK Item	Description	
521751	Set of wedges for the Chatter™ Data Logger tube mount model. Contains wedges number 1, 2, 3 and 4.	
512751	Set of wedges for the Chatter™ Data Logger tube mount model. Contains wedges number 4, 5 and 6.	
??	Antenna	

Appendixes

Appendix A
Installing Chatter™ Link on your PC

Additional information:
Appendix A 180

Appendix B
Updating Chatter™ Link to a new release

Additional information:
Appendix B 182

Appendix C
Setting the time on your PC

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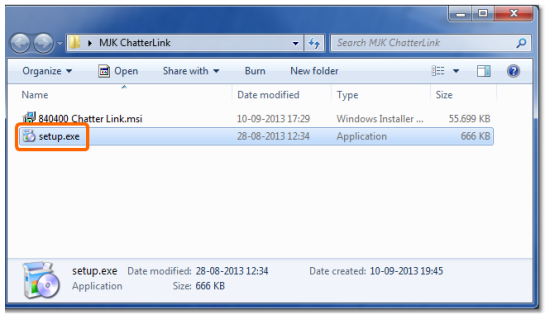
Appendix A

Installing Chatter™ Link on your PC

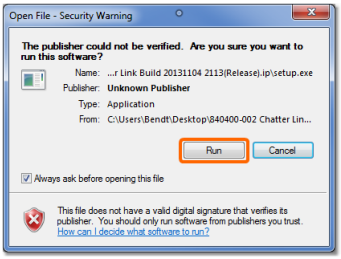
You must install the program on your PC before you can use it This guide shows ho to install Chatter™ Link

1 The Chatter™ Link program is in a zip-file. Unzip it to a folder on your desktop.

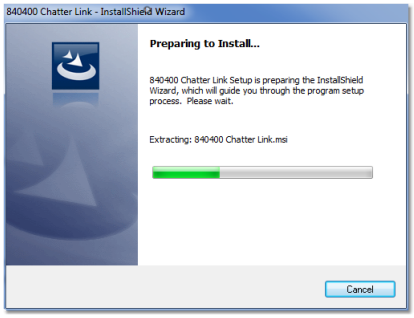
Double-click the *Setup.exe* file



2 Answer **Yes** to this warning if it is displayed

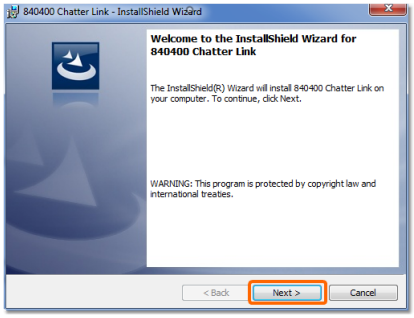


3 You will see a green progress-bar during the install procedure. It is for your information only.



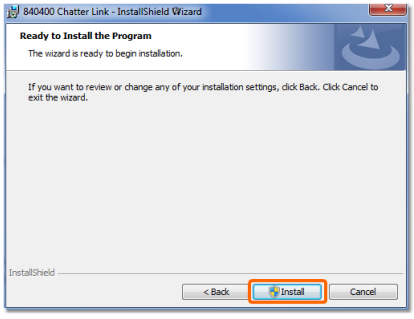
4 The welcome window.

Click the button **Next >**

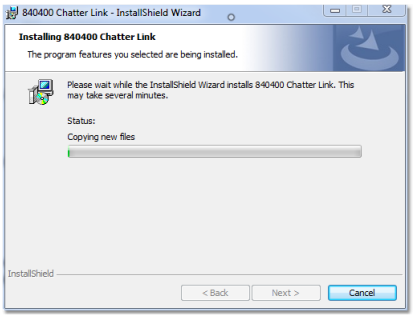


5 Ready to install the Chatter™ Link program

Click the button **Install**

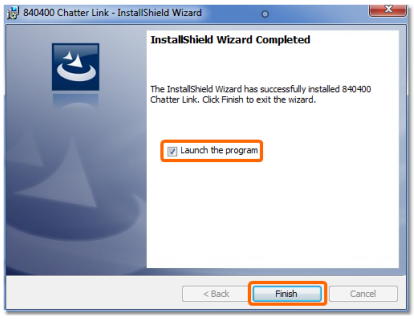


6 You will see a green progress-bar during the install procedure. It is for your information only.

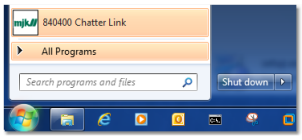


7 Installation done.

Click the button **Finish** and the Chatter™ Link program starts



8 You can also start the Chatter™ Link program using the shortcut in the Start-menu



Appendix B

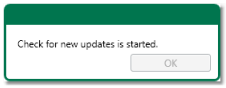
Updating Chatter™ Link to a new release

1 Start the check for program updates with the button in the menu strip.



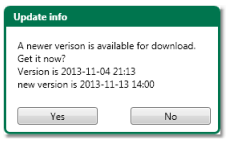
> Your PC must be connected to the internet for this to work.

2 This window is displayed while the program checks for new, available updates.



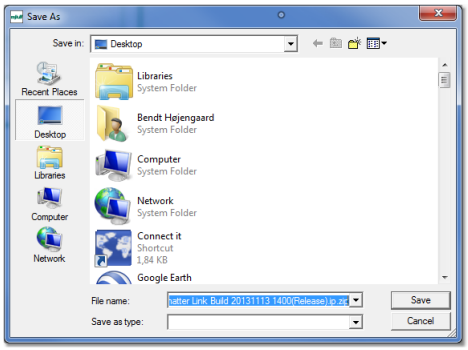
3 You will be presented wit a window like this if new updates are available.

If you select **No**, the update sequence is cancelled.

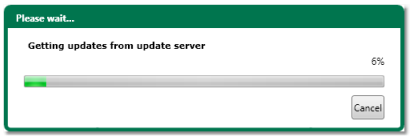


4 If you select **Yes**, you will be asked for a download location.

Choose one to suit your preferences



5 The window keeps track of the download progress.



> If you are using a wireless broadband connection you may expect download time of approximately three minutes,

6 When the download is complete, you must install the updated program as described in Appendix A 180..

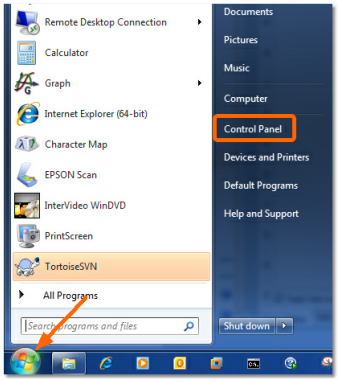
Appendix C

Setting the time on your PC

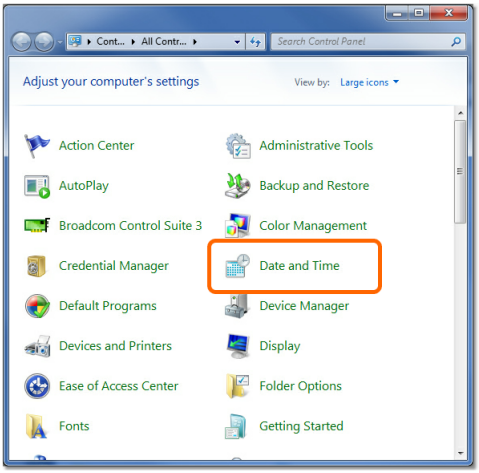
The time in your PC is used when you are setting the clock in your Chatter™ Data Logger. If you want the Chatter™ Data Logger to use the correct time when it is logging data, you must have the correct time settings in your PC.

Use the guide below to check your PC time settings

1 Click the button **Start**
Select *Control Panel*

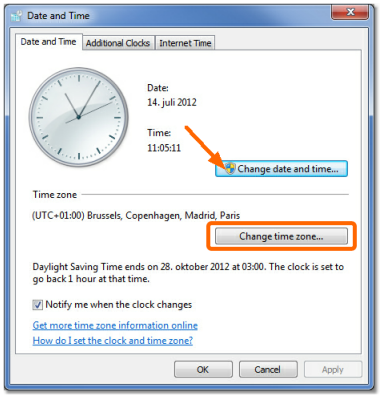


2 Select the *Date and Time* control panel.

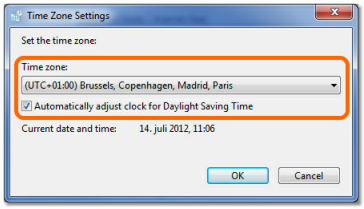


3 Start with the PC time, it should not be off by more than five minutes.

Check the time zone, it must be set to your local time zone.



4 Change the time zone if necessary.



Appendix D

MJK Automation ApS has compiled this list of known APNs from various telecom suppliers for your convenience, MJK Automation ApS holds no responsibility for the accuracy of the data in this table.

	Telecom supplier	APN
	Optus	internet
	Telestra	telestra.internet
	Vodafone	vfintrnet.au
	Drei	drei.at
	Orange	orangeinternet
	Proximus	internet.proximus.be
	TDC	internet
	3	data.tre.dk
	Telenor	internet
	Telenor	Internet
	O2	Internet
	Telia	online.telia.se
	Vodafone	internet.vodafone.net

Appendix E

Character sets used in e-mails

Country	Character set	Text
Latin1	ISO-8859-1	Latin1 covers most West European languages, such as French (fr), Spanish (es), Catalan (ca), Basque (eu), Portuguese (pt), Italian (it), Albanian (sq), Rhaeto-Romanic (rm), Dutch (nl), German (de), Danish (da), Swedish (sv), Norwegian (no), Finnish (fi), Faroese (fo), Icelandic (is), Irish (ga), Scottish (gd), and English (en), incidentally also Afrikaans (af) and Swahili (sw), thus in effect also the entire American continent, Australia and much of Africa. The most notable exceptions are Zulu (zu) and other Bantu languages using Latin Extended-B letters, and of course Arabic in North Africa, and Guarani (gn) missing GEIUY with ~ tilde. The lack of the ligatures Dutch IJ, French OE and ,,German`` quotation marks is considered tolerable. The lack of the new C=-resembling Euro currency symbol U+20AC has opened the discussion of a new Latin0.
Latin2	ISO-8859-2	Latin2 covers the languages of Central and Eastern Europe: Czech (cs), Hungarian (hu), Polish (pl), Romanian (ro), Croatian (hr), Slovak (sk), Slovenian (sl), Sorbian. For Romanian the S and T had better use commas instead of cedilla as in Turkish: the U+015F LATIN SMALL LETTER S WITH CEDILLA at =BA ought to be read as U+0219 LATIN SMALL LETTER S WITH COMMA BELOW etc.
Latin3	ISO-8859-3	Latin3 is popular with authors of Esperanto (eo) and Maltese (mt), and it covered Turkish before the introduction of Latin5 in 1988.
Latin4	ISO-8859-4	Latin4 introduced letters for Estonian (et), the Baltic languages Latvian (lv, Lettish) and Lithuanian (lt), Greenlandic (kl) and Lappish. Note that Latvian requires the cedilla on the =BB U+0123 LATIN SMALL LETTER G WITH CEDILLA to jump on top. Latin4 was followed by Latin6.
Cyrillic	ISO-8859-5	With these Cyrillic letters you can type Bulgarian (bg), Byelorussian (be), Macedonian (mk), Russian (ru), Serbian (sr) and pre-1990 (no ghe with upturn) Ukrainian (uk). The ordering is based on the (incompatibly) revised GOST 19768 of 1987 with the Russian letters except for ë sorted by Russian alphabet (ABVGDE).
Arabic	ISO-8859-6	This is the Arabic alphabet, unfortunately the basic alphabet for the Arabic (ar) language only and not containing the four extra letters for Persian (fa) nor the eight extra letters for Pakistani Urdu (ur). This fixed font is not well-suited for text display. Each Arabic letter occurs in up to four (2^2) presentation forms: initial, medial, final or separate. To make Arabic text legible you'll need a display engine that analyses the context and combines the appropriate glyphs on top of a handler for the reverse writing direction shared with Hebrew. The rendering algorithm is described in the Unicode book and I have implemented it in my arabjoin perl script.
Greek	ISO-8859-7	This is (modern monotonic) Greek (el) to me. ISO-8859-7 was formerly known as ELOT-928 or ECMA-118:1986.
Hebrew	ISO-8859-8	And this is the Hebrew script used by Hebrew (iw) and Yiddish (ji). Like Arabic it is written leftwards, so get your dusty old bidirectional typewriters out of the closet! We are promised to see a Bidirectional Algorithm Reference Implementation published as Unicode Technical Report #9 in the near future.
Latin5	ISO-8859-9	Latin5 replaces the rarely needed Icelandic letters ðýþ in Latin1 with the Turkish ones.
Latin6	ISO-8859-10	Introduced in 1992, Latin6 rearranged the Latin4 characters, dropped some symbols and the Latvian ŗ, added the last missing Inuit (Greenlandic Eskimo) and non-Skolt Sami (Lappish) letters and reintroduced the Icelandic ðýþ to cover the entire Nordic area. Skolt Sami still needs a few more accents. Note that RFC 1345 and GNU recode contain errors and use a preliminary and different latin6.

Thai	ISO-8859-11	The Thai TIS620 is likely to be published as ISO-8859-11 Latin/Thai (th). It contains some combining vowel and tone marks that have to be written above or below the consonants.
Latin7	ISO-8859-13	Latin7 is going to cover the Baltic Rim and re-establish the Latvian (lv) support lost in Latin6 and may introduce the local quotation marks. It resembles WinBaltic.
Latin8	ISO-8859-14	Latin8 adds the last Gaelic and Welsh (cy) letters to Latin1 to cover all Celtic languages
Latin9	ISO-8859-15	The new Latin9 nicknamed Latin0 aims to update Latin1 by replacing the less needed symbols ¦¨´¸¼½¾ with forgotten French and Finnish letters and placing the U+20AC Euro sign in the cell =A4 of the former international currency sign ¤.

Appendix F

Definition of legends used in register descriptions

Modbus R/W

- R = Read only
- R/W = Read/Write
- 3 = Read holding registers
- 16 = Write holding registers

Data types

- U16 = unsigned 16 bit value
- U32 = unsigned 32 bit value
- S32 = signed 32 bit value
- STR20 = String with 20 chars
- B16 = bit array
- F32 = 32 bit float value

Firmware

- Nothing = Valid for all versions
- Number = Valid for this and later revisions

General setup parameters

Name	Reg #	Modbus R/W	Type	FW	Description
Station ID	2	R/W 3/16	U16		Used for ID device in SCADA system (not used internally in device) Default is 0, not in use
RTU Name/ID Tag	7	R/W 3/16	STR 20		RTU Name / Location Name Default = "Chatter1" (1 Depends on Device ID)
Last Battery measurement	18	R 3	U16		Last battery measurement after use of modem for last call [mV] • 0 = Unknown / not updated yet • < 3000mV = Replace battery • 3500 - 3700mV = OK, but this value is depending on how long the last connection was.
MJK Serial No	28	R 3	U32		MJK serial no. identifying Chatter™ Data Logger when contacting MJK
GSM signal-strength	30	R 3	U16		0-31 (99 = Unknown or not ready yet)
Second	40	R/W 3/16	U16		ex 59 = 59sec (sec .. to year must be written in **one** telegram)
Minute	41	R/W 3/16	U16		
Hour	42	R/W 3/16	U16		
Day	43	R/W 3/16	U16		
Month	44	R/W 3/16	U16		
Year	45	R/W 3/16	U16		
Modem Online Time left	46	R/W 3/16	U16	850007	Modem time left for call at this time [sec] Restarted daily. If 0, the Chatter™ Data Logger is not allowed to make any calls before next daily reset

Digital input

Name	Reg 1	Reg 2	Reg 3	Reg 4	Modbus R/W	Type	FW	Description
DI last updated	298	298	298	298	R 3/16	U32		Last time that signal values was updated (UTC Time in seconds since 1970.1.1 and only signal that are enable)
DI1 - 4 Status register	300:0	300:1	300:2	300:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
DI1 - 4 Alarm register	301:0	301:1	301:2	301:3	R/W* 3/16	B16 offset		Bit value 0 = off, 1 = active / on
DI1 - 4 pulses total	302	306	310	314	R/W 3/16	U32		
DI1 - 4 pulses today	304	308	312	316	R/W 3/16	U16		
DI1 - 4 pulses yesterday	305	309	313	317	R/W 3/16	U16		

Analog input

Name	Reg 1	Reg 2	Reg 3	Reg 4	Modbus R/W	Type	FW	Description
AI last updated	398	398	398	398	R 3/16	U32		Last time that signal values was updated (UTC Time in seconds since 1970.1.1 and only signal that are enable)
AI1 - 4 Low limit status flag	400:0	400:1	400:2	400:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
AI1 - 4 High limit status flag	401:0	401:1	401:2	401:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
AI1 - 4 Low limit alarm flag	402:0	402:1	402:2	402:3	R/W* 3/16	B16 offset		Bit value 0 = off, 1 = active / on
AI1 - 4 High limit alarm flag	403:0	403:1	403:2	403:2	R/W* 3/16	B16 offset		Bit value 0 = off, 1 = active / on
AI1 - 4 scaled value	404	406	408	410	R 3/16	F32		
AI1 - 4 Low limit pulses total	412	432	452	472	R/W 3/16	U32		Number of active limit pulses
AI1 - 4 Low limit pulses today	414	434	454	474	R/W 3/16	U16		Number of active limit pulses
AI1 - 4 Low limit pulses yesterday	415	435	455	475	R/W 3/16	U16		Number of active limit pulses
AI1 - 4 High limit pulses total	416	436	456	476	R/W 3/16	U32		Number of active limit pulses
AI1 - 4 High limit pulses today	418	438	458	478	R/W 3/16	U16		Number of active limit pulses
AI1 - 4 High limit pulses yesterday	419	439	459	479	R/W 3/16	U16		Number of active limit pulses

INET input

Name	Reg 1	Reg 2	Reg 3	Reg 4	Modbus R/W	Type	FW	Description
INET Com error status flag.	796:0	796:1	796:2	796:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
INET Com error status flag.	797:0	797:1	797:2	797:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
INET Last updated	798	798	798	798	R 3/16	U32		Last time that signal values was updated (UTC Time in seconds since 1970.1.1 and only signal that are enable)
INET1 - 4 Low limit status flag	800:0	800:1	800:2	800:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
INET1 - 4 High limit status flag	801:0	801:1	801:2	801:3	R 3/16	B16 offset		Bit value 0 = off, 1 = active / on
INET1 - 4 Low limit alarm flag	802:0	802:1	802:2	802:3	R/W* 3/16	B16 offset		Bit value 0 = off, 1 = active / on
INET1 - 4 High limit alarm flag	803:0	803:1	803:2	803:3	R/W* 3/16	B16 offset		Bit value 0 = off, 1 = active / on
INET1 - 4 scaled value	804	806	808	810	R 3/16	F32		
INET1 - 4 Low limit pulses total	820	840	860	880	R/W 3/16	U32		Number of active limit pulses
INET1 - 4 Low limit pulses today	822	842	862	882	R/W 3/16	U16		Number of active limit pulses
INET1 - 4 Low limit pulses yesterday	823	843	863	883	R/W 3/16	U16		Number of active limit pulses
INET1 - 4 High limit pulses total	824	844	864	884	R/W 3/16	U32		Number of active limit pulses
INET1 - 4 High limit pulses today	826	846	866	886	R/W 3/16	U16		Number of active limit pulses
INET1 - 4 High limit pulses yesterday	827	847	867	887	R/W 3/16	U16		Number of active limit pulses

Deviation detect

Name	Reg #	Modbus R/W	Type	FW	Description
Updated	1900	R 3/16	U32	850008	Last time that signal values was updated (UTC Time in seconds since 1970.1.1 and only signal that are enable)
Now	1902	R 3/16	F32	850008	Last calculation in input signal unit
AVG now	1904	R 3/16	F32	850008	Average used for calculation of deviation detect
AVG next	1906	R 3/16	F32	850008	Average for next period for calculation of deviation detect (0 when period function is not used)
Status register	1908	R 3/16	U16	850008	Bit value 0 = off end 1 = active / on (Bit1 lsb - Bit16 msb) • Bit1 = 1 if fall rate alarm is active • Bit2 = 1 if rise rate alarm is active
Alarm register	1909	R/W* 3/16	U16	850008	Bit value 0 = off end 1 = active / on (Bit1 lsb - Bit16 msb) • Bit1 = 1 if fall rate alarm is active • Bit2 = 1 if rise rate alarm is active
Fall rate alarm pulses total	1910	R/W 3/16	U32	850008	Number of active pulses
Fall rate alarm pulses today	1912	R/W 3/16	U16	850008	Number of active pulses
Fall rate alarm pulses yesterday	1913	R/W 3/16	U16	850008	Number of active pulses
Rise rate alarm pulses total	1914	R/W 3/16	U32	850008	Number of active pulses
Rise rate alarm pulses today	1916	R/W 3/16	U16	850008	Number of active pulses
Rise rate alarm pulses yesterday	1917	R/W 3/16	U16	850008	Number of active pulses

Stormflow recording

Name	Reg #	Modbus R/W	Type	FW	Description
Stormflow pulses total	1000	R/W 3/16	U32		Number of active pulses
Stormflow pulses today	1002	R/W 3/16	U16		Number of active pulses
Stormflow pulses yesterday	1003	R/W 3/16	U16		Number of active pulses
Stormflow duration total	1004	R/W 3/16	U32		Duration in seconds
Stormflow duration today	1006	R/W 3/16	U32		Duration in seconds
Stormflow duration yesterday	1008	R/W 3/16	U32		Duration in seconds
Stormflow status register	1016	R 3/16	U16	850007	Bit value 0 = off end 1 = active / on (Bit1 lsb - Bit16 msb) • Bit1 = 1 if stormflow is active • Bit2 = 1 if stormflow Volume limit is active (Only firmware >= 850008 and >= 850052)
Stormflow alarm register	1017	R/W* 3/16	U16	850007	Bit value 0 = off end 1 = active / on (Bit1 lsb - Bit16 msb) • Bit1 = 1 if stormflow is active • Bit2 = 1 if stormflow Volume limit is active (Only firmware >= 850008 and >= 850052)

Stormflow measurement

Name	Reg #	Modbus R/W	Type	FW	Description
Flow last updated	980	R 3/16	U32	850007	Last time that signal values was updated (UTC Time in seconds since 1970.1.1 and only signal that are enable)
Flow	982	R 3/16	F32	850007	Last measured flow [l/s]
Flow input	984	R 3/16	F32	850007	Input value used for flow calculation [Unit is depending on user setup]
Stormflow volume total	1010	R/W 3/16	U32	850007	Volume in litres
Stormflow volume today	1012	R/W 3/16	U32	850007	Volume in litres
Stormflow volume yesterday	1014	R/W 3/16	U32	850007	Volume in litres

Stormflow log

Name - Log 1	Log 1	Log 2	Log 3	Log 4	Log 5	Log 6	Log 7	Log 8	Log 9	Log 10	Modbus R/W	Type	FW	Description
Start time	1100	1111	1122	1133	1144	1155	1166	1177	1188	1199	R 3/16	U32		UTC Time in sec. since 1970.1.1 **This value must always be read to sync log and to get newest value. If not, the rest of the values will never be updated. Changed in FW 850008 to be any value in Log 1 sync log to get newest value.**
Stop time	1102	1113	1124	1135	1146	1157	1168	1179	1190	1201	R 3/16	U32		UTC Time in sec. since 1970.1.1
Status register	1104	1115	1126	1137	1148	1159	1170	1181	1192	1203	R 3/16	U16		Bit value 0 = off end 1 = active / on (Bit1 lsb - Bit16 msb) • Bit1 = 1 if detected a flow Input value is above flow convert table range
Pulses	1105	1116	1127	1138	1149	1160	1171	1182	1193	1204	R/W 3/16	U32		Number of active pulses
Duration	1107	1118	1129	1140	1151	1162	1173	1184	1195	1206	R/W 3/16	U32		Stormflow ON duration [sec]
Volume	1109	1120	1131	1142	1153	1164	1175	1186	1197	1208	R/W 3/16	U32		Stormflow volume [litres]

Name - Log 1 as ydmhms	Log 1	Log 2	Log 3	Log 4	Log 5	Log 6	Modbus R/W	Type	FW	Description
Start time seconds (UTC / Local)	1300	1319	1338	1357	1376	1395	R 3/16	U16	850007	ex 59 = 59sec **This Value must always be read to sync log and get newest value. If not, the rest of the values will never be updated. Change in FW 850008 to be any value in Log 1 sync log to get newest value.**
Start time minute (UTC / Local)	1301	1320	1339	1358	1377	1396	R 3/16	U16	850007	
Start time hour (UTC / Local)	1302	1321	1340	1359	1378	1397	R 3/16	U16	850007	
Start time day (UTC / Local)	1303	1322	1341	1360	1379	1398	R 3/16	U16	850007	
Start time month (UTC / Local)	1304	1323	1342	1361	1380	1399	R 3/16	U16	850007	
Start time year (UTC / Local)	1305	1324	1343	1362	1381	1400	R 3/16	U16	850007	
Stop time seconds (UTC / Local)	1306	1325	1344	1363	1382	1401	R 3/16	U16	850007	ex 59 = 59sec
Stop time minute (UTC / Local)	1307	1326	1345	1364	1383	1402	R 3/16	U16	850007	
Stop time hour (UTC / Local)	1308	1327	1346	1365	1384	1403	R 3/16	U16	850007	
Stop time day (UTC / Local)	1309	1328	1347	1366	1385	1404	R 3/16	U16	850007	
Stop time month (UTC / Local)	1310	1329	1348	1367	1386	1405	R 3/16	U16	850007	
Stop time year (UTC / Local)	1311	1330	1349	1368	1387	1406	R 3/16	U16	850007	
Status register	1312	1331	1350	1369	1388	1407	R 3/16	U16	850007	Bit value 0 = off end 1 = active / on (Bit1 lsb - Bit16 msb) • Bit1 = 1 if detected a Flow Input is over flow convert table range
Pulses	1313	1332	1351	1370	1389	1408	R/W 3/16	U32	850007	Number of active pulses
Duration	1315	1334	1353	1372	1391	1410	R/W 3/16	U32	850007	Stormflow ON duration [sec]
Volume	1317	1336	1355	1374	1393	1412	R/W 3/16	U32	850007	Stormflow volume [litres]

Data logger

General

Newest log-value *
A Log Value must be read in an single Telegram.
It is not possible to break up reading first part of the value in first telegram and Last part in the next
* What signal that is read from signal A, B, C, D is configured with "840140 MJK Chatter Link"
* If log value is missing maybe because log interval is not 5 min , then the value before is returned (a newer one)
Firmware <= 850008-001 (ONLY SUPPORT READ FROM OFFSET 0)
* Every read of the first record (Value or time) in logdata ("newest") will shift all data to the start with the newest logdata.
* Reading logs after first record, will only resulting in getting "newest" last position - this loginterval offset
Firmware >= 850008-002 (SUPPORT random read / reverse read from oldest to newest)
* Every read will sync log offset time = time now - Log interval * offset. (offset is starting at 0)

Name	Reg #	Modbus R/W	Type	FW	Description
Signal A signal type	1996	R/W 3/16	U16		Signal type to show log for : 0 = None, 1 = AI,2 = INET, 3 = Flow
Signal A signal number	1997	R/W 3/16	U16		Signal number selection: 0 = DI1,AI1,INET1, Flow[L/s] .., 3 = DI4,AI4,INET4
Signal A log interval	1998	R/W 3/16	U32		Interval between logs
Signal A log time	2000	R/W 3/16	U32		Log time UTC for newest Log value (To sync. SCADA with actual log time)
Signal A log value1 start address	2002	R/W 3/16	32 bit/16 bit		**Newest log-value ***
Signal A log value576 stop address 32Bit	3152	R/W 3/16	32 bit		Oldest log value 32 bit (Depending on signal log setup)
Signal A log value1152 stop address 16Bit	3153	R/W 3/16	16 bit		Oldest log value 16 bit (Depending on signal log setup)
Signal B signal type	3196	R/W 3/16	U16		Signal type to show log for : 0 = None, 1 = AI,2 = INET, 3 = Flow
Signal B signal number	3197	R/W 3/16	U16		Signal number selection: 0 = DI1,AI1,INET1, Flow[L/s] .., 3 = DI4,AI4,INET4
Signal B log interval	3198	R/W 3/16	U32		Interval between logs
Signal B log time	3200	R/W 3/16	U32		Log time UTC for newest Log value (To sync. SCADA with actual log time)
Signal B log value1 start address	3202	R/W 3/16	32 bit/16 bit		**Newest log-value ***
Signal B log value576 stop address 32Bit	4352	R/W 3/16	32 bit		Oldest log value 32 bit (Depending on signal log setup)
Signal B log value1152 stop address 16Bit	4353	R/W 3/16	16 bit		Oldest log value 16 bit (Depending on signal log setup)
Signal C signal type	4396	R/W 3/16	U16		Signal type to show log for : 0 = None, 1 = AI,2 = INET, 3 = Flow
Signal C signal number	4397	R/W 3/16	U16		Signal number selection: 0 = DI1,AI1,INET1, Flow[L/s] .., 3 = DI4,AI4,INET4
Signal C log interval	4398	R/W 3/16	U32		Interval between logs
Signal C log time	4400	R/W 3/16	U32		Log time UTC for newest Log value (To sync. SCADA with actual log time)
Signal C log value1 start address	4402	R/W 3/16	32 bit/16 bit		**Newest log-value ***
Signal C log value576 stop address 32Bit	5552	R/W 3/16	32 bit		Oldest log value 32 bit (Depending on signal log setup)
Signal C log value1152 stop address 16Bit	5553	R/W 3/16	16 bit		Oldest log value 16 bit (Depending on signal log setup)
Signal D signal type	5596	R/W 3/16	U16		Signal type to show log for : 0 = None, 1 = AI,2 = INET, 3 = Flow
Signal D signal number	5597	R/W 3/16	U16		Signal number selection: 0 = DI1,AI1,INET1, Flow[L/s] .., 3 = DI4,AI4,INET4
Signal D log interval	5598	R/W 3/16	U32		Interval between logs
Signal D log time	5600	R/W 3/16	U32		Log time UTC for newest Log value (To sync. SCADA with actual log time)
Signal D log value1 start address	5602	R/W 3/16	32 bit/16 bit		**Newest log-value ***
Signal D log Value576	6752	R/W 3/16	32 bit		Oldest log value 32 bit (Depending on signal

Alarm history

Name	Alm 1	Alm 2	Alm 3	Alm 4	Alm 5	Alm 6	Alm 7	Alm 8	Modbus R/W	Type	FW	Description
Info Text	21300	21344	21388	21432	21476	21520	21564	21608	R 16	STR 64		User for standard alarm texts like ex. 'DI1' or 'Stormflow limit'. **This value must always be read to sync log and get newest value. Else the rest of the values will never be updated.**
Start time seconds (UTC / Local)	21332	21376	21420	21464	21508	21552	21596	21640	R 16	U16		ex 59 = 59sec
Start time minute (UTC / Local)	21333	21377	21421	21465	21509	21553	21597	21641	R 16	U16		
Start time hour (UTC / Local)	21334	21378	21422	21466	21510	21554	21598	21642	R 16	U16		
Start time day (UTC / Local)	21335	21379	21423	21467	21511	21555	21599	21643	R 16	U16		
Start time month (UTC / Local)	21336	21380	21424	21468	21512	21556	21600	21644	R 16	U16		
Start time year (UTC / Local)	21337	21381	21425	21469	21513	21557	21601	21645	R 16	U16		
Stop time seconds (UTC / Local)	21338	21382	21426	21470	21514	21558	21602	21646	R 16	U16		ex 59 = 59sec
Stop time minute (UTC / Local)	21339	21383	21427	21471	21515	21559	21603	21647	R 16	U16		
Stop time hour (UTC / Local)	21340	21384	21428	21472	21516	21560	21604	21648	R 16	U16		
Stop time day (UTC / Local)	21341	21385	21429	21473	21517	21561	21605	21649	R 16	U16		
Stop time month (UTC / Local)	21342	21386	21430	21474	21518	21562	21606	21650	R 16	U16		
Stop time year (UTC / Local)	21343	21387	21431	21475	21519	21563	21607	21651	R 16	U16		

Letter of conformity

Konformitetserklæring
Vi, MJK Automation A/S,
DK-2850 Nærum,
påtager os det fulde ansvar for at produktet som denne erklæring angår, er i overensstemmelse med følgende standard(er) eller andre normdokument(er).

EN61000-6-1:2007
EN61000-6-3:2007
efter bestemmelserne i direktiv 2004/108/EC

Chatter Data Logger

Declaration of Conformity
We, MJK Automation A/S,
DK-2850 Nærum,
declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standard(s) or other normative document(s).

EN61000-6-1:2007
EN61000-6-3:2007
following the provisions of Directive 2004/108/EC

Chatter Data Logger

Konformitätserklärung
Wir, MJK Automation A/S,
DK-2850 Nærum,
erklären in alleiniger Verantwortung, dass das Produkt auf das sich diese Erklärung bezieht mit der/den folgenden Nor me(en) oder normativen Dokument(en) übereinstimmt.

EN61000-6-1:2007
EN61000-6-3:2007
Gemäss den Bestimmungen der Richtlinie 2004/108/EC

Chatter Data Logger

Declaration de conformite
Nous, MJK Automation A/S,
DK-2850 Nærum,
déclarons sous notre seule responsabilité que le produit auquel se réfère cette déclaration est conforme á la (aux) norme(s) ou autre(s) document(s) normatif(s)

EN61000-6-1:2007
EN61000-6-3:2007
conformément aux dispositions de Directive 2004/108/EC

Chatter Data Logger

Dichiarazione di conformità
Noi, MJK Automation A/S,
DK-2850 Nærum,
dichiariamo sotto la nostra esclusiva responsabilità che l'apparecchio al quale questa dichiarazione si riferisce, è conforme alla seguente normativa(e) standard o ad altri documenti di normativa(e)

EN61000-6-1:2007
EN61000-6-3:2007
conformemente alla disposizioni della Direzione 2004/108/EC



Chatter Data Logger

Declaración de Conformidad
Nosotros, MJK Automation A/S,
DK-2850 Nærum,
declaramos bajo nuestra única responsabilidad que el producto al cual se refiere esta declaración, está en conformidad con la(s) siguente(e) norma(s) u otros documentos normativos

EN61000-6-1:2007
EN61000-6-3:2007
según las disposiciones de la(s) directiva(s) 2004/108/EC

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