

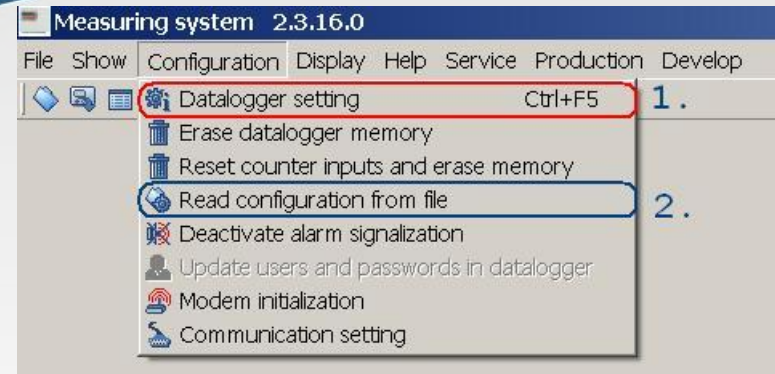


Monitoring systems COMET types MS55 & MS6

MS55/MS6 Configuration



Monitoring Systems COMET types MS55 & MS6



MS settings can be made:

- Using software for MS COMET.
- Direct communication with MS (1.).
- Non-Direct – editing file in PC and its later saving to MS(2.).

Each downloaded file with record contains a complete MS configuration, which can be edited, saved on hard-disc and when needed return back to MS.

Monitoring Systems COMET types MS55 & MS6

1. MS name (required) :

MS data logger

Data folder

Settings [MS55D_JN2011]

Common | Communication | Profile | Advanced option

Type and identification of datalogger

Name: **MS55D_JN2011**

Serial number: 11550002

Type: MS55D FW:5.5.3

Data memory: 2 MB

Date and time in datalogger: 10.2.2012 9:42:1

Communication - device selection

Name	Serial number	Device
MS55D_JN2011	11550002	EM111
MS6 Board	11550001	EM211
EMC004	11550014	EM104

Display mode - device selection

Measuring system 2.3.16.0

File Show Configuration Display Help Service Production De

Display [Entry time: 5.3.2012 9:07:46, Interval: 1 min.]

Meteo_station: **MS55D_JN2011**

Nr	Channel name	R	Value	Unit	I	II	F
1	1: Tiek	<input checked="" type="checkbox"/>	Chyba 1	hPa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Kanal 2: DC I	<input checked="" type="checkbox"/>	19.565	mA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Kanal 3: DC U	<input checked="" type="checkbox"/>	-8.406	V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Kanal 4: DC U	<input checked="" type="checkbox"/>	3.699	V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Kanal 5: T TK	<input checked="" type="checkbox"/>	37.5	°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Kanal 6: T Pt	<input checked="" type="checkbox"/>	27.4	°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

data logger's web pages

MS55D_JN2011

Main menu | Single | Mobile

Channels

System status

About

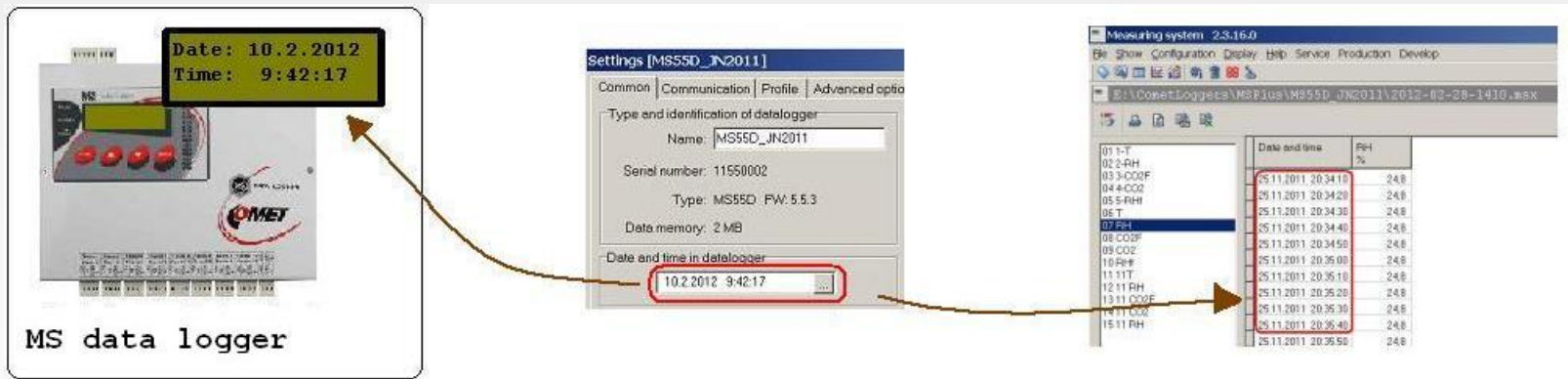
Remove cond

Online channels

Nr.	Channel name	R	Value
1	1: Tiek	<input checked="" type="checkbox"/>	Error 1
2	Kanal 2: DC I	<input checked="" type="checkbox"/>	19.472
3	Kanal 3: DC U	<input checked="" type="checkbox"/>	-8.406
4	Kanal 4: DC U	<input checked="" type="checkbox"/>	3.698
5	Kanal 5: T TK	<input checked="" type="checkbox"/>	37.5
6	Kanal 6: T Pt	<input checked="" type="checkbox"/>	27.5

Monitoring Systems COMET types MS55 & MS6

2. MS Time&Date settings (required):



- This setting affects all MS timing.
- It is necessary to delete whole record after changing MS date and time.
- Seasonal time change is not support.

Monitoring Systems COMET types MS55 & MS6

3. Process Setting (use if required):

1. Common settings
Processes name definition

Process Nr.	Label
1	Process 1
2	Flitch
3	Process 3
4	Process 4
5	Process 5
6	Process 6
7	Process 7
8	Process 8
9	Empty
10	Process 10
11	Process 11
12	Process 12
13	Process 13
14	Process 14
15	Smoked ham
16	Salami

2. Channel settings
Assign of processes to MS input channel

3. MS data logger
Choosing of process name

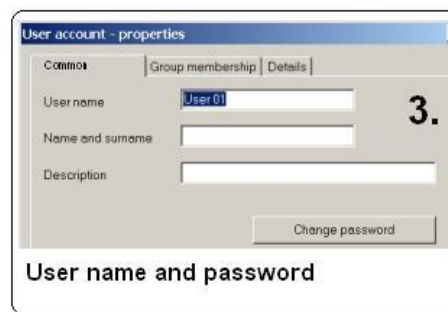
4. Recorded data table

Chann. T	Date and time	Chann. T °C	Process
02 Kanal 2: Flitch			
03 Kanal 3: P			
04 Kanal 4: DC I	23.01.2012 07:17:57	124.1	flitch
05 Kanal 5: DC I	23.01.2012 07:17:58	124.1	flitch
06 Kanal 6: DC I	23.01.2012 07:17:59	124.1	flitch
07 Kanal 7: DC I	23.01.2012 07:18:00	124.1	flitch
08 Kanal 8: DC I	23.01.2012 07:18:00	124.1	flitch
09 Kanal 9: DC I	23.01.2012 07:18:01	124.1	smoked ham
10 Kanal 10: DC I	23.01.2012 07:18:02	124.1	smoked ham
11 Kanal 11: DC I	23.01.2012 07:18:03	124.1	smoked ham
12 Kanal 12: DC I	23.01.2012 07:18:04	124.1	smoked ham
13 Kanal 13: DC I	23.01.2012 07:18:05	124.1	smoked ham
14 Kanal 14: DC I	23.01.2012 07:18:06	124.1	smoked ham
15 Chann.15: Smok	23.01.2012 07:18:07	124.1	smoked ham
16 Kanal 16: DC I	23.01.2012 07:18:08	124.1	smoked ham
17 Alarm OUT	23.01.2012 07:18:09	124.1	smoked ham
	23.01.2012 07:18:10	124.1	smoked ham
	23.01.2012 07:18:11	124.1	smoked ham
	23.01.2012 07:18:12	124.1	smoked ham
	23.01.2012 07:18:13	124.1	smoked ham
	23.01.2012 07:18:14	124.1	smoked ham
	23.01.2012 07:18:15	124.1	smoked ham
	23.01.2012 07:18:16	124.1	smoked ham
	23.01.2012 07:18:17	124.1	smoked ham
	23.01.2012 07:18:18	124.1	smoked ham
	23.01.2012 07:18:19	124.1	smoked ham
	23.01.2012 07:18:20	124.1	smoked ham
	23.01.2012 07:18:21	124.1	smoked ham
	23.01.2012 07:18:22	124.1	smoked ham
	23.01.2012 07:18:23	124.1	smoked ham
	23.01.2012 07:18:24	124.1	smoked ham
	23.01.2012 07:18:25	124.1	salami
	23.01.2012 07:18:26	124.1	salami
	23.01.2012 07:18:27	124.1	salami

Processes allows to mark part of record with additional text. They are used to subscribe parts of ongoing process with default text when the user needs.

Monitoring Systems COMET types MS55 & MS6

4. MS Security Settings (use if required):

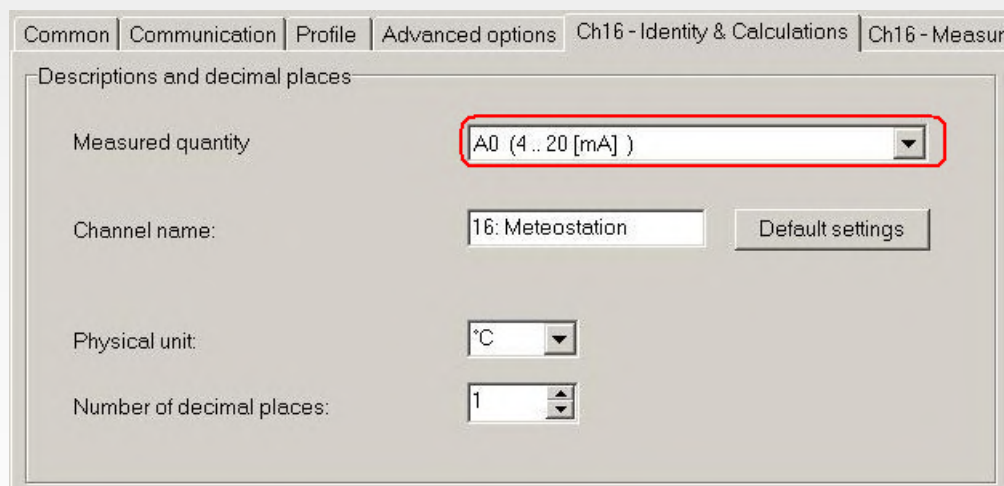


After turning on the security, the username and password will be required at the beginning of communication. For alarm deactivation could be used unique PIN code for each user. In record is possible to recognize which user was deactivating the alarm. Login information can be stored in PC optionally.

Software adjusting is doing in menu File – Options – Users and passwords. All changes from keyboard is possible to protect by PIN2 code (unrelated to user).

Monitoring Systems COMET types MS55 & MS6

5. Measured input value (required settings):



The screenshot shows a software configuration window titled 'Ch16 - Measur'. The window has several tabs: 'Common', 'Communication', 'Profile', 'Advanced options', 'Ch16 - Identity & Calculations', and 'Ch16 - Measur'. The 'Ch16 - Measur' tab is active. Below the tabs, there is a section titled 'Descriptions and decimal places'. This section contains four fields: 'Measured quantity' with a dropdown menu showing 'A0 (4.. 20 [mA])' (highlighted with a red box), 'Channel name' with a text box containing '16: Meteostation' and a 'Default settings' button, 'Physical unit' with a dropdown menu showing '°C', and 'Number of decimal places' with a spinner box showing '1'.

Select measured value according to connected hardware. MS55 type is limited only to fitted input modules.

For some inputs types (eg. Counters, RS485 input etc.) are available any other settings. Detailed description you can find in manual.

Monitoring Systems COMET types MS55 & MS6

6. Input identification (required settings):

The image illustrates the input identification process for a COMET MS55 board. It consists of several interconnected components:

- MS Data logger:** A photograph of the physical device with a digital display showing "7: T Meteostation 11.2 °C".
- Configuration Window:** A screenshot of the "Ch16 - Identity & Calculations" settings. Key fields include:
 - Measured quantity: A0 (4..20 [mA])
 - Channel name: 16: Meteostation
 - Physical unit: °C
 - Number of decimal places: 1
- Data logger's web pages:** A screenshot of the "MS55 Board" web interface showing a table of "Online channels". Channel 16 is highlighted with a red box, showing its name "Meteostation" and unit "°C".
- Online monitoring - Display mode:** A screenshot of the real-time monitoring interface. Channel 16 is highlighted with a red box, showing a value of "4.6 °C".
- Record table:** A screenshot of a data log table with columns for "Date/Time", "Channel 1: DC U", "Channel 2: Stav", "Channel 3: Clac", "Channel 4: Freq", "Channel 5: Ext", "Channel 6: Meteostation", and "Alarm OUT". The "Channel 6: Meteostation" column is highlighted with a red box.

Choose the name of input channel and assign physical unit and number of decimals.

Monitoring Systems COMET types MS55 & MS6

7. Conversions – user calibration (use if needed):

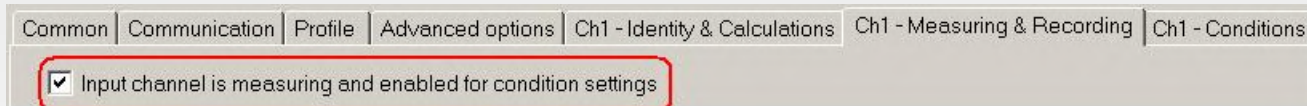
The screenshot shows the 'Settings [MS55 Board]' window with the 'Ch16 - Identity & Calculations' tab selected. The 'Descriptions and decimal places' section includes a dropdown for 'Measured quantity' set to 'A0 (4..20 [mA])', a text field for 'Channel name' containing '16: Meteostation', a dropdown for 'Physical unit' set to '°C', and a spinner for 'Number of decimal places' set to '1'. The 'Recalculation' section is highlighted with a red border and contains a checked checkbox 'Recalculate measured value'. Below this are two calibration points: the first has an 'Input value' of '4.00' and 'will be shown as' '-30.00 °C'; the second has an 'Input value' of '20.00' and 'will be shown as' '80.00 °C'.

Using two-point user calibration may be done conversion of measured value to expected output value. Setting parameters is depended to parameters of connected sensor.

Monitoring Systems COMET

types MS55 & MS6

8. Measuring and record (required settings):



For acquisition and process of measured values on specific channel it is necessary to enable its measurement.

It is necessary to enable suitable record type for recording of measured values:

- Continuous recording with a constant interval – measured values are stored into a MS memory with this interval.
- Conditional record with continuous interval – record runs only if selected condition which can be deduced from exceeded of measured values on this channel, on other channel, time or is manually set by user is performed.
- Sample record – only the measured value and time of condition change is recorded

Time limit of record process (global, daily) can be set for all record types. Conditions and its combinations are set similarly as in alarms.

Monitoring Systems COMET types MS55 & MS6

8.1. Examples of record :

Date and time	Channel 1: T[°C]
1.1.2009 08:00:00	23,8
1.1.2009 08:30:00	24,5
1.1.2009 09:00:00	26,8
1.1.2009 09:30:00	33,2
1.1.2009 10:00:00	37,5
1.1.2009 10:30:00	42,3
1.1.2009 11:00:00	45,1
1.1.2009 11:30:00	45,2
1.1.2009 12:00:00	44,1
1.1.2009 12:30:00	40,1
1.1.2009 13:00:00	35,2
1.1.2009 13:30:00	30,1

Continuous record

Date and time	Channel 10: T[°C]
1.1.2009 10:55:00	40,1
1.1.2009 11:00:00	41,3
1.1.2009 11:05:00	40,2
1.1.2009 11:30:00	40,3
1.1.2009 11:35:00	42,5
1.1.2009 11:40:00	40,1

Conditional record

Date and time	Channel 1: T[°C]
1.1.2009 08:01:11	23,8
1.1.2009 08:40:23	24,5
1.1.2009 09:05:07	26,8
1.1.2009 09:12:44	33,2
1.1.2009 10:08:09	37,5
1.1.2009 10:32:48	42,3

Sampled record

Date and time	Channel 1: T[°C]	
1.1.2009 08:00:00	23,8	continuous
1.1.2009 08:30:00	24,5	continuous
1.1.2009 09:00:00	26,8	continuous
1.1.2009 09:30:00	33,2	continuous
1.1.2009 10:00:00	37,5	continuous
1.1.2009 10:30:00	39,3	continuous
1.1.2009 10:55:00	40,1	conditional
1.1.2009 11:00:00	41,3	continuous + conditional
1.1.2009 11:05:00	40,2	conditional
1.1.2009 11:30:00	40,3	continuous + conditional
1.1.2009 11:35:00	42,5	conditional
1.1.2009 11:40:00	40,1	conditional
1.1.2009 12:00:00	34,1	continuous
1.1.2009 12:30:00	30,1	continuous
1.1.2009 13:00:00	25,2	continuous
1.1.2009 13:30:00	20,1	continuous

Continuous + sampled record combination

Different types of record can be operated simultaneously and this can be used eg. for detailed mapping of conditions where the measured values exceed the specified limits.

Monitoring Systems COMET

types MS55 & MS6

9. Conditions:

- Conditions must be set if we use the alarm or if we need to change record only under certain circumstances.
- Conditions must be set, if we use alarms or if we need record only under certain conditions.
- Its a conditions derived either from measured values, from time or are set remotable by user (from PC or via SMS)
- The condition can take one of two states (valid / invalid).
- Using conditions alarms are evaluated and record is activated.
- Up to 4 different conditions can be defined on each channel.

Monitoring Systems COMET types MS55 & MS6

9.1. Example conditions derived from the measured values:

Condition 1

Start of validity: > °C for the duration of s

End of validity: value returns back with hysteresis °C expires s

In the case of input error (measured value is not available):

- The condition is valid, if input value exceeds 170°C and this state persist at least 30 seconds. Condition expire immediately if the temperature drops below 168°C.
- Termination of condition may be depended on time, on measured value or on its combination
- In case, that error value will be measured, is possible to choose from several options how to respond state conditions.
- Detailed description including graphs you can find in the manual.

Monitoring Systems COMET

types MS55 & MS6

9.2. Example of condition derived from the time:

Condition 1

Start of validity:

valid daily in time interval

from to

valid only in interval

from
to

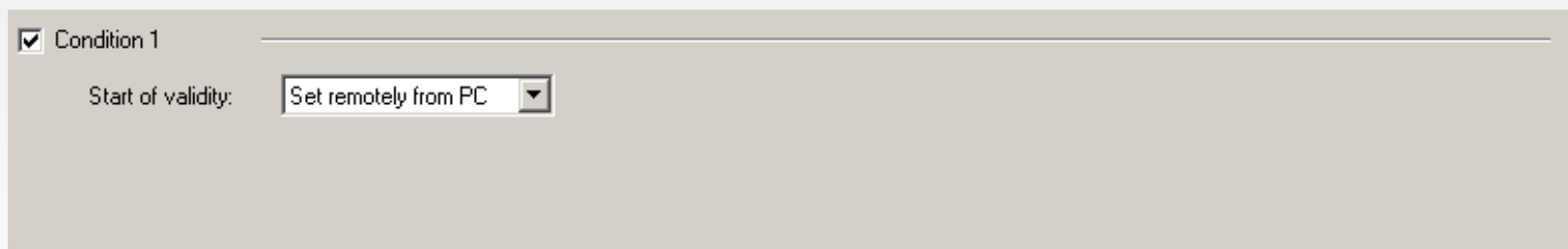
valid on selected days

<input checked="" type="checkbox"/> Monday	<input checked="" type="checkbox"/> Friday
<input checked="" type="checkbox"/> Tuesday	<input type="checkbox"/> Saturday
<input checked="" type="checkbox"/> Wednesday	<input type="checkbox"/> Sunday
<input checked="" type="checkbox"/> Thursday	

- The condition is valid, if the current date and time fulfill selected criteria.
- Termination of condition occurs immediately, if these criteria are not longer valid.

Monitoring Systems COMET types MS55 & MS6

9.3. Examples of conditions, set by user:



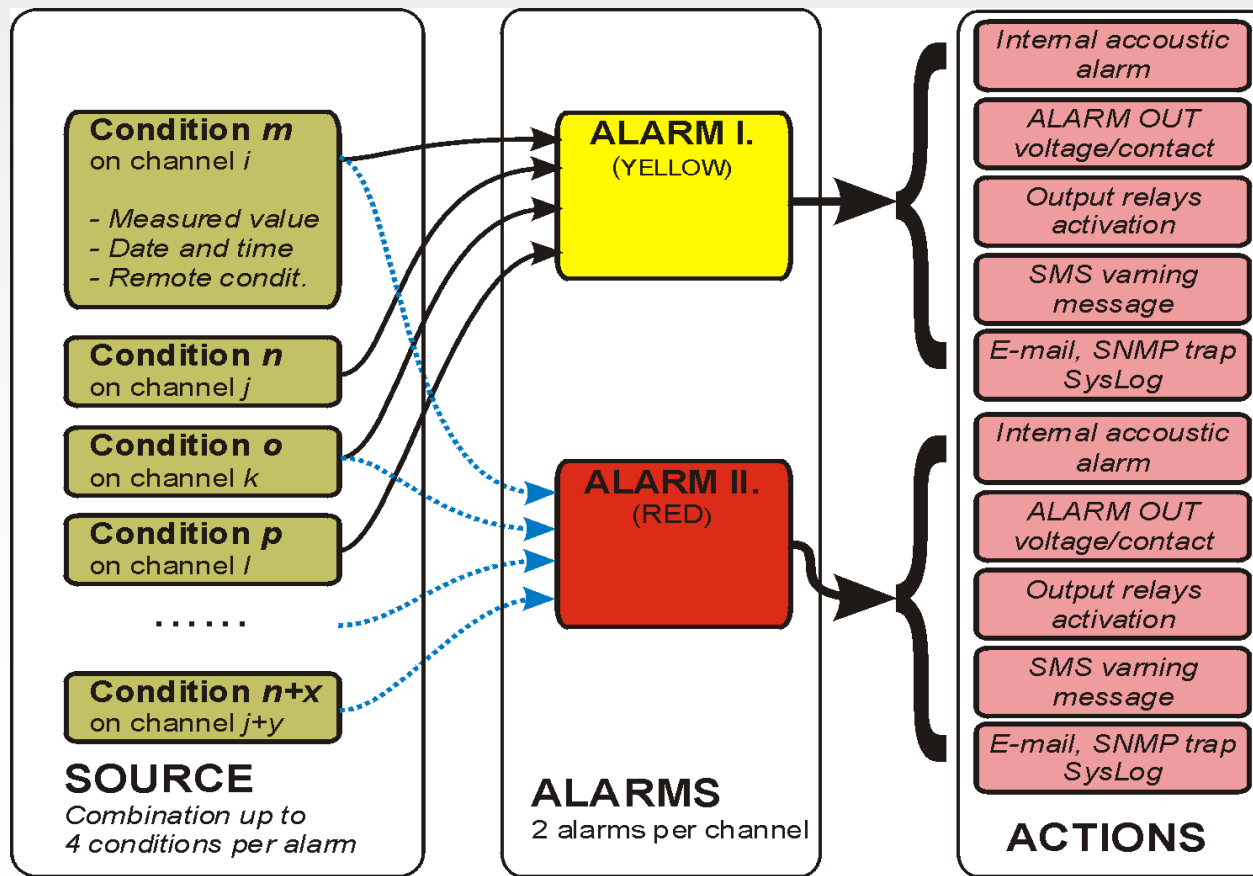
Condition 1

Start of validity: Set remotely from PC

- Condition can be set in a running mode Display
- It is necessary to set users PIN, if users and password administration is enabled.
- Condition can be controlled using SMS messages in case of setting this condition and connecting to GSM modem. Users PIN code is necessary to set.

Monitoring Systems COMET types MS55 & MS6

10. Alarm creation on input channels:



Monitoring Systems COMET

types MS55 & MS6

10.1. Examples of assignment alarms conditions:

- Assignment of 1 condition

Settings [DataLogger]

Communication | Profile | Advanced options | Ch6 - Identity & Calculations | Ch6 - Measuring & Recording | Ch6 - Conditions | Ch6 - Alarms & Signalization

Alarm 1

Alarm will be activated, when valid:

Condition 1 on this channel

- Assignment of combined conditions

Settings [DataLogger]

Communication | Profile | Advanced options | Ch6 - Identity & Calculations | Ch6 - Measuring & Recording | Ch6 - Conditions | Ch6 - Alarms & Signalization

Alarm 1

Alarm will be activated, when valid:

(1@6 OR 2@4) AND (1@2 OR 2@6)

Condition Expression Editor

Simple Condition

Condition 1

Simple condition consists of one condition available on actual channel.

Condition List

Condition Nr.	Channel Nr.	Operator
(1	@ 6	OR
2	@ 4) AND
(1	@ 2	OR
2	@ 6)

Add

Remove

Remove All

Condition list consists of combination up to four conditions available on all channels.

Condition Expression: (1@6 OR 2@4) AND (1@2 OR 2@6)

Original OK Cancel

Monitoring Systems COMET types MS55 & MS6

10.2. Actions in case of alarm:

Alarm 1

Alarm will be activated, when valid:

Condition 1 on this channel

Activated alarm switch on yellow LED (I.) on this channel and following actions will be executed:

- activate internal acoustic signalization
- activate ALARM OUT signalization

Switch ON output relay no.:

<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input checked="" type="checkbox"/> 16

Send SMS message to phone numbers:

<input checked="" type="checkbox"/>	+420156324779
<input type="checkbox"/>	+421256897663

Send e-mail message to addresses:

<input checked="" type="checkbox"/>	test@cometsystem.cz
<input checked="" type="checkbox"/>	my.name@gmail.com

1. Possibility of activation an internal signaling.
2. Possibility of activation ALARM OUT output.
3. Possibility to swith selected relays on added relay output.
4. Possibility to send warning SMS via connected GSM modem.
5. Possibility to send warning email via Ethernet interface.

Monitoring Systems COMET types MS55 & MS6

10.3. Internal acoustic signalization:

Common | Communication | Profile | Advanced options

Alarm signalization

- Internal acoustic alarm signalization
- ALARM OUT signalization
- Recording of ALARM OUT state changes
- Recording of all alarms changes
- Full memory acoustic signalization (100%)

- Global turn-on using bookmark Profile, possibility of full memory signalization

Alarm 1

Alarm will be activated, when valid:

Condition 1 on this channel

Activated alarm switch on yellow LED (I.) on this channel

- activate internal acoustic signalization

- Each alarm turn-on

Common | Communication | Profile | Advanced options | Ch1 - Identity & Calculations | Ch1 - Measuring & Recording | Ch1 -

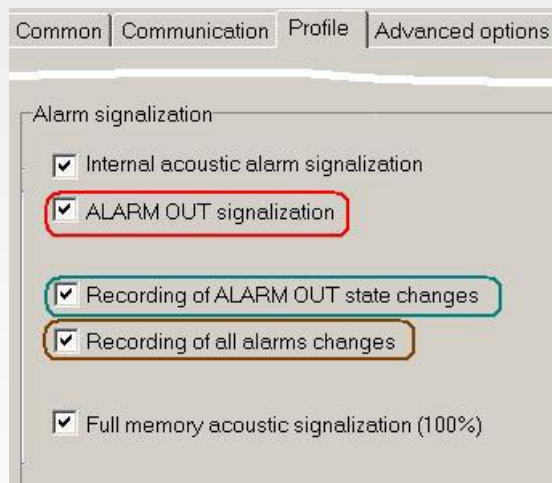
Confirmation of alarm signalization

- by Enter key
- by menu
- from computer

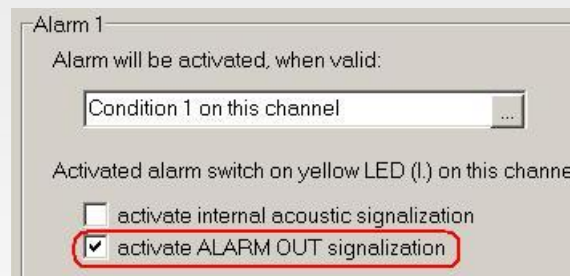
- ALARM OUT output and its acoustic alarm can be deactivated by operator.

Monitoring Systems COMET types MS55 & MS6

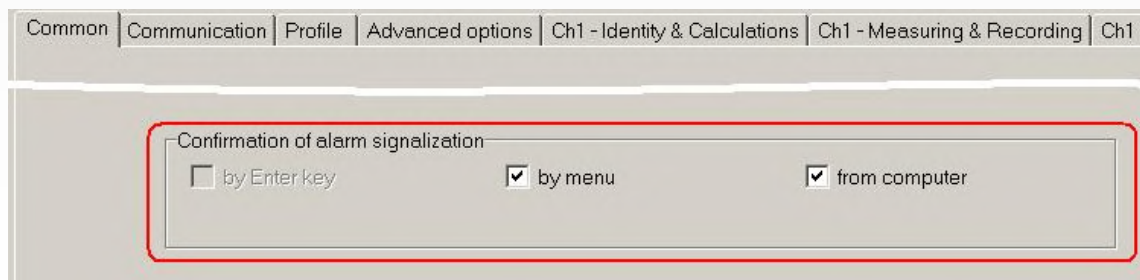
10.4. ALARM OUT output:



- Global turn-on using bookmark Profile, possibility of alarm record



- Each alarm turn-on



- ALARM OUT output and its acoustic alarm can be deactivated by operator. ALARM OUT may act inversely - the settings on bookmark Advanced

Monitoring Systems COMET

types MS55 & MS6

10.5. Output relays module:

Alarm 1

Alarm will be activated, when valid:

Condition 1 on this channel

Activated alarm switch on yellow LED (I) on this channel and following actions

activate internal acoustic signalization

activate ALARM OUT signalization

Switch ON output relay no.:

<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8
<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input checked="" type="checkbox"/> 16

- Any of 16 output relays can be switched in case of alarm.
- Each relay can be controlled by any number of alarms.
- Relay are active when alarm persists. It can be deactivated only using remote alarm condition, not by the operator.

Monitoring Systems COMET types MS55 & MS6

10.6. Warning SMS messages:

Settings [Data Logger]

Communication | Profile | Advanced options | Ch1 - Identity & Calculations | C

Datalogger responds to incoming SMS messages

Datalogger sends SMS message when selected alarms are activated

1. It is necessary to allow SMS on Communication bookmark. GSM modem must be connected to MS.

Communication | Profile | Advanced options | Ch1 - Identity & Calculations | Ch1 - Measuring & Rec

SMS phone number list

+420156324779 +421256897663

2. It is necessary to define phone numbers of dialed participants.

3. It is necessary to define phone numbers of dialed participants on Alarms bookmark.

Alarm 1

Alarm will be activated, when valid:

Condition 1 on this channel

Activated alarm switch on yellow LED (!) on this channel and following actions will be executed:

activate internal acoustic signalization

activate ALARM OUT signalization

Switch ON output relay no.:

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15 16

Send SMS message to phone numbers:

+420156324779

+421256897663

Send e-mail message to addresses:

test@cometsystem.cz

my.name@gmail.com

Monitoring Systems COMET types MS55 & MS6

10.7. Warning e-mails:

The first screenshot shows the 'Communication' bookmark with the 'Advanced options' sub-tab selected. Under 'Ethernet options', the 'Send warning e-mails' checkbox is checked and highlighted with a red box. Other options like 'Send traps' and 'Syslog' are also checked.

The second screenshot shows the 'E-mails (1)' sub-tab. The 'SMTP server' section is highlighted with a red box, showing the 'SMTP server IP address' set to '62.141.16.108' and '25'. The 'SMTP authentication' section is also visible with fields for 'User name' and 'Password'.

The third screenshot shows the 'E-mails (2)' sub-tab. The 'Recipient e-mail' section is highlighted with a red box, showing three recipient addresses: 'test@cometsystem.cz', 'my.name@gmail.com', and an empty field. The 'Sender' is set to 'info@cometsystem.cz'.

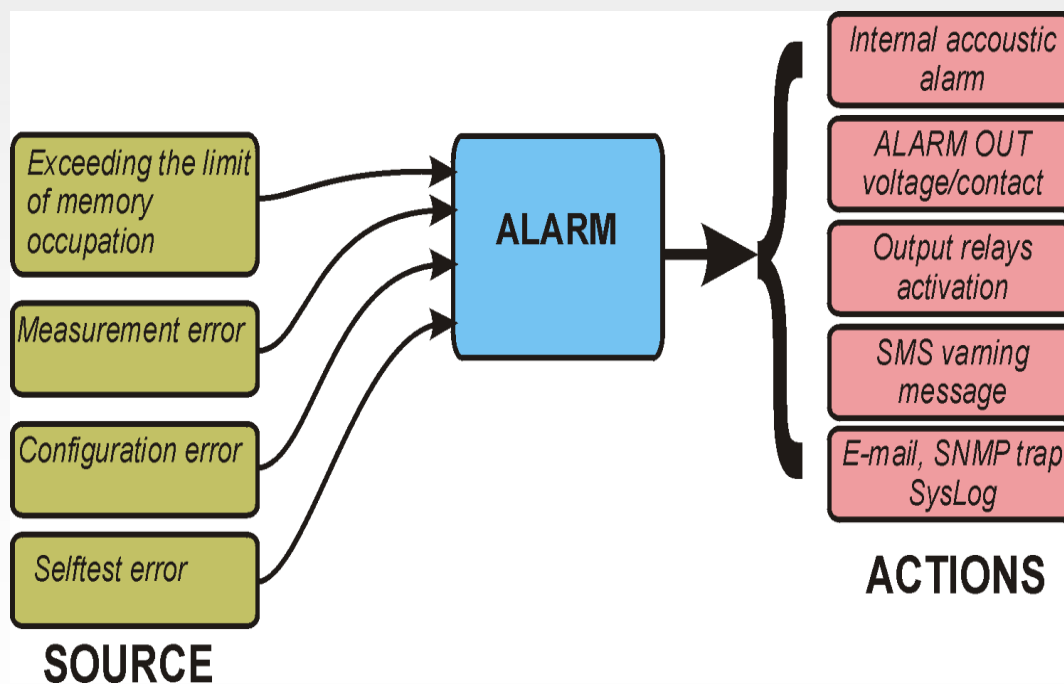
1. It is necessary to allow emails and define another configuration on Communication bookmark.

The 'Alarm 1' configuration page shows the 'Activated alarm switch on yellow LED (L) on this channel and following actions will be executed:' section. Under 'Send e-mail message to addresses:', the email addresses 'test@cometsystem.cz' and 'my.name@gmail.com' are selected and highlighted with a red box. Other options include 'activate internal acoustic signalization' and 'activate ALARM OUT signalization'.

2. It is necessary to choose message recipient on Alarms bookmark.

Monitoring Systems COMET types MS55 & MS6

11. Another alarm options:



Configuration is done on global bookmark Profile. Alarms can also arised due to exceeding the limit of full memory, measurement error, MS configuration and selftest.

Monitoring Systems COMET types MS55 & MS6

11.1. Another alarm options:

Communication | Profile | **Advanced options** | Ch1 - Identity & Calculations | Ch1 - Measuring & R

Limit of memory occupation
Limit of memory occupation: %

Critical state actions

When any from states appear

- Measurement error on any input channel
- Datalogger configuration error
- Selftest error
- Exceeding the limit of memory occupation

And state duration is s

Then following actions will be executed

- Activate internal acoustic signalization
- Activate ALARM OUT signalization

Send SMS to phone numbers:

- +420156324779
- +421256897663

Switch ON output relay no.:

- 1 2 3 4 5 6 7 8
- 9 10 11 12 13 14 15 16

Send e-mail to addresses:

- test@cometsystem.cz
- my.name@gmail.com

Monitoring Systems COMET types MS55 & MS6

12. Example for configuration of Ethernet Interface

The screenshot displays the configuration interface for the Ethernet interface, divided into several sections:

- Datalogger communication interface:** Includes radio buttons for RS232 (without handshake), modem (RS232 interface with RTS-CTS handshake), RS485, Ethernet (selected), and USB. The Ethernet port is set to 10001. A baud rate of 115200 Bd is selected. There are checkboxes for "Datalogger responds to incoming SMS messages" and "Datalogger sends SMS message when selected alarms are activated".
- Ethernet options:** Shows Ethernet firmware as 6-5-1.3. The DHCP checkbox is unchecked. Device IP address is 192.168.2.211, Gate IP address is 0.0.0.0, and Mask IP address is 255.255.255.0. MTU size is set to 1400. Checkboxes for "Send warning e-mails", "Send traps", "Syslog", "Web enable", "SOAP", and "Modbus" are all checked.
- E-mails (1):** A sub-panel with "Page refresh" set to 10 s and "Port" set to 80.
- E-mails (2):** A sub-panel with three "Trap recipient IP address" fields (all set to 0.0.0.0) and a "Password for read" field. A "Send test trap" button is present.
- SOAP:** A sub-panel with "Target SOAP server IP" (0.0.0.0), "Target web page" (empty), "Source port" (0), "Destination port" (0), and "Sending interval" (0 s).
- Modbus:** A sub-panel with "Port" set to 512.
- Syslog:** A sub-panel with three "Syslog server" address fields (all set to 0.0.0.0) and a "Send test message" button.