

MULTILOGGER EML-01, EML-02, EML-03, EML-04, EML-05, EML-06, EML-07, EML-08, EML-09

Quick guide

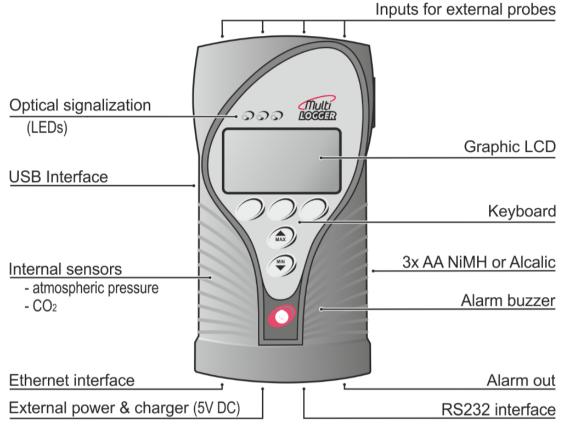
ATAL B.V. Ampèrestraat 35-37 NL-1446 TR PURMEREND

Postbus 783 NL-1440 AT PURMEREND

> **T** (+31) 0299 630 610 **F** (+31) 0299 630 611

> > E <u>info@atal.nl</u> I www.atal.nl

The Multilogger has been designed for measuring and recording physical and electric quantities with an adjustable logging interval from 1 second to 24 hours. The device is equipped with 4 inputs (connectors) for external probes or signals. Moreover, some versions also include an internal atmospheric pressure and/or CO₂ concentration sensor. The production line consists of several models with various combinations of the input ranges of the measured quantities.



Getting started

Before putting the Multilogger into operation it is necessary to set up the device inputs in accordance with connected probes and for the required measuring ranges. This settings can be performed only using a computer with **Vision** software.

• Install **Vision** software to your computer by launching installer and follow the instructions. If you purchased a license for full version, register it.

Recommended configuration: 1 GHz processor, RAM 2 GB, Windows 7 or later, Net framework version 4

Minimal configuration: 1 GHz processor, RAM 1 GB, Windows XP service pack 2, Net framework version 4

• Connect the appropriate probes or signals to the inputs as described in the last part of this manual.



- The Multilogger is supplied with included pre-charged NiMH batteries. Switch on the device - push the red switch button and check the battery status in the menu System Information (click Enter – Next). The value should be over 60%. If you do not change the device settings, the batteries will be automatically recharged during device operation in case of a connected the external AC adapter.
- Launch the installed Vision software and connect the Multilogger with PC via USB interface using supplied cable. The device is automatically added to the list and thus is ready for further communication with SW:

Device Home					Home
Functions			State	Devices	
	Downlo		General Connected		Datalogger M1323
		data from device.	Connection: Device type: Device description: Serial number: Firmware: Actual device time: Record Logging Memory occupation:	USB Multilogger (M1323)	Files
Ŀ	Configu Device con	IFation figuration. Device parameters settigns.		Datalogger M1323 14260007	Displays
Þ	Di splay Start displ	ay from this device.		1.0.0 6/1/2015 8:02:09 AM	
	Erase Erase reco	rd data from this device.		• 0%	
	Clear co Set counte	ounter r value to zero.	Alarm		
Manage ————			Is alarm Active acustic signalization Active alarm out		
	Remove cu	e rrent device from the list.	III Mute Advanced		
Ľ	Edit Edit currer	t connection device parameters.	Advanced Selftest error Battery capacity:	83 %	

• Click the button *Configuration* and then click *Inputs*. List of inputs will be displayed:



Device Home C	onfiguration X	Home
Configuration	View mode Cancel Apply Once you begin to edit an item, it automatically switches to edit mode. Cancel Apply	Devices Datalogger M1323
General Information, preferences,	In 1 1 2 3 4 Input No. 1 T/RH digital probe	Files
Record Interval, record type,	CH1: Relative humidity[%] RH Recording: On Alarmi Alarm2 Edit Remove CH2: Temperature[°C]	Displays
Alarm events Global alarm events settings.	I Recording: Un Alarmt Alarm2 Edit Remove	
Security Security	In 2 1 2 3 4 Input No.2 Pt1000 SMART	
Ethernet Ethernet interface settings,	In 3 1 2 3 4 Input No.3 Binary input off 🐼 📜	
Inputs Inputs settings.	CH5: Binary input[] Settings ¹ Clear BIN Recording: On Alarm1 Alarm2 Edit Remove	
Summary Summary of all device settings.	In 4 1 2 3 4 Input No.4 Binary input OFF K Inc. Clear	
	CH3: Binary input[] BIN Recording: On Alarmi Alarmi Edit Remove	
	In 5 Press Input No.5 Atmospheric pressure	
	CH8: Absolute pressure[hPa] Pabs Recording: On Alarm1 Alarm2 Edit Remove	

This panel shows the configuration of the new device with the factory settings. For each input is shown the current type of connected probe or its measuring range.

Change the settings of the selected input is possible by pressing Settings icon:

Device Home	Configuration X				Home
Configuratio	Constant State Sta	Edit mode You booked device configuration. No one else will be able to configure the device.		Apply changes	Devices
	Input setting	-			Datalogger M1323
General Information, preferences,	Input name:	Input No. 1			Files
Record	Connected probe:	T/RH digital probe 🤝			Displays
Interval, record type,	Measured quantities	Temperature			
Alarm events		Relative humidity			
Global alarm events settings		Dew point			
Security		Absolute humidity			
Security		Specific humidity			
Ethernet		Mix ratio			
Ethernet interface settings,		Specific enthalpy			
Inputs		Advanced More flexible adding of measured quantities.			
Inputs settings.					
Cummon			Cancel	Finish	
Summary Summary of all device settin	gs.				

Here it is possible in the dropdown menu to change the type of probe connected to the device input and to assign the appropriate input name for the easier orientation. For each type of probe there is available different list of measured quantities of which can be selected as user needs. Clicking to Finish the newly selected measured quantities will be assigned to the



currently free channels. The maximum number of channels, with which the Multilogger can operate is 16. Then you can continue to set next input.

ln 1	1	2	3	4	Input No. 1	T/RH digital probe			کن Settings	Clear
CH1: RH	Relati	ve hu	midity	/[%]	Recording: On		Alarm1	Alarm2	Edit	Remove
CH2: T	Temp	eratur	e[°C]	F	Recording: On		Alarm1	Alarm2	Edit	Remove

In the line of each measured variable (ie. channel), you can change its other settings (eg. Alarm limits, alarms indication, the channel recording, etc.). For these settings, use Alarm1, Alarm 2 and Edit icon.

In these settings, pay attention to the least the following items:

- check and, if necessary, correct date and time in the Multilogger (option General / DateTime)
- set the required recording interval and start of recording (option Record)
- If the device will be connected to the Ethernet, set the parameters according to the information from your IT administrator (Ethernet option)

All the settings can be saved to the device by clicking on the Apply Changes.



Connection of probes and measured signals to the device inputs

Manufactured models differ from each other by their input ranges and by input connectors. There are three types of connectors / terminals:

MiniDIN connector

It is used for connection of the DigiS/M..., DigiL/M..., Pt1000/M probes and for external CO₂ probe. Plug properly oriented probe connector to the input of Multilogger. You can follow the optical key for correct position. The input connector marked "CO2" is designed for external CO2 probe only.

optical key

Universal thermocouple connector

Plug properly oriented connector to the input of Multilogger. The connector is mechanically coded using a wider pin and can be plugged in one

position only. Make sure that the wires of probes and measuring junctions are not electrically connected to any conductive parts! Electrical other coupling amona thermocouples can cause large measurement errors or instable values! To obtain correct measurement values, the Multilogger has to be temperature-stabilized!

Two voltage ranges are available on each universal thermocouple connector for measuring small voltages. Use the white uncompensated connector connected according to the picture in this case.

Connection terminals

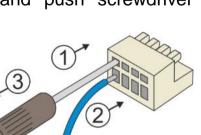
Inputs (0 to 20) mA, (0 to 10) V, binary inputs and the counter are equipped with a two-part, self-locking WAGO terminal block. Insert flatbladed screwdriver to rectangle terminal hole and push screwdriver towards away from you - contact is released.

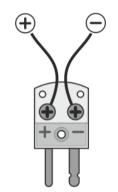
Insert wire to released terminal (circular hole behind the rectangular one) and close the terminal by removing the screwdriver.

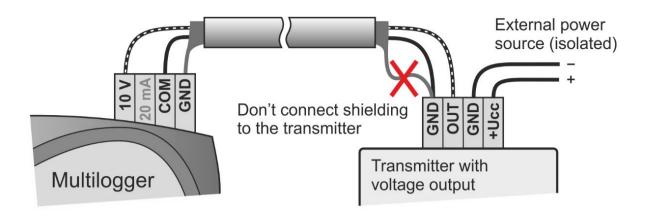
The terminal block can be removed from the device without the need to disconnect individual wires!

Connection of the transmitter with voltage output:

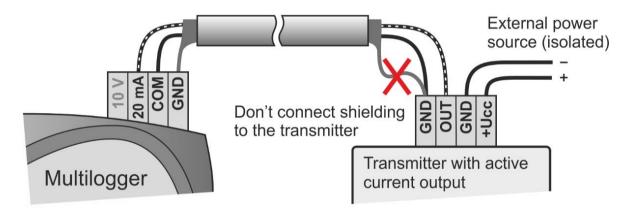




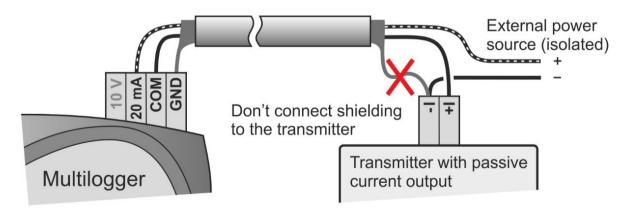




Connection of the transmitter with the current output (active):



Connection of the transmitter with the current output (passive):



Connection of the binary and counter input:



