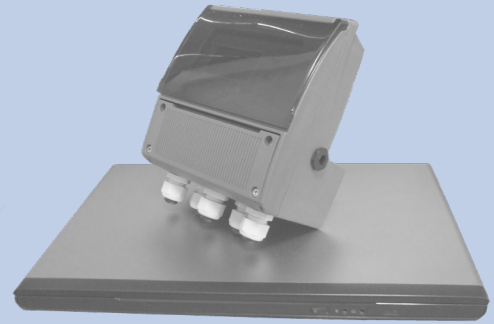


MCP

Software



Operating Instructions

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INTRODUCTION

Mcp (mnemonic command protocol) is an application that works in real time with the connected device and It's used to control, to program and to manage a SE58 transmitter.

The saved data can be managed and / or downloaded directly through Mcp interface.

If a transmitter is equipped with a GPRS or Wi-fi module, and you want to extract the sensor test data, you have to enable some options for the data transfer, on the transmitter.

The most important functionalities of Mcp interface are:

- Analysis and sensor data collection
- Managing of function to enable / disable in the transmitter
- Set, read and execute all functions by an alphanumeric string (Mcp command)
- Simulation of instrument display
- Color processing of the transmitter display
- Instrument data logger downloading
- View downloaded data

	MCP INTERFACE	TRANSMITTER	NOTE
SETTING THE TRANSMITTER DATA	✓	✓	It is recommended to use the MCP interface for a more convenient data entry
SETTING OF ALL FUNCTIONS	✓	NOT POSSIBLE	All functions are not available in the transmitter. (The available functions depend on the model of the transmitter and the user access level).
SHOW THE MCP COMMAND AND DISPLAY FUNCTION	✓	Only functions on a physical display	---

SAFETY CONVENTION



WARNING



PRECAUTIONS

SOFTWARE TOOLS END USER LICENSE AGREEMENT “MCP” (STEULA)



Please before accepting to install and use this software, read carefully the following terms and conditions. Unless you have a different license agreement, the use of supplied software indicates your acceptance of this license agreement and warranty.

Registered version

MCP is a software that can be installed on Microsoft Windows® and allows you to set all the functions of the transmitter and customize the menu.

However any changes using MCP are not recommended, unless:

- after receiving corresponding training by burkert,
- done by professional,
- agreed by the end user, and done inline with the MCP manual

With using this MCP software you agree to the following Software Tools End User License Agreement “MCP” (STEULA):

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the “Software”) to use the Software, and to permit persons to whom the Software is furnished to do so, subject to the conditions of this STEULA.

In a nutshell:

- The Software is intended for use by professionals and professionally, and in connection with our products only;
- While we took care to provide access to a convenient tool, it is not required for the use of our products; we cannot be liable for any consequence in using this Software;
- We will update the Software from time to time based but not regularly and may at any point in time discontinue to offer the Software or its updates for download.
- The Software could include technical or other mistakes, inaccuracies or typographical errors.
- At any time without prior notice, we may make changes to the software pointing to third-party websites or shops or documentation made available on the third-party’s website.
- The software may be out of date, and we make no commitment to update such materials.

Legal advise:

- 1. One registered copy of supplied software may either be used by a single person who uses the software personally on one or more computers, or installed on a single computer used non-simultaneously by multiple people, but not both.
- 2. You may access to software through a network, provided that you have obtained and agreed to individual licenses for the software covering all computers that will access the software through the network regardless if they access the software program concurrently or at different times.
- 3. You are not allowed to modify its content, decompose, decompile its components, redistribute, offer or sell the Software.
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- 5. THIS SOFTWARE AND ANY ACCOMPANYING FILES ARE GIVEN FREE OF CHARGE “AS IS” AND WITHOUT WARRANTIES, EXPRESS OR IMPLIED, AS TO PERFORMANCE OR MERCHANTABILITY OR NON-INFRINGEMENT OF THIRD PARTY RIGHTS.

- 6. No advice or information, whether oral or written, obtained by you from us shall create any warranty for the software.
- 7. Good data processing procedure dictates that any program shall be thoroughly tested in a non-critical environment before using the Software. You must assume the entire risk of using the program. NOTE THAT USING THE SOFTWARE IMPACTS THE OPERABILITY / FUNCTIONALITY OF THE HARDWARE AND MAY HAVE SEVERE CONSEQUENCES FOR THE PRODUCTION OF THE FACILITY THE HARDWARE IS INSTALLED IN.
- 8. THE SOFTWARE IS IN PARTICULAR NOT DESIGNED, INTENDED, LICENSED, OR AUTHORIZED FOR USE IN ANY TYPE OF SYSTEM OR APPLICATION IN WHICH THE FAILURE OF THE SYSTEM OR APPLICATION COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCURE (E.G., MEDICAL SYSTEMS, LIFE SUPPORT, LIFE-SUSTAINING SYSTEMS, LIFE-SAVING SYSTEMS, OR SECURITY SYSTEMS) OR IN HAZARDOUS ENVIRONMENTS REQUIRING FAIL-SAFE CONTROLS, INCLUDING WITHOUT LIMITATION, THE DESIGN, CONSTRUCTION, MAINTENANCE OR OPERATION OF NUCLEAR FACILITIES, AIRCRAFT NAVIGATION OR COMMUNICATION SYSTEMS, AIR TRAFFIC CONTROL, OR WEAPONS SYSTEMS. LICENSOR SPECIFICALLY DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR SUCH PURPOSES.
- 9. IN NO EVENT SHALL WE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

FIRST START OF MCP

Requirements

- Operating system Microsoft Windows 8.1® or Windows 10®
- USB output from the PC type A
- System administrator rights are required to install the communication drivers.



The program must be downloaded only from authorized sites



Before connecting the transmitter to the pc, download Mcp software as the instructions described below

If the computer has an internet connection, the system checks for an update when the program is started. Press "Yes" to update it to the latest features.



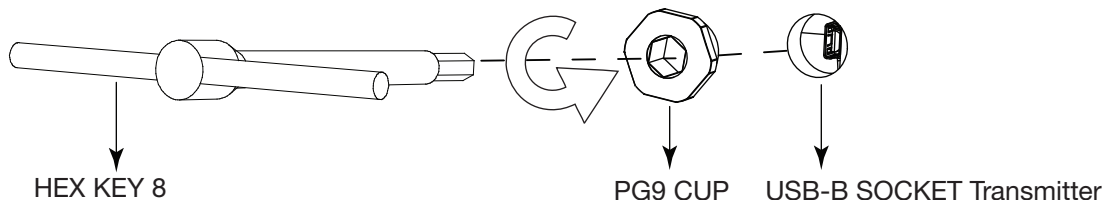
After the automatic update, connect the device with the USB mini B cable.
If the driver is not installed after starting the Mcp software, follow the driver installation procedure at pag. 10.



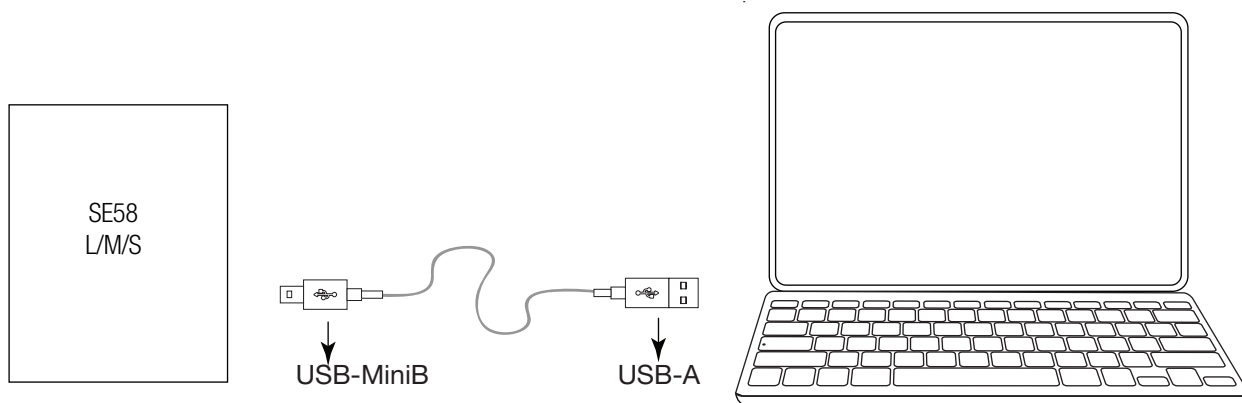
Don't rename the Mcp.exe file after the first run to avoid conflicts on future software updates.

TRANSMITTER CONNECTION TO THE PC

Connect your computer to remove the PG9 cap as follows



Connection to the computer via USB cable



- Click on this button to establish the connection using MCP:



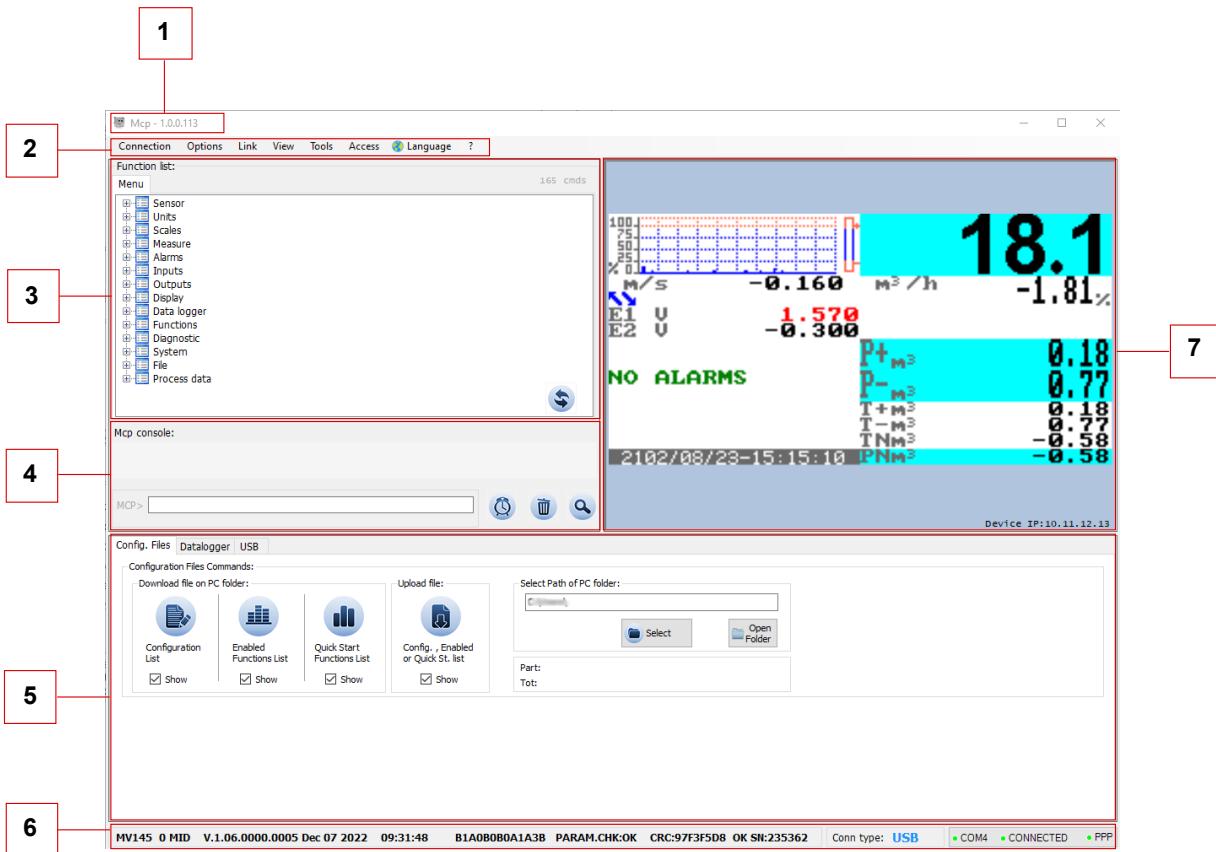
Mcp.exe



ATTENTION: Before starting the program be sure that the transmitter is connected to a power supply as per the data plate.

MCP INTERFACE

Following there is a description of the interface areas and the Mcp software functions. Descriptions relating to specific functions of the various transmitters will be reported in the operating manual of the transmitter.

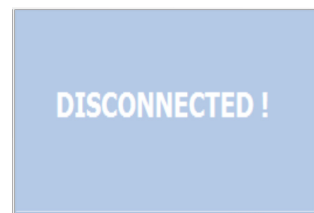


MAN 1000541520 EN Version: B Status: RL (released | freigegeben) printed: 15.03.2023

- AREA 1: Information on Mcp software version
- AREA 2: Mcp Management menu.
- AREA 3: Transmitter function list
- AREA 4: Mcp console; Command text editor.
- AREA 5: File and configuration settings and tabs for download datalogger.
- AREA 6: General informations about the connected transmitter.
- AREA 7: Virtual screen for displaying data.



ATTENTION: If the message "DISCONNECTED" appears in box 7, it means that it is not connected to any device, and therefore is waiting for a connection with a transmitter.



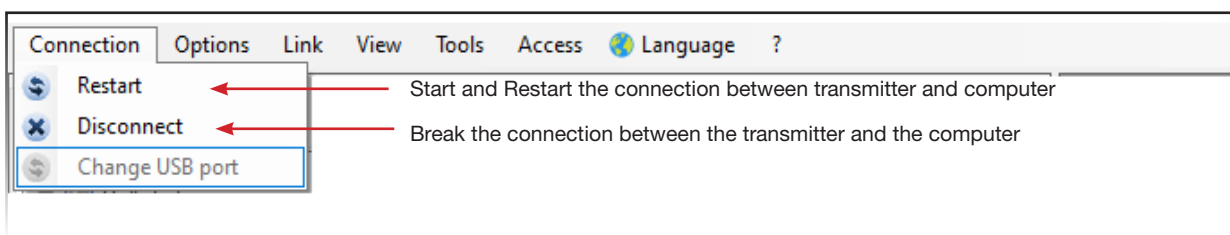
AREA 1

This section displays the Mcp software version installed on your computer.

AREA 2

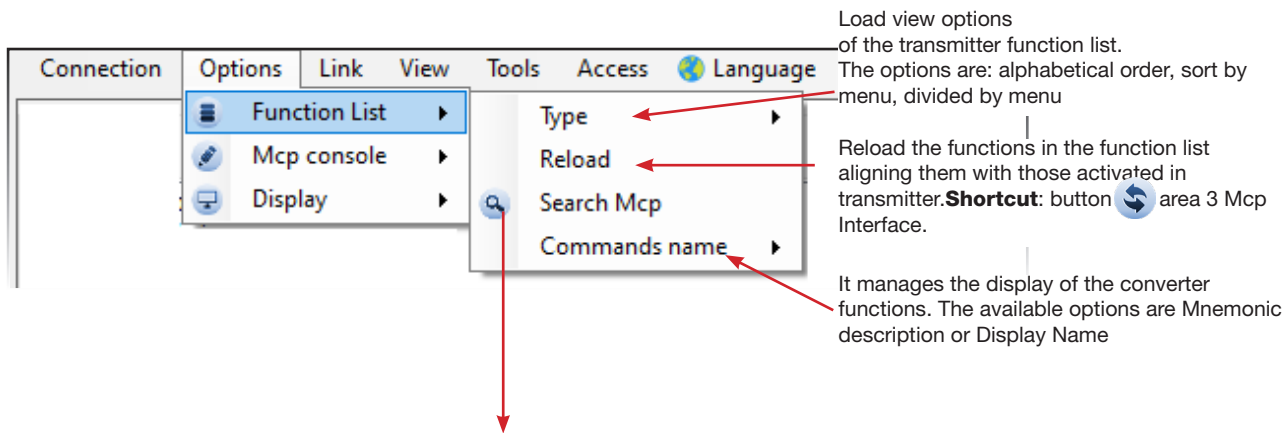
In this section there are 6 management menus of the Mcp software: Connection / Option / Link/ View / Tools / Access /Language/ ? Below they are described in order.

Connection

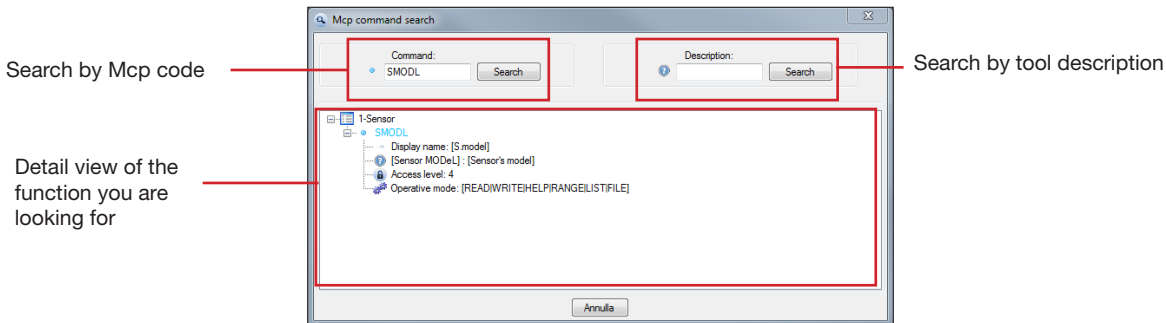


Options

Function list: Contains the options for managing the functions of the connected transmitter.

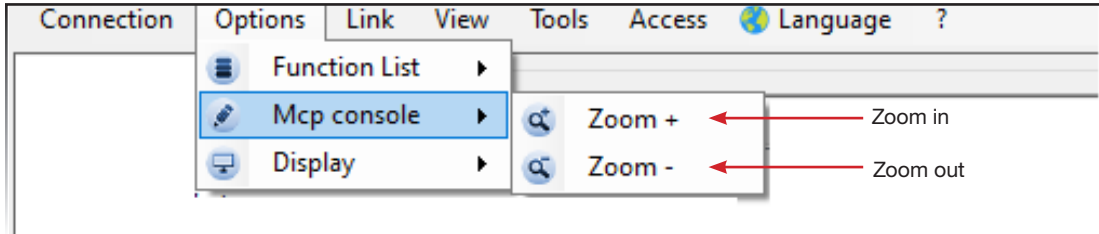


Activate a mask for quick search
Mcp commands of functions based on the name of the function and the type of description of the function.
(Shortcut Ctrl + F).

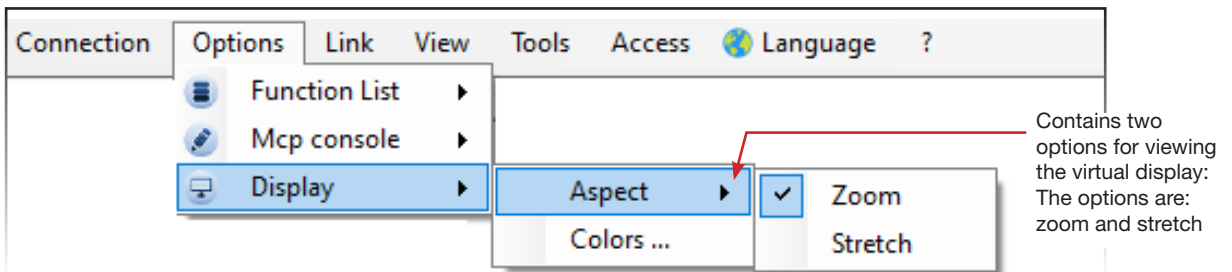


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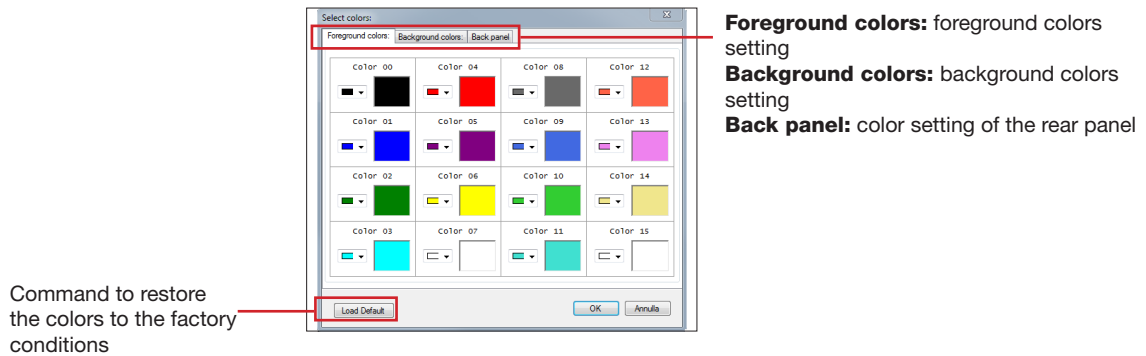
- **Mcp console:** Contains the options for enlarging and reducing the text visible in the Mcp console (Area 4 of the Mcp interface)



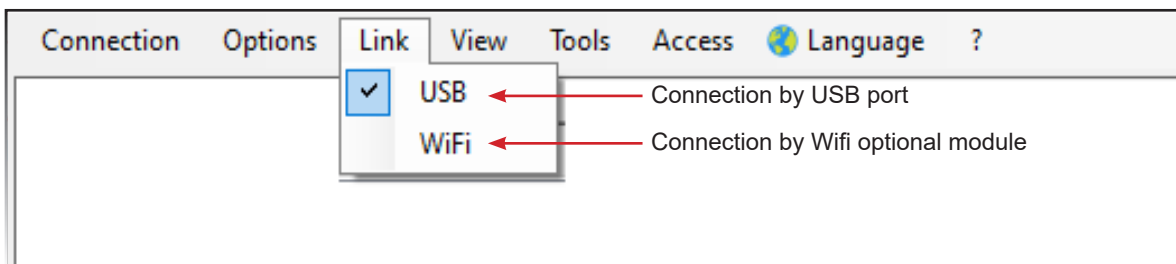
- **Display:** Contains the options for managing the virtual display (Area 7 of the Mcp interface)



Virtual display color setting.



- **Link:**



N.B: for connection via the Wi-Fi module, consult the dedicated manual

View

It only displays the virtual display in the entire screen of the Mcp software

It display in the Mcp interface the virtual display, the screen containing the list of transmitter functions (area 3) and the Mcp console (area 4)

It display in the Mcp interface the virtual display, the screen containing the list of transmitter functions (area 3) and the Mcp console (area 4) and the file configuration tabs with the settings for the datalogger download.

Tools

□ Install:

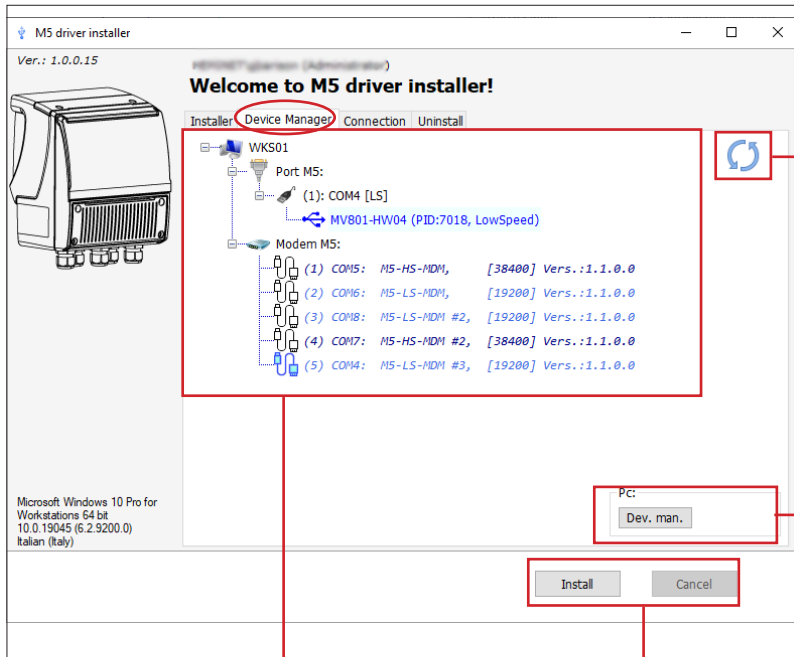
Area that shows the installation progress

Buttons to start or stop the installation of device drivers



ATTENTION: To start the installation procedure, you must start the program as an administrator. If the program was not sent as administrator, the program will restart automatically and runs as administrator

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Refresh button: read all transmitters connected to the USB ports

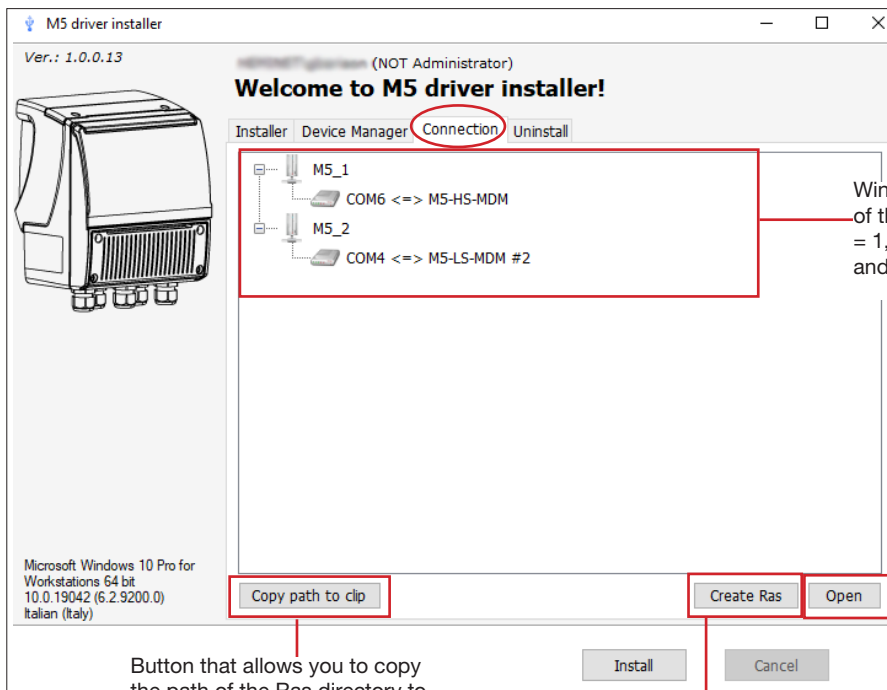
Button that open the device manager. From these screens you can also uninstall the drivers

Window that allows the management of the single communication ports and modems of the system.

Buttons to start or stop the installation of device drivers



ATTENTION: Close the window once the installation procedure of the various items of the Install process has been completed. Restart the operating system after installing the device



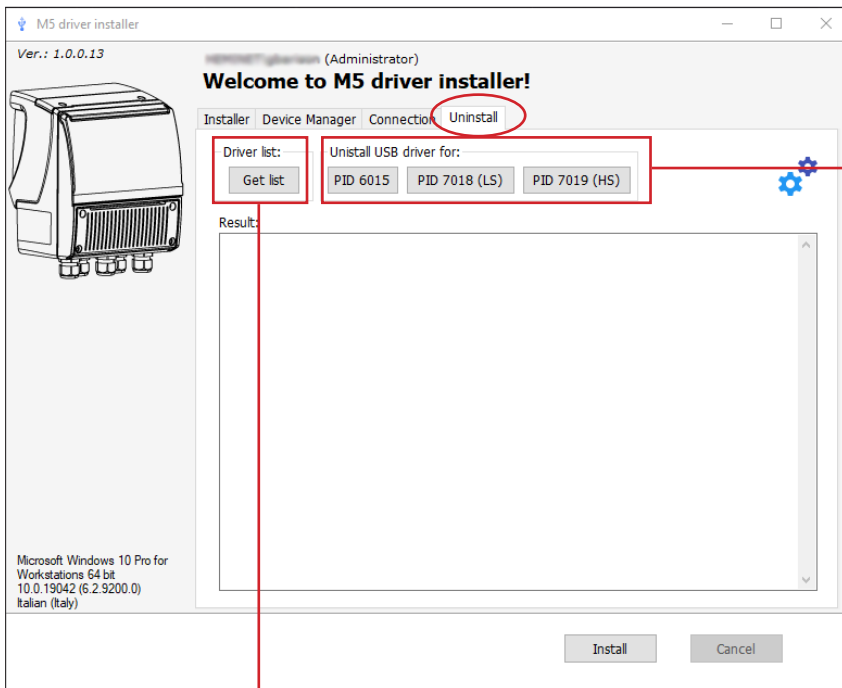
Window that allows the management of the ras connections installed M5_x (x = 1,2,3 etc.) on the relative M5 modem and com port

Button that opens the Ras connections created

N.B: If a CFLST has never been loaded to the converter, the list is empty. Whenever a parameter is changed by sending a cflst file (with drag & drop), first the CFLST is saved (**reserved to service**)

Button that allows you to copy the path of the Ras directory to the clipboard (**reserved to service**)

Button that recreates Ras connections (**reserved to service**)

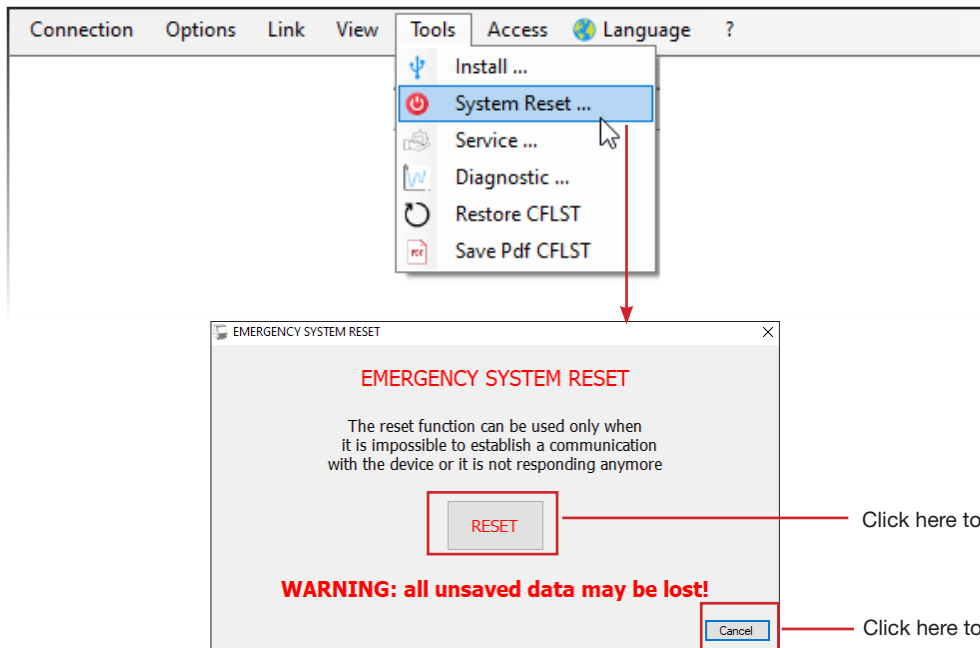


Buttons reserved for service

- PID 6015: Uninstall driver VID 0403, PID 6015 (Ftdi)
- PID 7018: Uninstall driver VID 0403, PID 7018 (M5 low speed)
- PID 7019: Uninstall driver VID 0403, PID 7019 (M5 high speed)

This button allows you to list the M5 drivers installed on the PC
(reserved to service)

- **System Reset:** It permits an instantaneous reset of the transmitter.

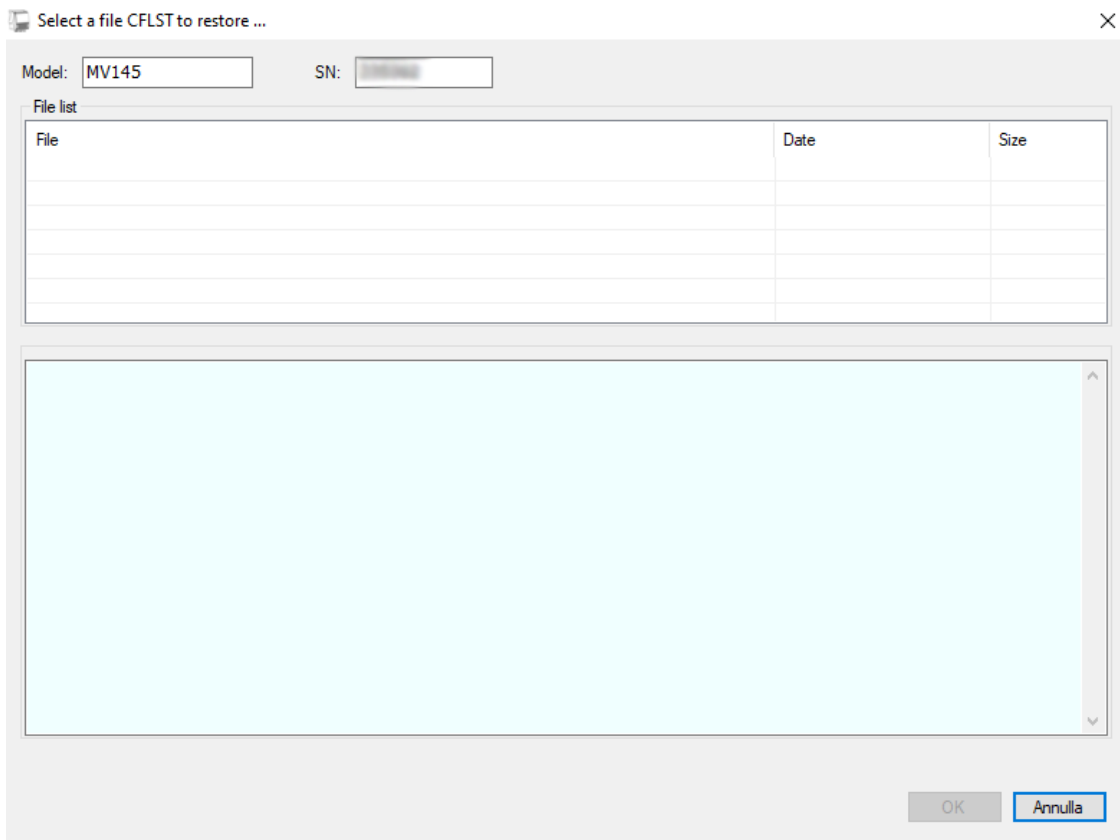
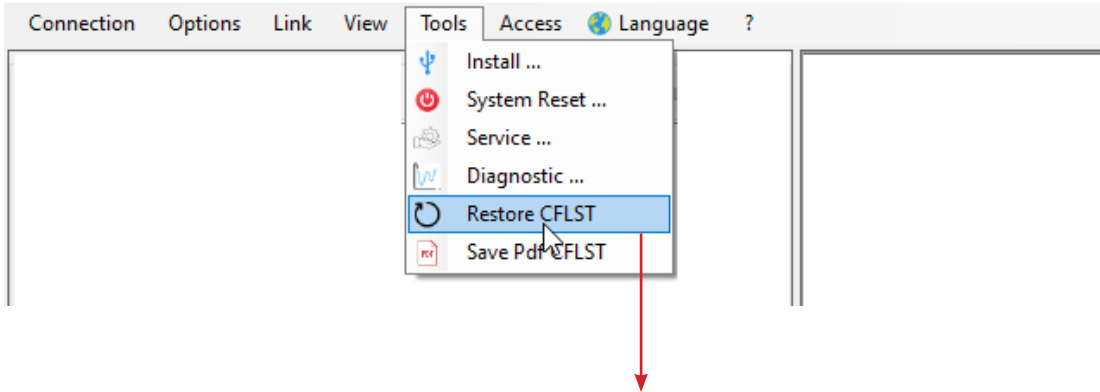


Click here to reset the transmitter

Click here to exit from this window

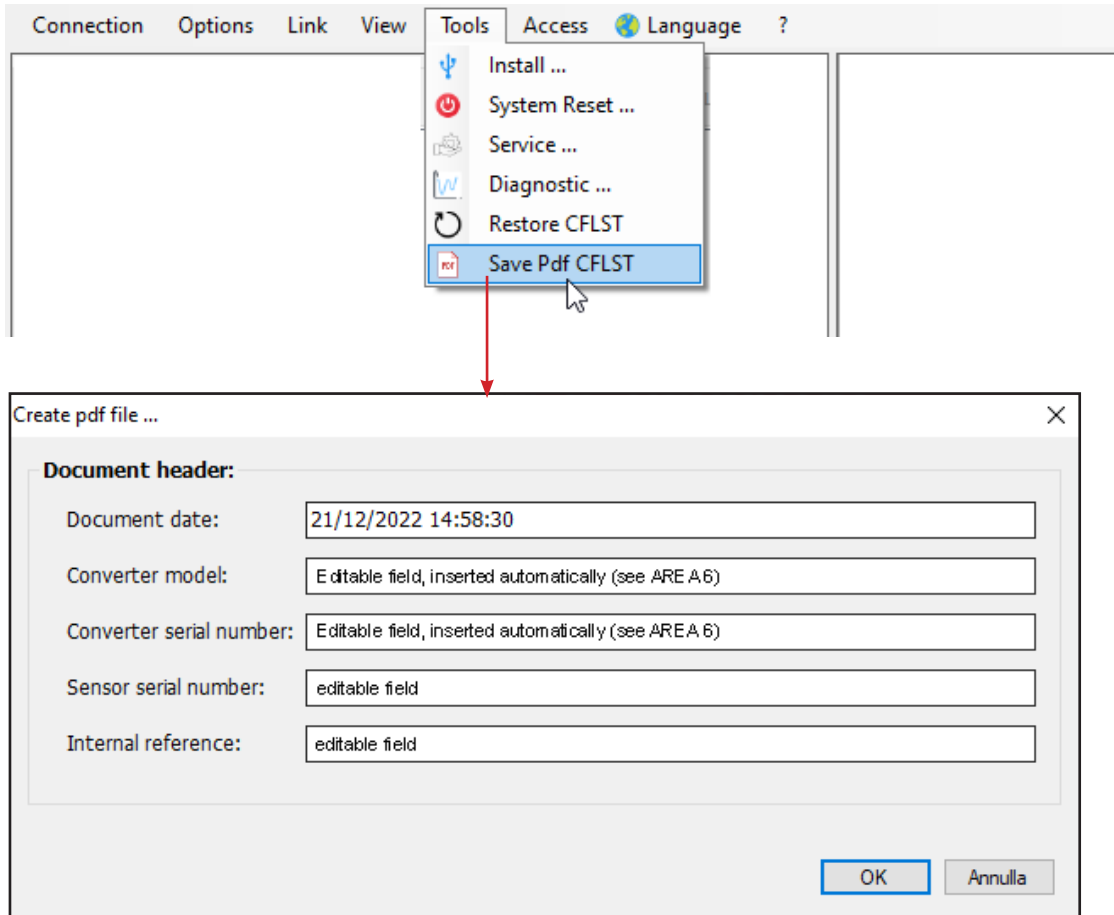
- **Service:** reserved to Service
- **Diagnostic:** reserved to Service.

• **Restore CFLST:**



**N.B: If a CFLST has never been loaded to the converter, the list is empty.
Whenever a parameter is changed by sending a cflst file (with drag & drop), first the CFLST is saved**

- **Save Pdf CFLST:**



Below an example of CFLST PDF .

Document date: 21/12/2022 15:34:34
Converter model: MV210 1 V.1.04.0005.0004 Dec 01 2021 12:37:57 B0B1B0A0A0
Converter serial number: 234003
Sensor serial number: Ser. Num.
Internal reference: Internal ref.

Sensore

Modello=4
Lining=0:'UNSPEC.'
Tipo=0:'F.BORE'
U.mis.=0:'METRICHE'
Diam.=6:'32(mm)'
KA=+1.7934
KA=-1.0000
KZ=+319
KD=-307
CoeFFicient KJ=+0
Posizione=0
KP dinamico=0:'OFF'
Ki=+1.0000
Kp=+1.0000
KC=0.97690
C.ecc.=80.0:'(mA)'
Reg.PB=5
Reg.DK=15
Freq.=2:'10(Hz)'
Test t.vuoto=1:'ON'
R max=50:'(kohm)'
P.eletr.=2:'MED'
Preamplif.=0:'OFF'
L.cavo=0:'(m)'
Rit.all.mis=20
Sensor Coils TiMe A=0.00:'(ms)'
,
Sensor Coils TiMe B=0.00:'(ms)'
,
Sensor Coils RESistance=0.0:'(ohm)'
Sensor E1 Reference Resistance
=0:'(kohm)'
Sensor E2 Reference Resistance
=0:'(kohm)'
Sensor Coils Temperature ReFer
ence=0:'(°C)'
Verif.sens.=0:'OFF'
KL=+0,+0,+0,+0,+0,+0,+0,+0,
+0,+0,+0,+0,+0,+0,+0,+0
SET TK values=+0.0,+0.0,+0.0,+
0.0,+0.0,+0.0,+0.0,+0.0,+0.0,
+0.0,+0.0,+0.0,+0.0,+0.0,+0.0,
+0.0

Unita'misura

Diam.=0:'mm'
L.cavo=0:'m'
U.m.por.=0:'METRICHE'
U.m.T+=0:'METRICHE'
U.m.T+=6:'(m3)'
N.d.T+=4
U.m.P+=0:'METRICHE'
U.m.P+=6:'(m3)'
N.d.P+=4

U.m.T-=0:'METRICHE'

U.m.T-=6:'(m3)'
N.d.T-=4
U.m.P-=0:'METRICHE'
U.m.P-=6:'(m3)'
N.d.P-=4
U.m.temp.=0:'°C'
U.m.massa=0:'OFF'
Ps=1.0000:'(kg/dm3)'

Scale

FS1=26:'m3/h',25.000000
FS2=26:'m3/h',26.000000

Misura

Filtro=5:'2.0s'
Cut-off=0.5:'(%)'
Measure Filter Cut-off Thresho
ld 2=0.10:'(%)'
Ver.Calibr=0:'OFF'
Autorange=0:'OFF'
Alta imm.=0:'OFF'
DYNamic Sample Analysis=1:'ON'
DYNamic Sample Time=1.0:'(m)'
DYNamic Range Threshold=2:'0.2
0%'

Allarmi

Max+=0.000:'(m3/h)'
Max-=0.000:'(m3/h)'
Min+=0.000:'(m3/h)'
Min-=0.000:'(m3/h)'
Ist.=0.118:'(m3/h)'
V.all.mA=10:'(%)'

Ingressi

reset T+=0:'OFF'
reset P+=0:'OFF'
reset T-=0:'OFF'
reset P-=0:'OFF'
Blocco cont=1:'ON'
Azzer.mis.=0:'OFF'
Calibrazione=0:'OFF'
Cambio scala=0:'OFF'

Uscite

Usc.mA1=1:'4',1:'22',3:'+/-'
A1S=26:'m3/h',25.000000

Display

Lingua=7:'IT'
Contrasto=4
T.visual.=60:'(s)'
F.display=2:'5(Hz)'
Fn.Disp.=2
Blocco f.v.=0:'OFF'
Tot.parz.=0:'OFF'
Tot.neg.=0:'OFF'
Tot.netti=0:'OFF'
Quick start=0:'OFF'

Diagnostica

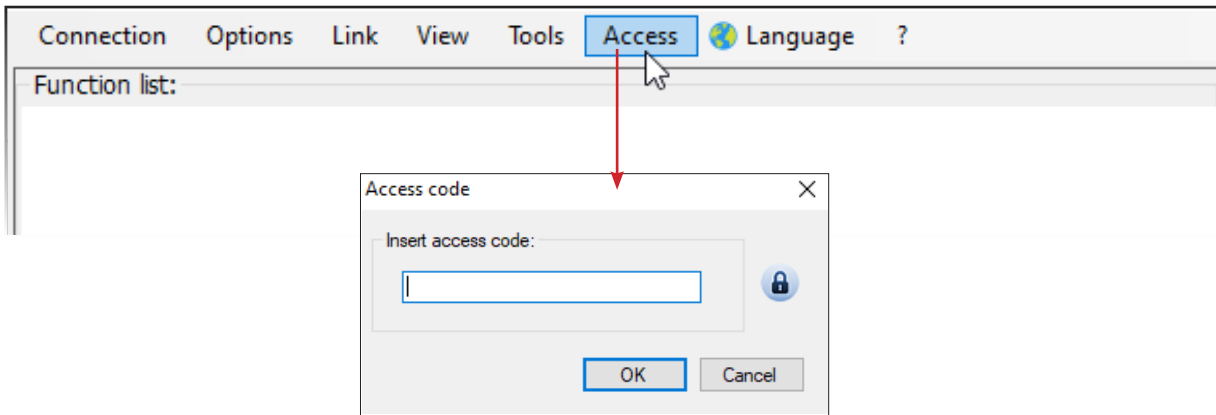
WT=':0078:06:30:10'

Sistema

Unique Identity KEY=53B5230BB6
06E62A80983098D824D64F
HardWare SET=846D8449962404D5D
7E828A4971E81E3
HardWare CODE=DA7379301E94E7CF
3D206CF08EAD4FC1
FirmWare CRC=00000000
Cod.L1=FA9F68823DF764CD7BADE1E
BA431F8EB
Cod.L2=A3717E91BEFFA2C7EA64331
4AD14F301
Cod.L3=4BD2388580F6D44E8F8D956
15C3DBD12
Cod.L4=C424765F6CDF4D5AF76DE09
24845E2D3
Cod.L5=58BEAE39E1B67CB5D4DE46B
86BAB8AC9
Cod.L6=
Accesso rist=0:'OFF'
Ind.IP dispos.=010.011.012.013
Ind.IP client=010.011.012.012
Mask rete=255.255.255.254
KT=0.97934
KS=1.00000
KR=1.00000
ISOCalmaster Reference=0.00000
CALibration eXecution status M
emory=1:'ON'
DAC1 4mA=2571
DAC1 20mA=11248
Volume Totalizer Total Positiv
e Set=0
Volume Totalizer Partial Posit
ive Set=0
Volume Totalizer Total Negativ
e Set=0
Volume Totalizer Partial Negat
ive Set=0
Volume Total Positive Overflow
Set=0
Volume Partial Positive Overfl
ow Set=0
Volume Total Negative Overflow
Set=0
Volume Partial Negative Overfl
ow Set=0
CPU MaX.recorded temperature=+
50:'(°C)'
CPU MiN.recorded temperature=+
10:'(°C)'
Board T1 MaX.recorded temperat
ure=+48:'(°C)'

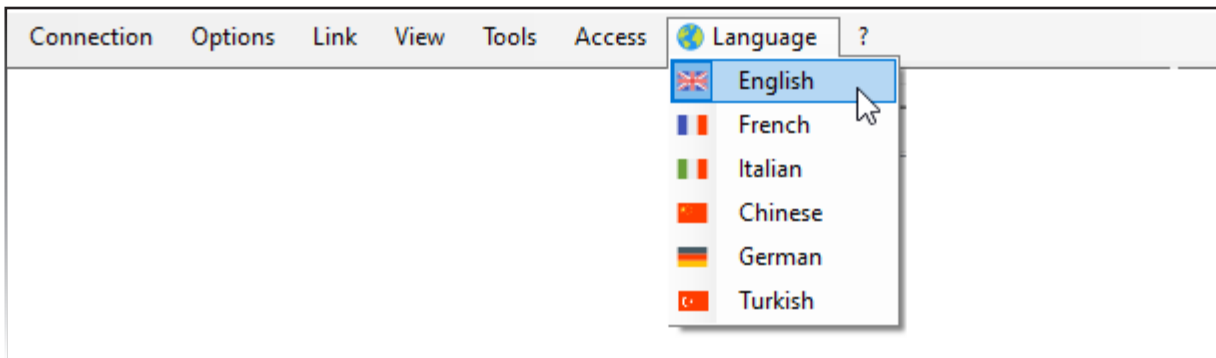
Board T1 MiN.recorded temperature= +8:'(°C)'		
Board T2 MaX.recorded temperature= +50:'(°C)'		
Board T2 MiN.recorded temperature= +8:'(°C)'		
Calibration Offset Register 0= -29690		
Calibration Gain Register 0= 1.00310		
Calibration Gain Register 1= 1.00350		
Calibration Gain Register 2= 1.00693		
Calibration Gain Register 3= 1.00759		
Calibration Gain Register C= 0.98241		

Access



It opens the window in which it's possible to enter the access code provided by the manufacturer, which allows you to activate various functions of the transmitter. Access code or level code therefore regulates the presence or absence (from access level 2 and above) of some functions in the list of functions. **Shortcut Ctrl+A.**

Language

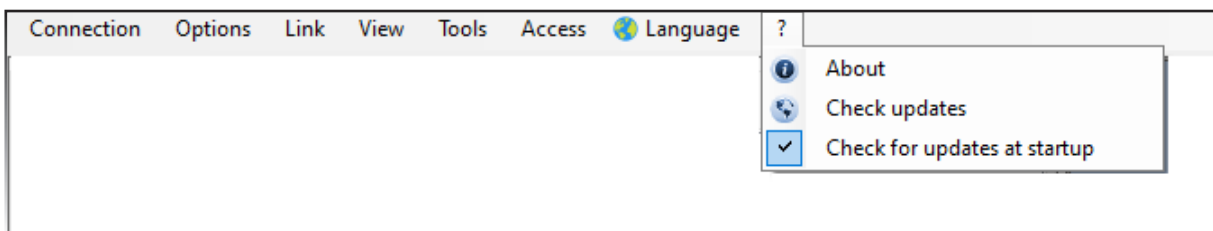


Through this menu item you can choose the language of the software interface

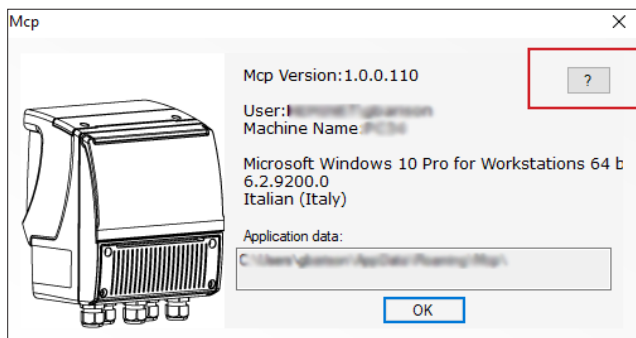


ATTENTION! This option doesn't change the transmitter language, but only the software one. To change the transmitter language see the transmitter manual.

?



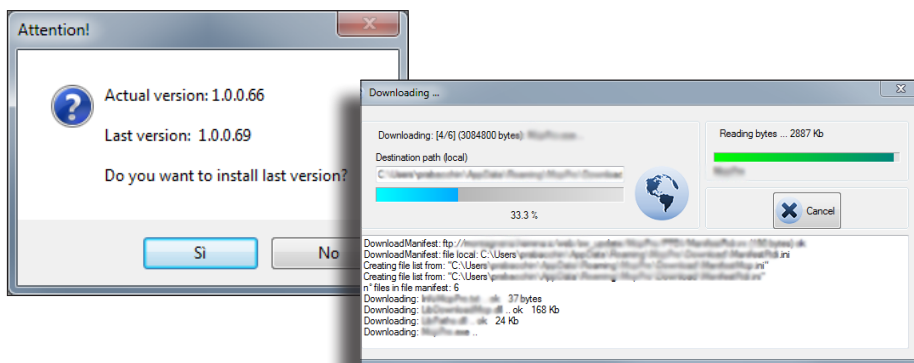
- **About:** This option opens a window where you see the Mcp software version, user type, operating system name computers, language used and the location where the Mcp program installed.



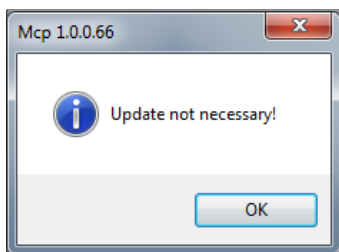
Clicking on this button opens a window that describes the changes applied for each software update

- **Check Update:** Check if updates are available;

If an update is available a popup appears and you can start the update:



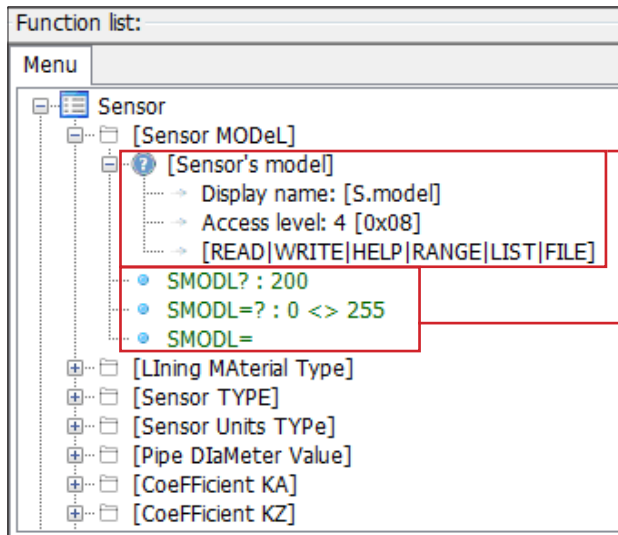
If no update are available, a popup will advise you that the program is upgraded to the last version:



- **Check for updates at startup:** Clicking on this option enables the automatic search of updates at every program start

AREA 3

The Mcp software in Section 3 shows the list of functions available for the connected transmitter. This list has a tree structure in which there are different contents for each function. The following image explains this structure.



INFORMATION ABOUT THE SELECTED COMMAND

- **Display Name:** Name of the function shown on the display
- **Access level:** Number of the access level
- **[_]:** Description of the interactions that the command can support

COMMAND OPTIONS PROVIDED FOR EACH FUNCTION:

Syntax of Mcp associated commands to device functions and ENABLE in accordance with the system level of access you have.

[COMMAND Mcp] ?: Mcp command followed by “?” Asks the same of the command (read status of the command).

- **[COMMAND Mcp]=?:** Mcp command followed by “=?” Shows the range of values in which a command can be set. (Help command).
- **[COMMAND Mcp] =:** Mcp command followed by the “=” requires the entry of a value from the allowable value in the command itself. (Command set).
- **[COMMAND Mcp]:** without operator, instantaneous executable function activated by selecting Mcp command followed by ENTER on ButtonBOARD

AREA 4

The editor for entering the Mcp commands has a line in which, after sending the command, it shows the result of the command executed. The following image explains this structure.



Mcp CONSOLE EDITED COMMANDS AREA

Area dedicated to display the commands entered and the related results.

BUTTON TO SEARCH COMMANDS

It opens the Mcp command search window (cntrl+F). See option menu on pag. 7

BUTTON TO DELETE EDITED CONTENT

- This button delete what has been written in the edited Mcp Console command area.

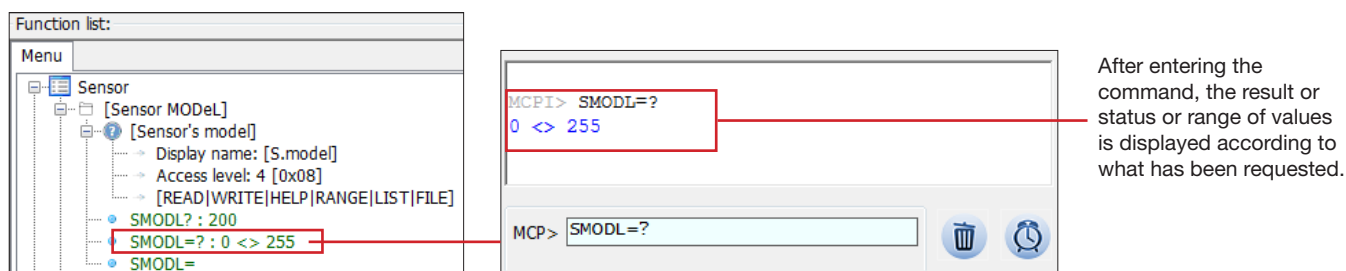
BUTTON FOR ADJUSTING SYSTEM DATE AND TIME

- Button that adjusts and updates the date and time with that of the operating system in which the Mcp program was installed. This Key is present only if the connected converter has the Micro SD enabled.

COMMAND INSERTION LINE

- Section in which the Mcp commands of the functions are edited.

Example of starting an Mcp command using a text editor

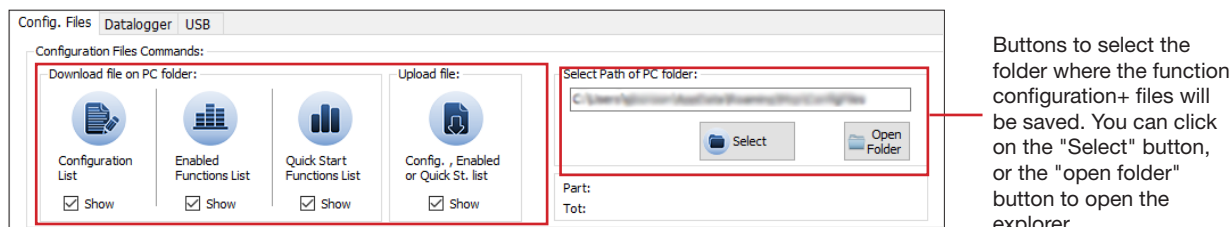


- The command can be edited by writing it from the buttonboard or by double clicking on the name of the desired command from the function list.
- By pressing enter on the buttonboard, the command will be executed.

AREA 5

This area contains the buttons for activating, disabling and displaying the transmitter functions and managing the relative data collection of the functions (data logger).

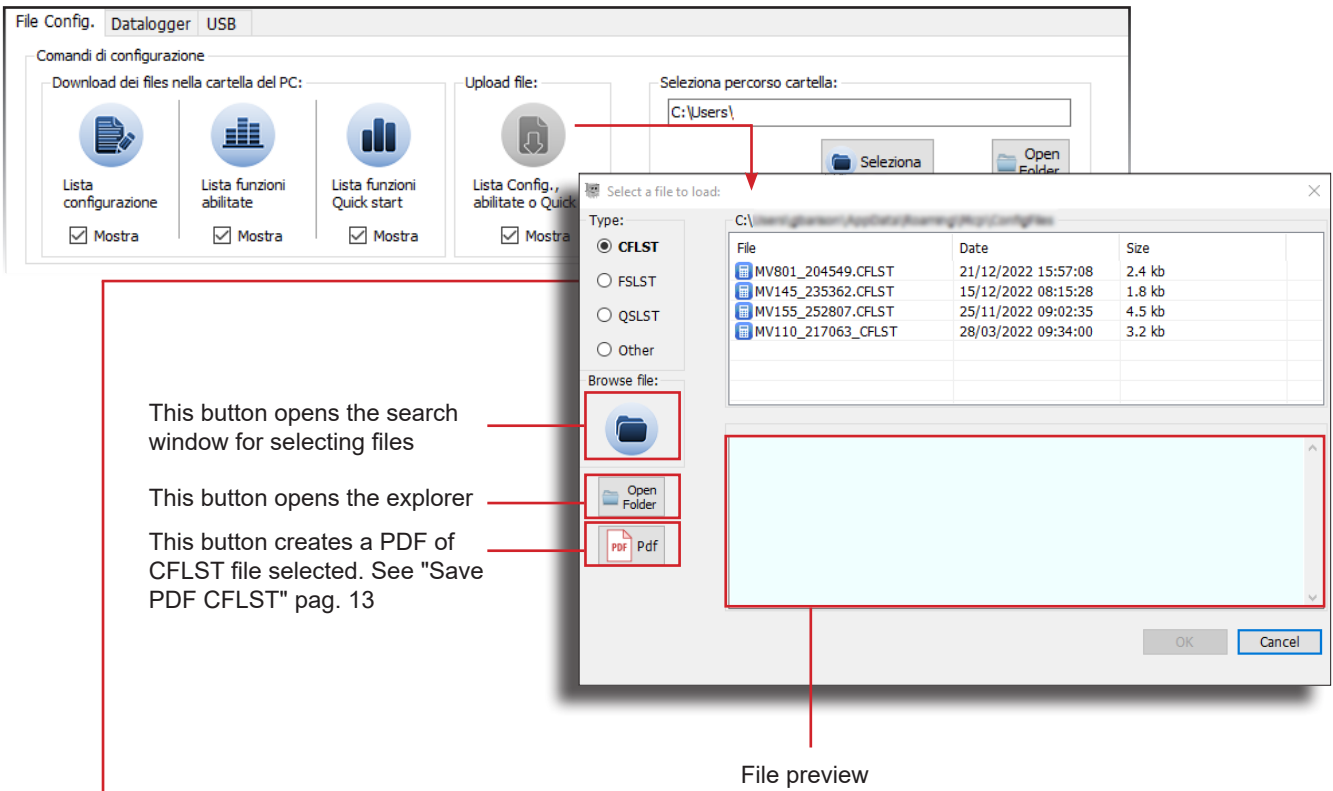
File Configuration



Buttons descriptions:

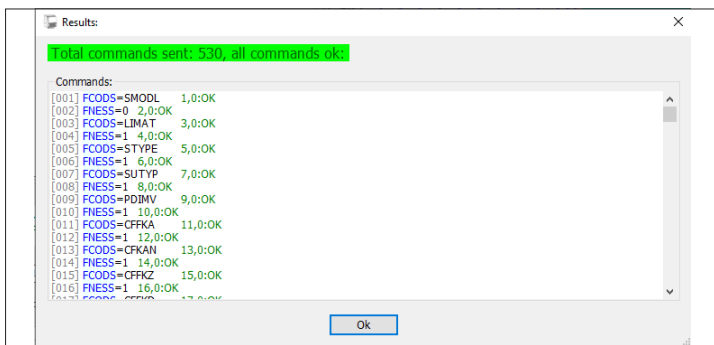
- **Configuration list**
Save a .txt file showing the status of the active functions on the connected transmitter. The file will be opened automatically after saving if flagged on "show".
- **Enabled function list**
Save a .txt file that contains the information (description, menu, etc.) of the active functions of the transmitter. If the flag on show is present, a window will be displayed showing the active functions of the transmitter by reading these data from the saved .txt file.
- **Quick Start function list**
Saves a .txt file containing the information (description, menu, etc.) of the active functions that are displayed and not displayed in the quick start menu. If the flag on show is present, a window will be displayed showing the active functions of the transmitter by reading these data from the saved .txt file.
- **Config., enabled or Quick St.list**
This button allows one to load the previously saved command configuration files. To load a configuration file follow the procedure below:

Press the “Config. Enable ..” button and select the previously saved .txt file relating to the configuration to be loaded.



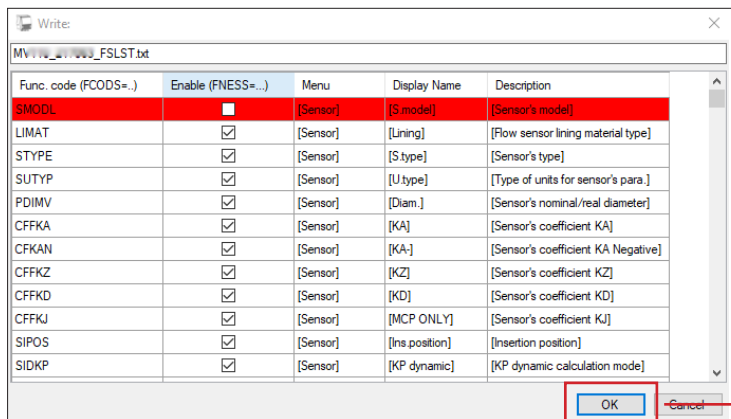
Buttons decriptions:

- **CFLST:** By selecting this option you can select a configuration list to load. The file must have a .txt extension. Once the file has been selected, click on the "ok" button to start the upload. At the end of the process, a window opens and the upload will be notified. Also any errors will be reported.



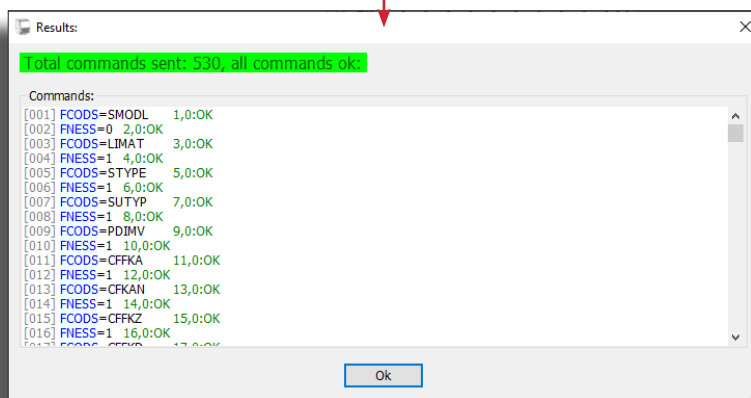
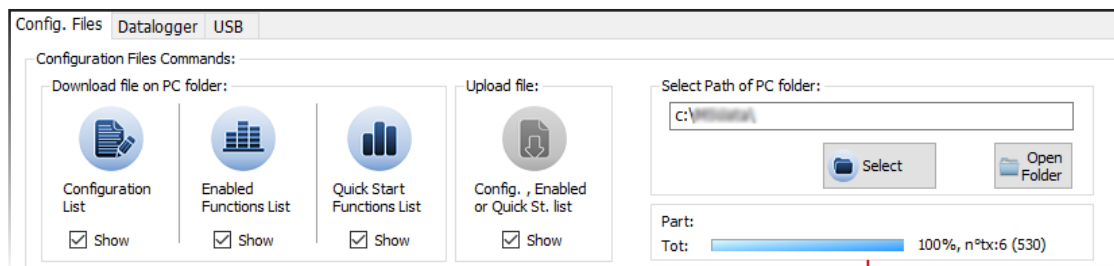
N.B: THE PROCESS FOR THE FSLST AND QSLST OPTIONS IS THE SAME, THE TWO OPTIONS ARE THEREFORE ILLUSTRATED TOGETHER ON THE NEXT PAGE.

- **FSLST:** By selecting this option you can select a list of enabled functions to load. The file must have a .txt extension. Once the file has been selected, click on the "ok" button to open a window that allows you to choose the functions enabled on the transmitter. Functions that are not enabled are highlighted in red.
- **QSLST:** By selecting this option you can select a list of functions enabled in the quick start to be loaded. The file must have a .txt extension. Once the file has been selected, click on the ok button to open a window that allows you to choose the functions enabled in the quick start. Functions that are not enabled are highlighted in red.



Once the configuration is complete, click on "ok" button

In the main page is shown the progress of the upload, at the end of the process a screen opens, confirms the upload and highlights any errors.

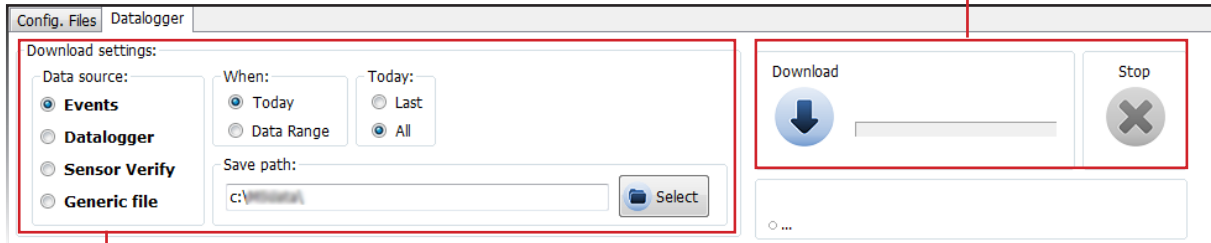


- **Other:** Allows one to choose any file, the system recognizes the final code (e.g. CFLST) and opens the relative window.

DATA LOGGER ACCESS

In this section you can set the values for the download of the loggers activated in the transmitter and execute it.

Buttons to start and stop the download



Buttons descriptions:

Data source

Events: Save file system events (Example F-RAM hardware data [WORKING AREA] [SUCCESSFULLY LOADED])

Datalogger: Saves the loggers enabled in the transmitter (see the relevant transmitter manual).

Sensor Verify: Saves the sensor verification activity data.

Generic file: Save a specific file contained in the SD card.

When (reference period for downloading data)

Today: This option permits the download of the current day files

Data range: this option allows you to select the download period

Today (divides today's day into two categories for download)

Last: This option allows you to download the last downloaded files of the current day

All: This option allows you to download the entire current day of the file

Save path: This option allows you to save the files in the desired folder on your PC

Example: Events Download

To download all the events of the current day in a specific folder, set the following parameters:

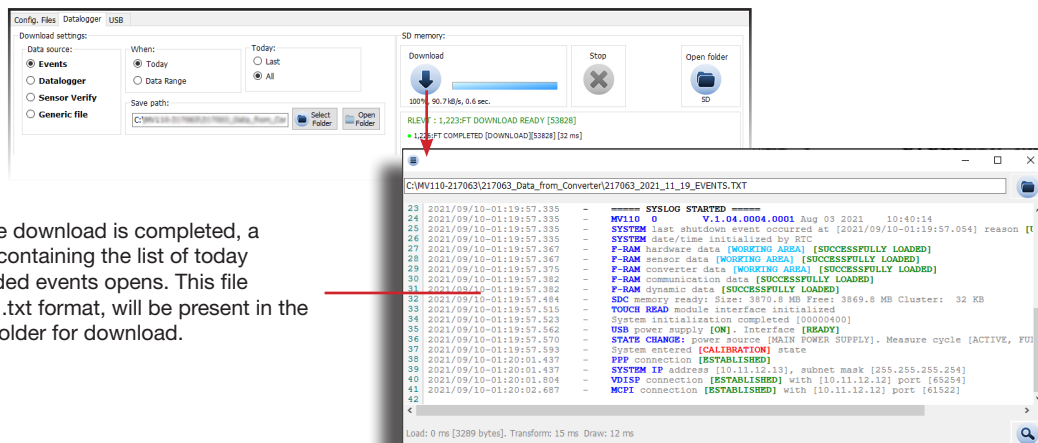
Data source: Events

When: Today

Today: All

Save path: C:/.....

The parameters are set to click the Download button.



When the download is completed, a window containing the list of today downloaded events opens. This file saved in .txt format, will be present in the chosen folder for download.

Example: Download Data Logger



Notes: It's recommended that date and time be synchronized between the transmitter and the PC in order to correctly read the saved data and download them.

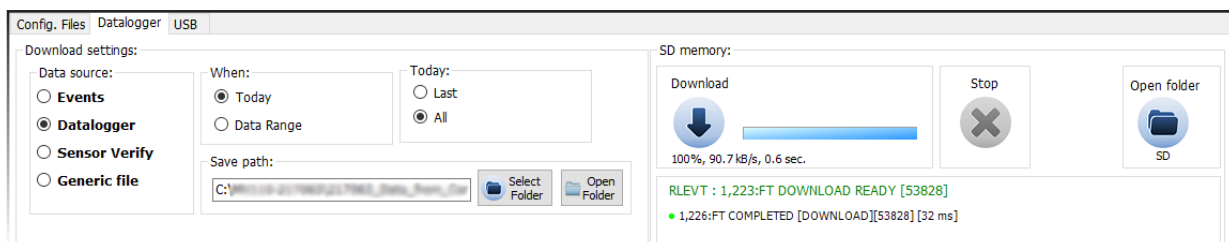
To download all the loggers of the day to a specific folder, set the following parameters as follows

Data source: Datalogger

When: Today

Today: All

Save path: C: /



Display of downloaded files with the download data logger setting enabled.

Note: The fields are fixed position, regardless of whether the previous fields are active or not. Inactive fields are empty (they are delimited by the separator, but contain no data).

	N	1	2	A
N°Record. View progressively the number of registered records.	n°			NRECORD
Data. The recording date viewing for each record.	ddmm	yy		DATE
Hours. Time recording viewing for each record.	00	00	00	HOURS
Total positive totalizer value. Form Fields when the send flag is active on the totalizer T+.	0			U.M. T+
Partial positive totalizer value. Form Fields when the send flag is active on the totalizer P-.	0			U.M. P-
Total negative totalizer value. Form Fields when the send flag is active on the totalizer T-.	0			U.M. T-
Partial negative totalizer value. Form Fields when the send flag is active on the totalizer P-.	0			U.M. P-
Total net totalizer value. Form Fields when the send flag is active on the totalizer TN.	0			U.M. TN
Partial net totalizer value. Form Fields when the send flag is active on the totalizer PN	0			U.M. PN
Flow rate. Form Fields present when the send flag is on the flow in units of measurement.	0			U.M. FLOWRATE

Flow rate %. Form fields present when the flag of alarm sending is active (only N ° of present total alarms)	R	S	%	0
N ° active alarms. Form fields present when the flag of alarm sending is active (only N ° of present total alarms)	T	U	AL	0
Loss of current measured during insulation test. Available value when sending the sensor test data is active.	V	W	mA	0
Time rise A. Available value when sending the sensor test data is active.	X	Y	ms	0
Time rise B. Available value when sending the sensor test data is active.	Z	AA	ms	0
Sensor test error code. Available value when sending the sensor test data is active.	AB	AC	ERR	0

Visualization of logger download file.

Access Level 5 (diagnostic level) in order to download this type of file.

Voltage measured on electrode E1. Form fields when it is on the flag of sending data on the input voltage (diagnostic value).	AD	AE	V	0
Voltage measured on electrode E2. Form fields when it is on the flag of sending data on the input voltage (diagnostic value).	AF	AG	V	-0.023
Differential voltage between the two electrodes. Form Fields when it is on the flag of sending data on the input voltage (diagnostic value)	AH	AI	V	0
Common mode voltage in the electrodes. Form fields when it is on the flag of sending data on the input voltage (diagnostic value).	AJ	AK	V	0
Noise at low frequency measured on the electrodes. Form fields when it is on the flag of sending data on the input signal noise levels (diagnostic value).	AL	AM	V	0
Differential low frequency noise measured on the electrodes. Form fields when the flag is active sending of data on the input signal noise levels (diagnostic values).	AN	AO	V	0
Low-frequency noise measured input ADC. Form fields when the flag is active sending of data on the input signal noise levels (diagnostic values).	AP	AQ	mV	0
High frequency noise measured input ADC. Form fields present when the flag is active sending of data on the input signal noise levels (diagnostic values).	AR	AS	mV	0
Measured equivalent resistance on the electrode 1. Form fields when it is on the flag of sending data on the electrode resistance measurements (diagnostic values).	AT	AU	kohm	0
Measured equivalent resistance on the electrode 2. Form fields when it is on the flag of sending data on the electrode resistance measurements (diagnostic values).	AV	AW	kohm	0

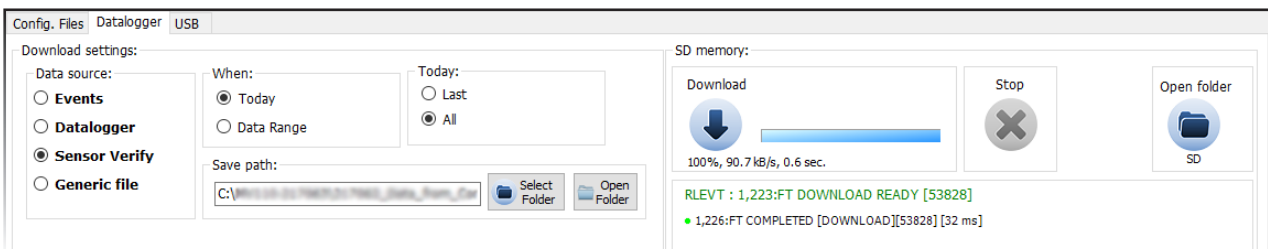
Coils excitation current. Form fields when it is on the flag of sending data related to the sensor excitation circuit measures (diagnostic value)	mA UUM UUM 0 0 0 AV EXCITATION CURR 0
Measured resistance of the excitation circuit (coil + cable). Form fields when the data transmission flag is active relative to the sensor excitation circuit measures (diagnostic values).	ohm UUM UUM 0 0 0 AZ RCOILS 0
Temperature measured on the sensor coils (indirect measurement). Form fields when the data transmission flag is active relative to the sensor excitation circuit measures (diagnostic values).	°C UUM UUM 0 0 0 BB TCOILS 0
Temperature T1 (Board Sensor 1: located close to the amplifier input). Form fields when the data transmission flag on board the internal temperature measurement is active (diagnostic values).	°C UUM UUM 0 0 0 BD T1 0
Temperature T2 (Board Sensor 2 : located close to the power supply module). Form fields when the data transmission flag on board the internal temperature measurement is active (diagnostic values).	°C UUM UUM 0 0 0 BE T2 0
CPU temperature. Form fields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic value).	°C UUM UUM 0 0 0 BH CPU 0
Primary power supply of CPU. Form fields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic value).	V UUM UUM 0 0 0 BJ CPU 0
Positive supply voltage of analog circuits. Form fields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic values).	V UUM UUM 0 0 0 BK ANCC+ 0
Negative supply voltage of the analog circuits. Form fields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic values).	V UUM UUM 0 0 0 BL ANCC- 0
Voltage measured on the battery B1 (NOT rechargeable battery). Fields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic values).	V UUM UUM 0 0 0 BM BATT1 0
Voltage measured on the battery B2 (or rechargeable battery). Formfields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic values).	V UUM UUM 0 0 0 BN BATT2 0
% Battery charge. Form fields when the data on the board's internal power supply voltage measurements the send flag is ON (diagnostic values).	% UUM UUM 0 0 0 BU BATTERY CHARGED 0

Example: Download Sensor Verify

The transmitter must comply with the following conditions to download the file "STESTLOG.CSV":

- The option SDC/RTC activated by the manufacturer
- The option "BIV" activated by the manufacturer
- The function "Sens. verify" on the menu "Sensor" activated
- It has to be connected to the power supply.

Once these conditions are respected, the instrument automatically performs a test of the sensor operating parameters every hour and fills out a line of the "STESTLOG.CSV" file; if you want to manually compile a line of the "STESTLOG.CSV" file, just start the "sens.verify" command on the "Diagnostic" menu or through the "SVERC" Mcp command.

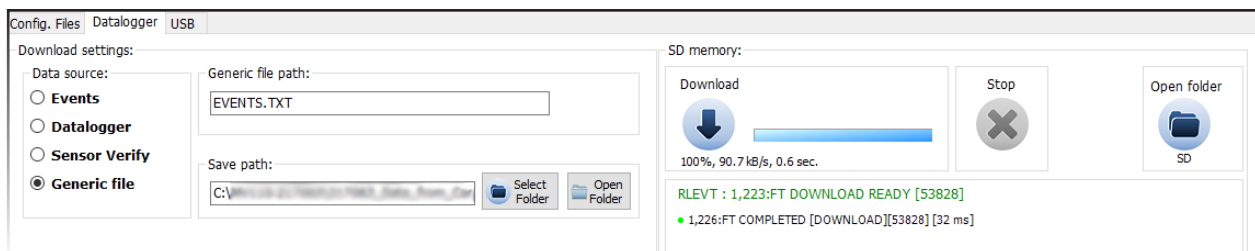


To download all sensor verification files of today's day to a specific folder, set the following parameters as follows:

- Data source:** Sensor verify
- When:** Today
- Today:** All
- Save path:** C: /

Once the parameters have been set, click the Download button.

Esempio: Download Generic File

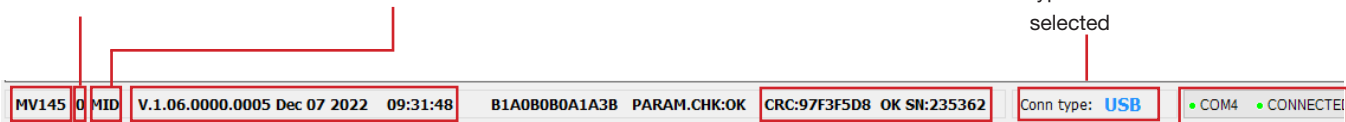


This function allows you to select a file contained in the SD memory of the transmitter and download it. In the "Generic file path" section indicate the name of the file contained in the SD and indicate the saving path of the file in "Save path". Once these values are set, proceed with the download of the file by clicking on the "download" button.

AREA 6

This section of the Mcp software displays the following data:

- 0 = board revision 0
- 1 = board revision 1
- not available on old firmware
- visible only if the instrument is certified MID



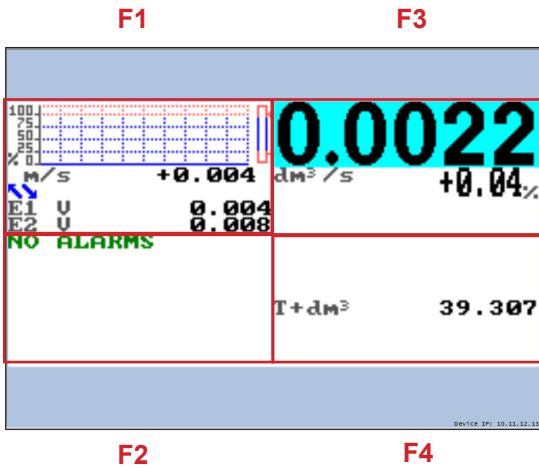
- Converter model
- V.0.00.2004 Converter Firmware Version
- 005: Converter data table
- Dec...: date and time of firmware creation
- ABC... Hardware Code
- SN: serial number
- type of connection selected
- Connection port Com..
- State of connection
- PPP Communication protocol

AREA7

The virtual display is shown in this area of the MCP software. For setting the colors see pag. 9



This screen is displayed when the transmitter power supply is absent. Connect the transmitter to the power supply to use the Mcp program.

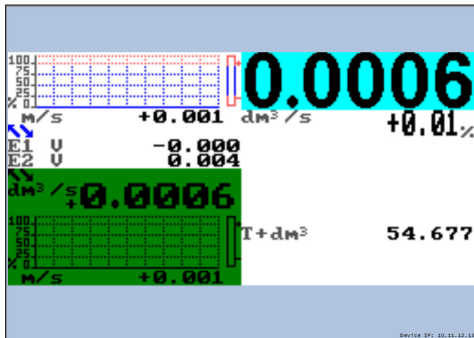


The virtual display is divided into 4 sections. In each of them there are different parameters set in the transmitter

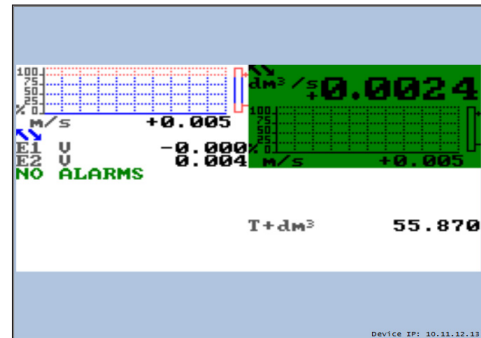
- F1 presents the diagram indicating the instantaneous flow rate variation and the relative active values in the transmitter.
- F2 Shows the list of alarms present in the system if active in it.
- F3 indicates the value of the instantaneous flow rate and the unit of measurement associated with it.
- F4 Shows the list of active totalizers in the transmitter.

Pressing the F1 or F2 or F3 or F4 buttons the real display is shown in the virtual one. In fact, depending on the button pressed, the real display will be shown.

Example: clicking F2



Example: clicking F3

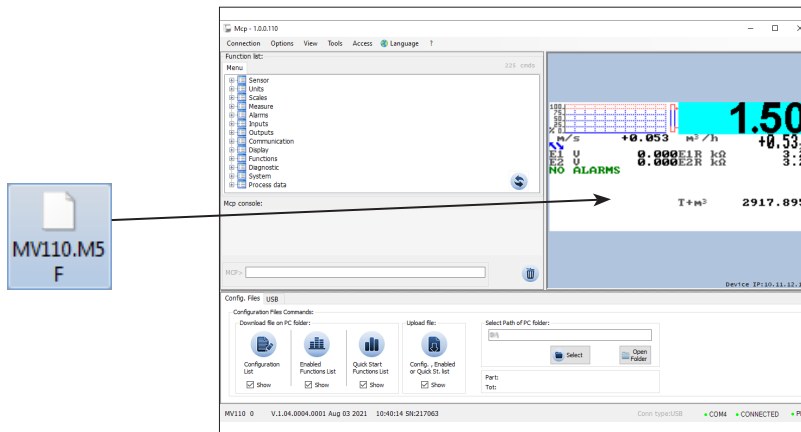


To handle the actual display by the PC buttonboard follow the meaning of the buttons shown in the table:

MCP Buttons	Transmitter Button
	 LONG PRESS
	 LONG PRESS
	 LONG PRESS

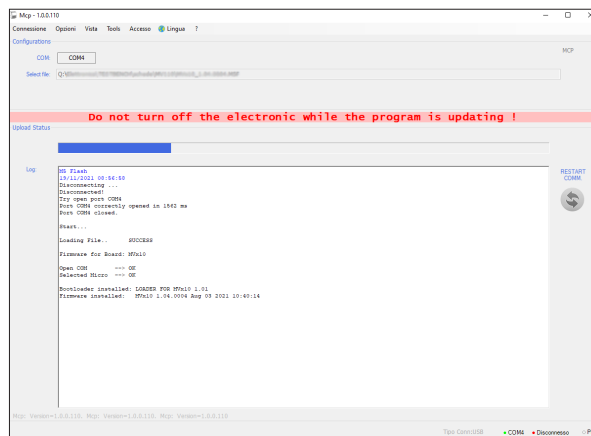
MANUAL UPDATE OF THE TRANSMITTER FIRMWARE

- Download the file with the .M5F extension
- Move the downloaded file to the desktop
- Start the Mcp program
- Connect the transmitter to the PC
- Drag-and-drop the firmware file as shown in the following figure:

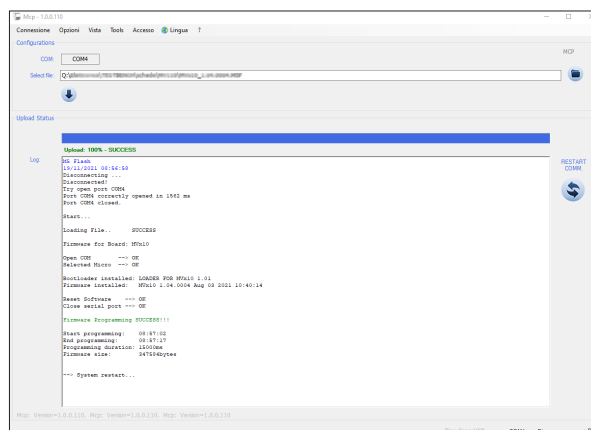


If the converter ISN'T equipped with SD card

- The following screen for firmware update starts and is displayed automatically.

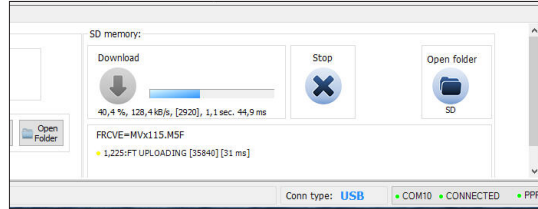


- At the end of this procedure, press the “restart comm” Key which restarts the converter and the Mcp software.

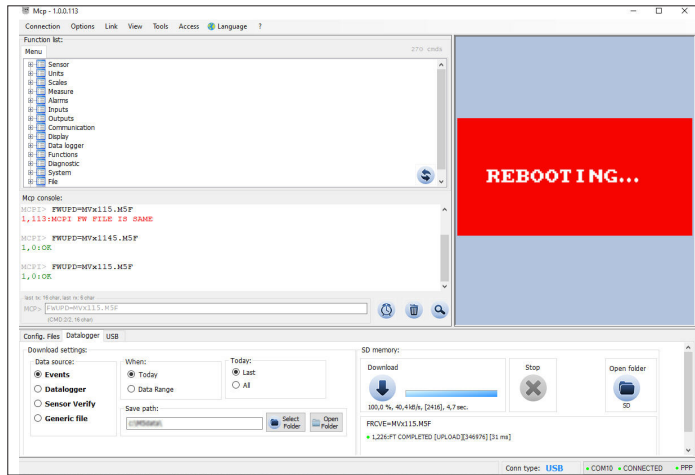


If the converter IS equipped with SD card

- ❑ The firmware download starts and MCP sends automatically some commands to the converter



- ❑ At the end of the procedure, the converter restarts automatically



REVIEW	DATE	DESCRIPTION
MAN_MCP_EN_BU_R00	04/05/2021	FIRST EDITION
MAN_MCP_EN_BU_R01	26/02/2022	SOFTWARE UPDATE
MAN_MCP_EN_BU_R02	22/12/2022	SOFTWARE UPDATE

