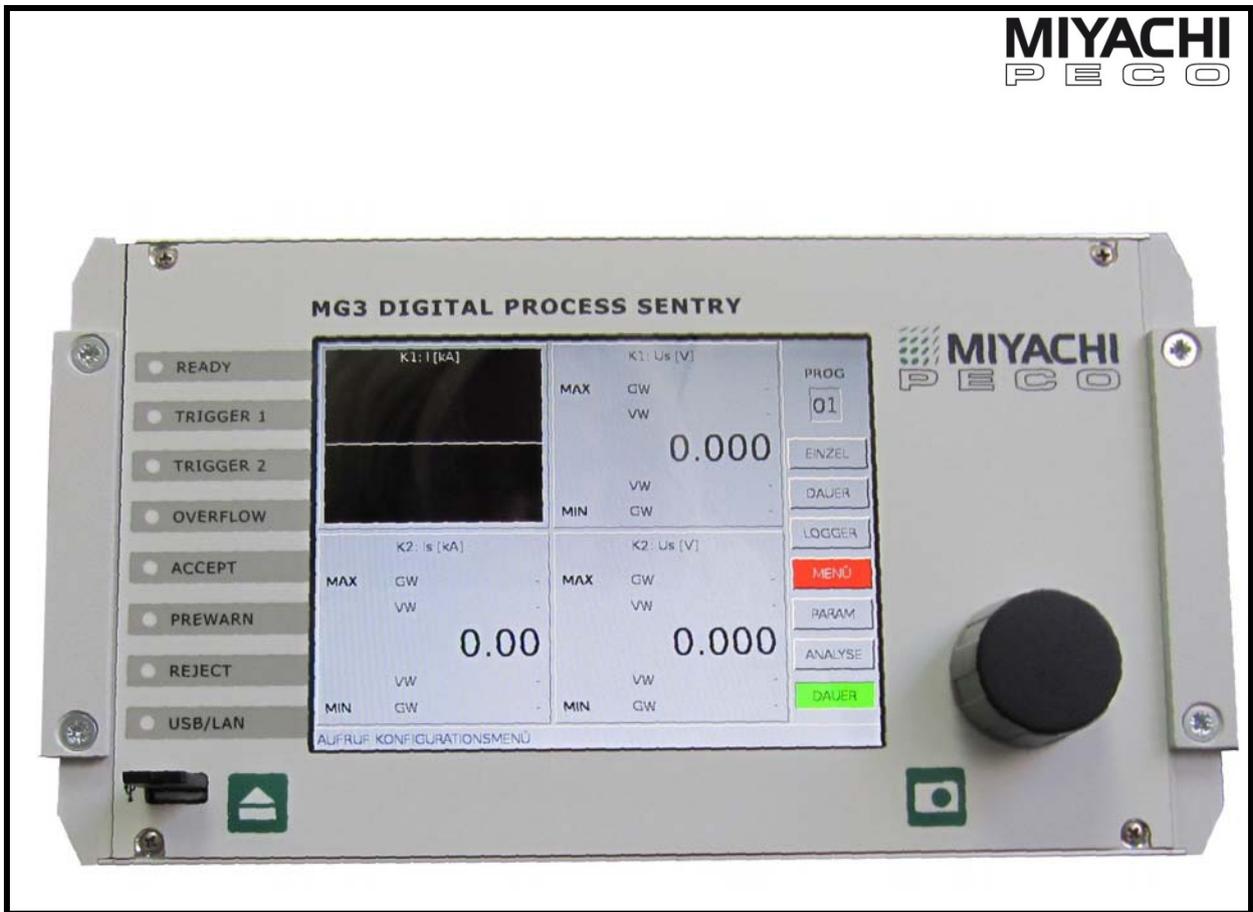


# Short overview

## MG3D New Functions



Order number:		Year:	
Serial number:		Reg.code	

Versions		
Version	Date	Basis of revision
1.0	2012-03	New
1.1	2014-07	Reset
1.2	2014-07	Ethernet
1.2a	2014-07	Note for cyclic saving, corrections
1.3	2015-07	Supporting Modbus instead of CANopen

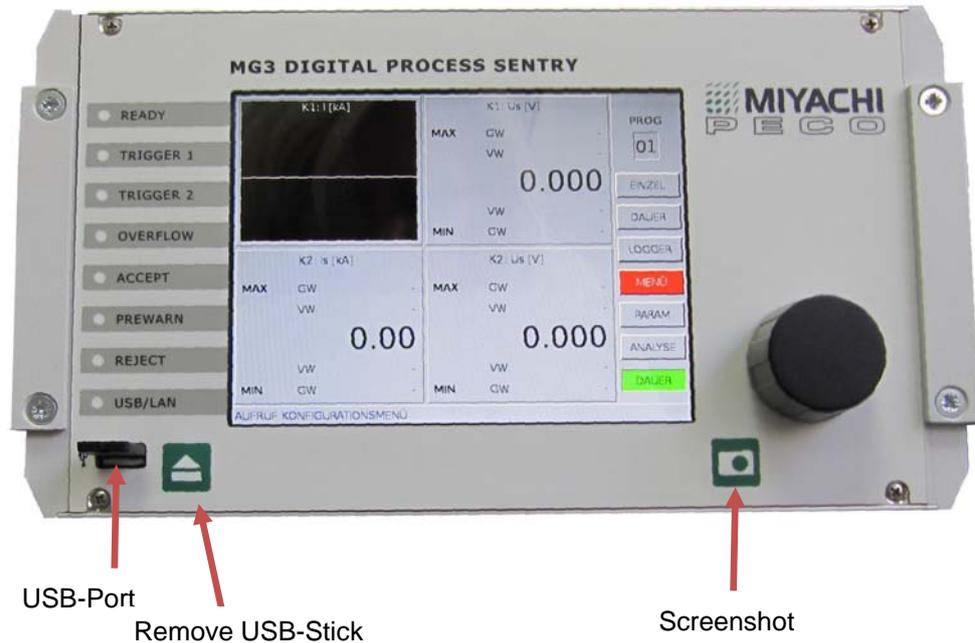
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## 1 Technical Innovations



### 1.1 USB-Port

We recommend using only industrial standard USB sticks (like the one included in the scope of delivery).



**Avoid fast cyclical saving in a row on the USB stick.  
This can influence the function and on long-term damage the data medium.**

### 1.2 Remove USB-Stick

Press this button before you remove the USB-stick.  
Before removing the USB-stick from pc/laptop disable the stick properly.

### 1.3 Screenshot

Press this button to take a screenshot of the current display. The screenshot is stored on the USB-stick (or internal – depending on the settings) with filename **SSH\_xxx.bmp** (xxx means consecutive number).

### 1.4 Modbus TCP

Starting with SW Version 6.5.0 the MG3 supports Modbus TCP.  
CANopen support available only on request.

**1.5 Technical Data**

Type of device	MG3
Measuring pause	Variable
Graphic display	VGA, 640 x 480 Pixel
Optical indications	8 front LEDs
Ambient temperature	0 °C to 40 °C
Relative humidity	max. 70 %
Dimensions Housing	approx. W 280 x H 140 x D 380 mm
Weight	approx. 5,3 kg, (approx. 11,7 lbs)

**1.6 Trouble Shooting**

**Problem during booting** When the MG3 freezes during booting, switch it off and on again. Repeat this up to 5 times, thus releases a complete reset.

**Note:** With this action all settings and values for the MG3 display (e.g. graphic view, bus addresses, etc.) are reset to factory settings.

After this the MG3 should start without problems.

**Abnormal end during booting** If the MG3 crashes during the booting and starts automatically again, **do not switch it off**. It will automatically restart up to 5 times for a complete reset.

**Note:** With this action also all settings and values for the MG3 display (e.g. graphic view, bus addresses, etc.) are reset to factory settings.

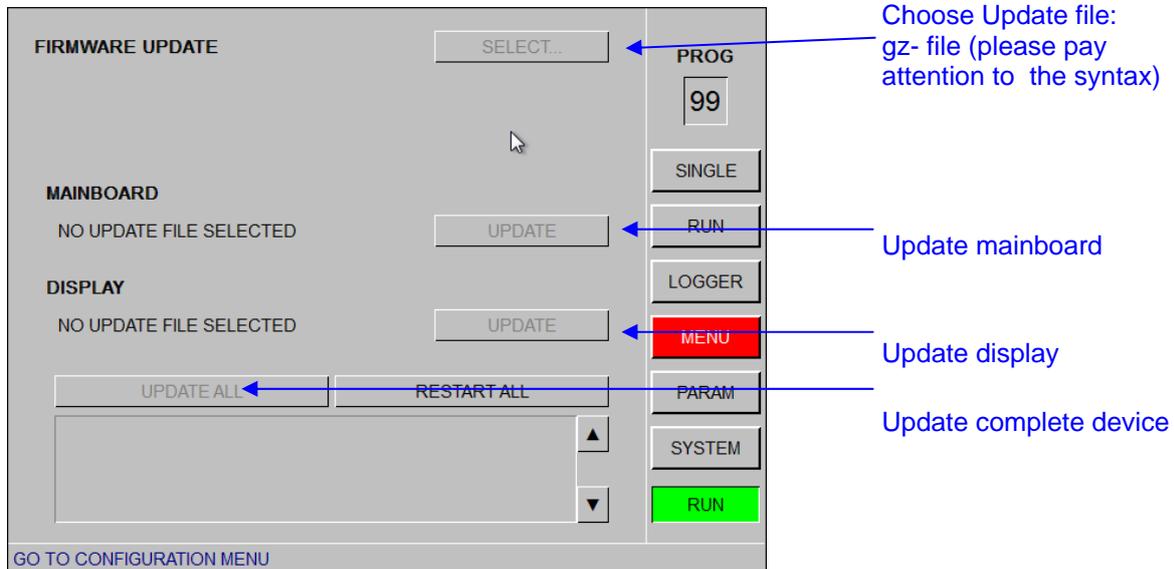
**Bluescreen or problem during shutdown** When MG3 shows a 'Bluescreen' (blue display with icons), please initiate a shutdown by pressing both touch buttons simultaneously for max. 10 seconds.



Press both touch buttons simultaneously max 10 sec. for a shutdown.

**Shutdown** You can also initiate a shutdown as described in the following: Go to MENU / GENERAL / ADVANCED, set the field SYSTEM to 'shut-down' and click to EXECUTE. Now a shutdown is initiated manually.

## 2 Firmware-Update



Plug in the USB-stick (which is delivered with the device).

Click to Menu / General / System and choose „USB-device“ for DATA LOCATION (when updated directly) or „internal“ (when updated via remote control).

Now you can start the update via Menu / General / System / Update.



**The update files (MG3Install\*.gz, bzw. \*.mot) may not be changed in the syntax und have to be saved on the USB-stick in the respective folder: X:/MG3/update (“X” means the according drive letter in Windows). This folder is created at the first plug-in of the USB-stick.**

Update:

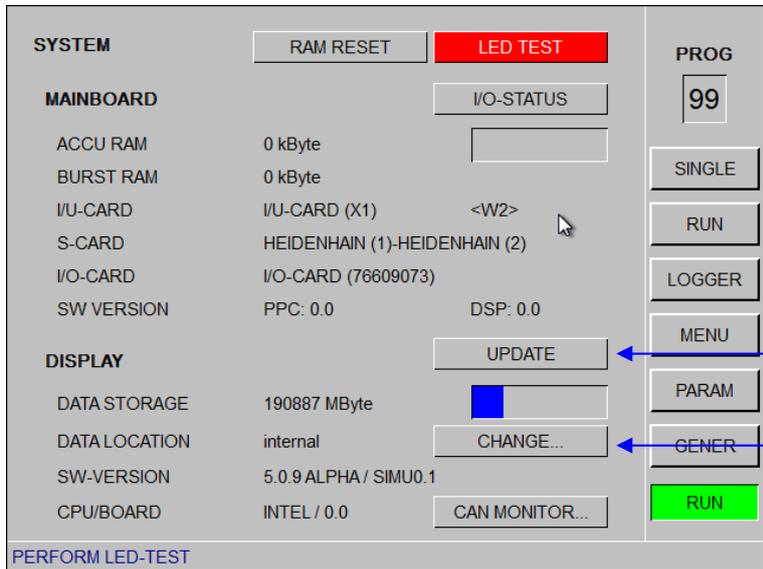
- First choose the corresponding update file for the mainboard or the display via the button 'SELECT'.
- Start the update with the 'UPDATE' button.

In order to update the complete device at the same time:

- Choose the corresponding update file.
- Start the update with the 'UPDATE ALL' button.

When the update is done, restart the MG3 with the button 'RESTART ALL'.

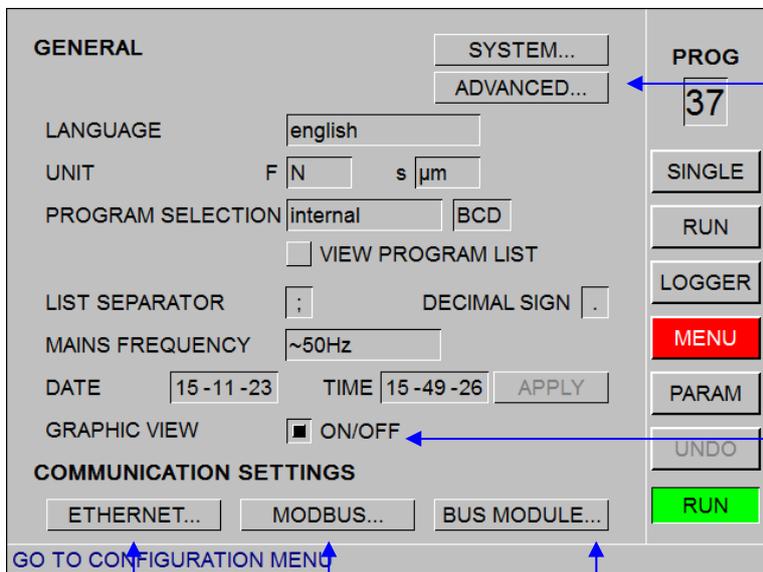
**3 Changes in the Display**  
**3.1 System Settings**



Firmware Update

Memory location for  
- Data/Screenshots  
- Logging  
- Graphs  
- Updates  
(internal / USB-device / network)

**3.2 Basic Settings**



Advanced system functions

Allow / suppress generally displaying graphs (to optimize weld rates)

Ethernet TCP/IP for data backup on the network

Modbus configuration

Bus module-configuration  
- Profibus DP  
- Ethernet/IP

### 3.3 Advanced System Settings

**ADVANCED SYSTEM PROPERTIES**

OS VERSION      WINDOWS V6.0

HOST NAME      PECOWSIS01      ...

ETHERNET INTERN    on (00:19:99:12:A9:62)

ETHERNET EXTERN    on (00:19:99:12:A9:62)

DELETE FIRMWARE UPDATE INTERNALLY      SELECT

**INITIALIZATION ENTRIES**

SECTION      default      ENTRY     

VALUE           READ      WRITE

SYSTEM      re-start      EXECUTE

GO TO CONFIGURATION MENU

**PROG**  
99

SINGLE

RUN

LOGGER

**MENU**

PARAM

BACK

**RUN**

Change host name (needs Re-Boot)

Exclusive system commands (Re-Start, Re-Boot, ...)

### 3.4 Ethernet Settings

You can establish the Ethernet connection to a shared folder in a local network using the RJ45 connector. In this shared folder you can store logging data and measuring waveforms directly.

All necessary settings can be done in screen MENU/GENERAL/ETHERNET.

After opening the Ethernet screen the password of the current registered user is required.

**ETHERNET (BETA)**

**PASSWORD**

OBTAIN IP-ADDRESS AUTOMATICALLY

IP ADDRESS      10.30.30.61

SUBNET MASK      255.255.255.0

GATEWAY      0.0.0.0      APPLY

**NETWORK CONNECTION**

USERNAME      username

PASSWORD      \*\*\*\*\*

DOMAIN      DOMMU      ...

SERVER      MECDENBAZ03      ...

DIRECTORY      Common      ...

CONNECT

GO TO CONFIGURATION MENU

**PROG**  
02

START

STEP

LOGGER

MENU

PARAM

UNDO

**AUTO**

Password

IP-settings

Network connection settings

Connect / disconnect the network shared directory

### 3.4.1 Configuration of the Interface

The communication through a network requires settings for IP address, subnet mask and optional gateway. In most networks a DHCP server is used.

In this case please enable “OBTAIN IP-ADDRESS AUTOMATICALLY” and click to APPLY.

The interface settings are now applied automatically.

In some networks the interface settings must be set manually. If no gateway is used, the gateway address must be set to “0.0.0.0”.

To activate the interface settings click to APPLY.

### 3.4.2 Connection to a network share folder

To establish a consistent connection to a network share folder, the network administrator has to create a user in this network with all necessary access rights (normally full access) for that share folder.

Enter the user name and password in the Ethernet screen below NETWORK CONNECTION.

Note: These settings are case sensitive!

Afterwards enter the domain name (DOMAIN), the name of the computer on which the share folder is located (SERVER) and the name of the share folder (DIRECTORY).

In case of a manually defined interface enter the IP address of the computer with the share folder at SERVER. To select a subdirectory path use a double-slash "/" to separate it from the share name.

The screenshot shows the 'ETHERNET (BETA)' configuration screen. It includes a 'PASSWORD' field, a checkbox for 'OBTAIN IP-ADDRESS AUTOMATICALLY', and input fields for 'IP ADDRESS' (10.30.30.61), 'SUBNET MASK' (255.255.255.0), and 'GATEWAY' (spacenet-std-gw) with an 'APPLY' button. Below this is the 'NETWORK CONNECTION' section with fields for 'USERNAME' (username), 'PASSWORD' (masked with asterisks), 'DOMAIN' (DOMMU), 'SERVER' (MECDENBAZ03), and 'DIRECTORY' (Common//SPECIAL). A red 'CONNECT' button is visible. On the right side, there is a 'PROG' dropdown set to '02' and buttons for 'START', 'STEP', 'LOGGER', 'MENU', 'PARAM', and 'UNDO'. A green 'AUTO' button is at the bottom right. The status bar at the bottom shows 'CH1: 00000238 0099 msec' and 'CH2: 00000000 0000 msec'.

Click to **CONNECT** in order to establish the connection to the share folder.

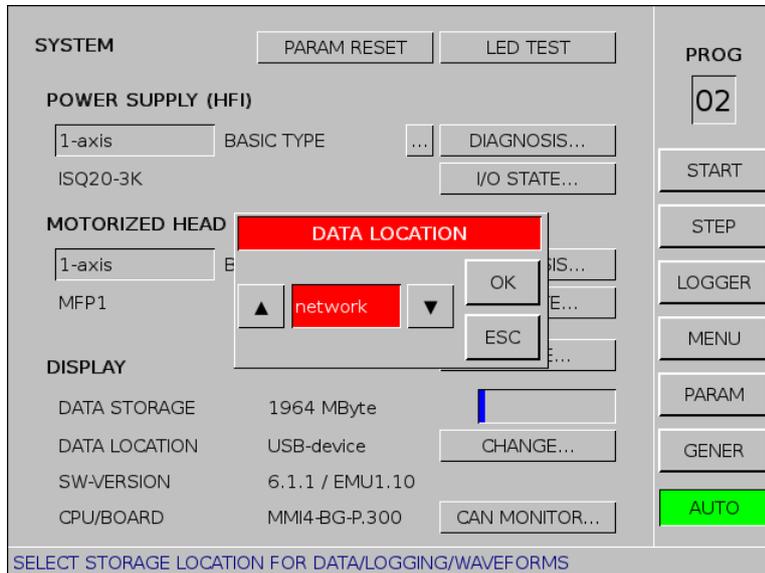
A successful connection is shown by the connection string in the status bar.

In case of error an error message is shown.

This screenshot is identical to the previous one, but the 'CONNECT' button has been replaced by a red 'DISCONNECT' button. The status bar at the bottom now displays 'CONNECTED: //MECDENBAZ03/Common'.

Click to **DISCONNECT** in order to close an existing connection.

If you want to save data in the share folder change the data location in screen MENU/GENERAL/SYSTEM to “network”.



The connection string is saved and after switching off and on, the unit tries automatically to re-establish the connection. In case of error the data location will be reset to “USB device” (default).

If the network connection is cut during operation, a subsequent write access to the network will generate an error and the data location will be reset to “USB device”. An error message appears: “data volume more than 95 % full: please change”. As a consequence of this error the unit can be non-operable for some seconds.



**Attention**

**The connection with the share folder should only be used in networks which guarantee a safe physical connection! The connection to wireless networks can lead to problems during operation of the unit!**

An active connection with a network share folder can result in longer times for booting and shutdown. The connection is only possible in local Windows networks which support the CIFS protocol. Other or proprietary architectures like ActiveDirectory are not supported.



**Due to the fact that MIYACHI has no influence on design, management and access rights assignment in connected networks, the functionality of Ethernet connections is not part of the product warranty.**

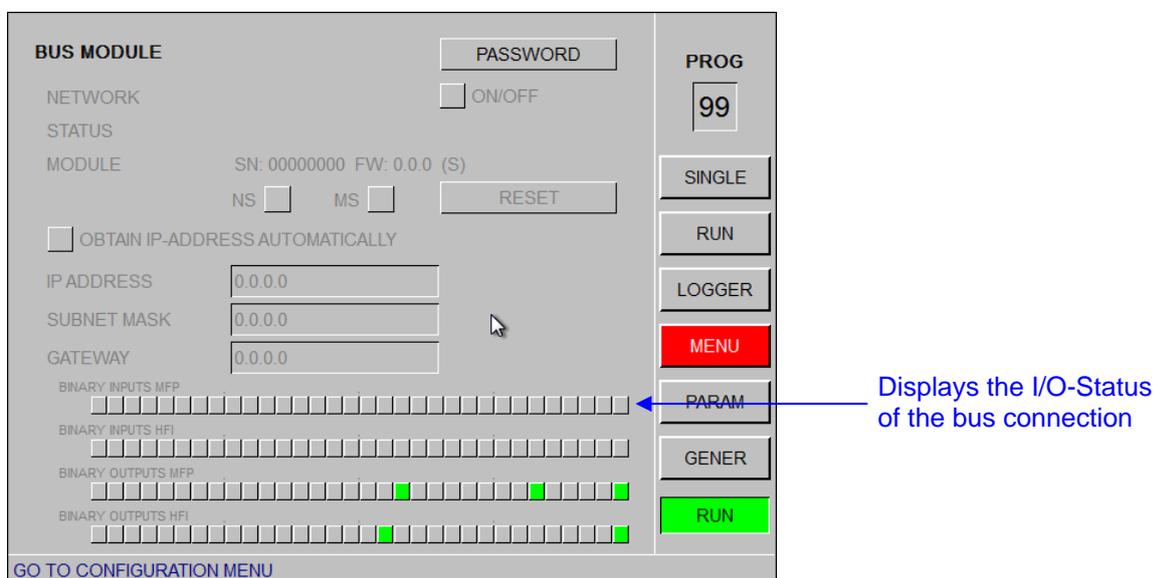
### 3.4.3 Create a network share folder

To create a shared network folder please follow the subsequent instructions:

1. Open Windows Explorer.
2. Create a folder.
3. Right click to the folder and follow Properties/Release or Advanced.
4. Click to ,Share This Folder‘.
5. Define name of share.
6. Select a user for sharing.
7. Allow Full Access, Read and Change for this user.
8. Apply settings.

This procedure can be slightly different depending on the used Windows Version.

### 3.5 Settings for Profibus-DP; Ethernet/IP, ...



### 3.6 Transferring data to PC/Laptop

 <b>Caution</b>	<p>Disable the USB stick before you remove it from the PC in order to use it with <b>MG3</b>.</p>
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**File structure**

Data on the USB stick is stored in four directories.

**DATA** contains files with the file name extensions:

- \*.bmp (Screenshots)
- \*.txt (Text file of parameters)
- \*.par (Parameter file)

**LOGGING** contains files with the file name extension:

- \*.log (Log-File)

**UPDATE** contains update files with the file name extension:

- \*.gz (Update-File)
- \*.mot (Update-File for mainboard)

**WAVEFORM** contains files with the file name extensions:

- \*.env (envelope waveform)
- \*.ref (Reference waveform)
- \*.crv (Measuring waveform)

	<ul style="list-style-type: none"> <li>Files with file name extensions *.log, *.env, *.ref, and *.crv are saved as CSV format (Comma Separated Value format), and can be further processed with Excel for instance.</li> <li>Files with file name extension *.par can be read, edited, adapted and written back again.</li> </ul>
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