

G5 DIN-Rail Mount Weighing Instrument with display Short form instructions



About this document

This document applies to the following instruments:

G5-RMD-S-DC-W, P/N 110885, HW Version 3

This manual is a short form instruction to get started with the G5 Weighing Instrument. Please refer to technical manuals for detailed information. Technical manual(s) as well as other manuals are available for download as pdf files from the www.blh Nobel.com website. Manuals can be ordered in printed format, contact your supplier.

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Content of delivery

Besides the instrument and this short form manual are detachable screw terminals enclosed (x6). Make sure all screw terminals are available when the instrument is installed.

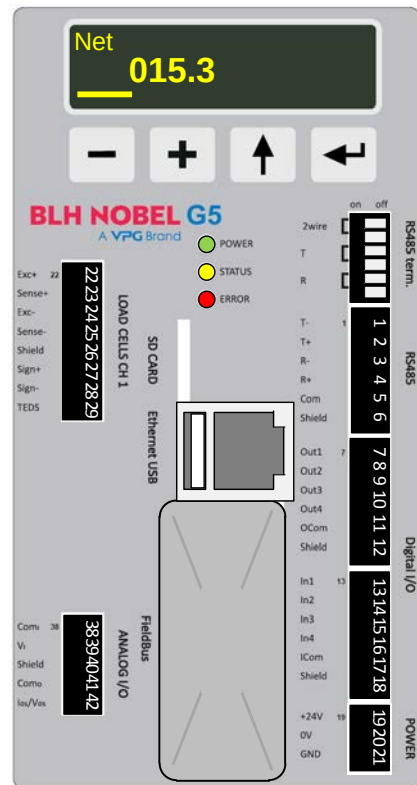
Mounting

The unit snaps on to a DIN-rail. To install tilt the lower end of the instrument slightly outwards (away from the DIN-rail) and place the hooks of the rear side of the instrument on the DIN-rail. Push the lower side towards the DIN-rail until it snaps into locked position. If the latch is not locking smoothly it can be opened using a screwdriver at the bottom. See picture below. Use a screwdriver to open the latch if the unit is to be removed from the DIN-rail.



Connectors

On the front panel of the instrument there are connections for DC power supply, RS485 serial communication, 4 digital outputs, 4 digital inputs, SD card, Ethernet, USB, Fieldbus (optional module), load cell input and analog I/O. See picture below.

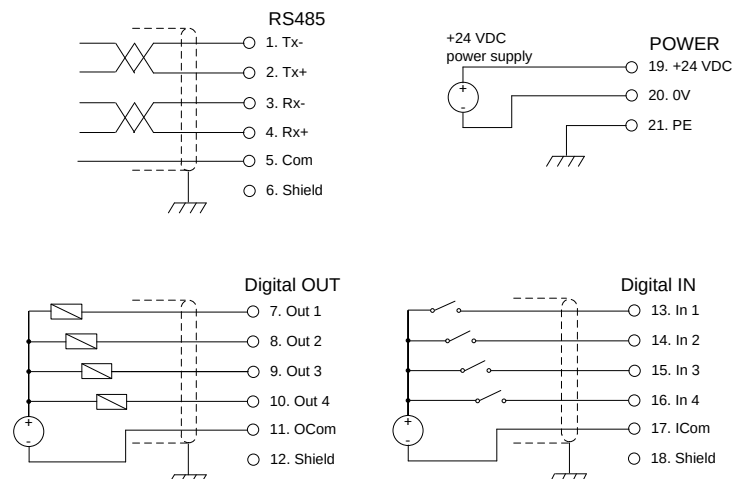


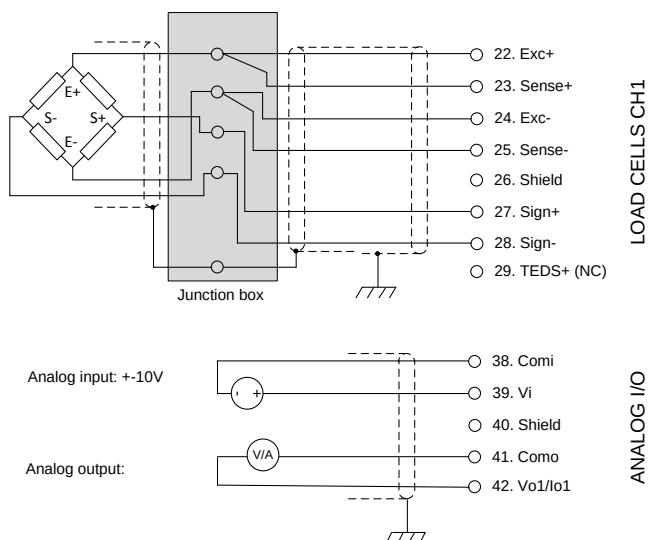
Front panel of a G5-RMD-S-DC-W.

Connections

Use DIP-switches (ON) to apply termination resistors to the RS485 lines if the G5 is the end point of the communication line. Set the 2 wire DIP-switches to ON if a two wire connection is used.

Load cell connection is shown with a single load cell connected. If more than one load cell is used they should be connected in parallel to the junction box. Use a 6 wire cable between junction box and instrument.





Firmware Upgrade

1. Place the upgrade file (G5Upgrd.fwp) on a micro SD-Card.
2. Turn off G5 power and insert the SD-Card in the instrument.
3. Turn on power and wait until red or green LED is lit.
Upgrading will take about 2 minutes.
4. Green LED indicates upgrade success and red failure. Try again if upgrade fails. Turn off power.
5. Remove SD-Card and power up instrument.

Connecting a G5 to a network

At delivery (factory default) the instrument is configured for static (manual) ip-address. The ip-address (192.168.99.150) is chosen to reduce the risk of problems if the instrument is connected to a network without configuration. The network settings should be configured before connecting an instrument to a network. A G5-RM is set-up by connecting to the instrument using a PC with a web browser. Connect the PC to instrument with a standard Ethernet cable. The PC should be set-up for a static ip-address matching the instrument e.g. 192.168.99.10 to match the default. Subnet is set to 255.255.255.0

Forcing the G5 to a static ip-address

A USB memory with a text file named "G5_STAT.IP" can be used to force the G5 to any static ip-address. This can be used if the default ip-address is not suitable or if the actual setting has been lost. The "G5_STAT.IP" file shall include the following text: # denotes comments which can be omitted.

```
# Settings for temporary use of static IP
address
192.168.59.243 # IP address
255.255.255.0 # Subnet mask
192.168.59.1 # Default gateway
```

Note that this is only an example of possible ip-address and subnet mask.

Calibration

Two menus are used to handle the calibration of the scale:

Main Menu -> Parameter Set-up -> Calibration Parameters
and

Main Menu -> Parameter Set-up -> Calibration

The 'Calibration Parameters' menu holds the parameters that control the general behavior of the scale such as unit, resolution, capacity etc. while the menu 'Calibration' is used when the scale is calibrated.

In this short form manual is the Data sheet calibration procedure is briefly described.

Data sheet calibration will quickly give a good accuracy if the mechanical system allows it. If very high accuracy is desired a dead load calibration should be done. Data sheet calibration will always give a good starting point.

Data sheet calibration procedure:

1. Select resolution, unit and capacity of the scale. The higher the resolution is (in relation to capacity) the lower should the bandwidth be set. If the output is unstable the bandwidth should be lowered and/or the resolution reduced (higher value).
2. Enter the Conversion factor which gives the relation between the load cell calibration unit and the scale unit. Multiplying the load value in load cell units with the conversion factor should give the load in scale units.
3. Set the number of load cells used for the scale.
4. Enter the load cell rated load and the load cell output values in mV/V for each LC.
5. Finally zero is set by entering the actual load to the set zero parameter.

Status LEDs

There are three LEDs indicating the status of the instrument.

STATE	GREEN	YELLOW	RED	Description
BOOT	On	Flickering	On	First stage boot, duration 1 second
START UP	On ¹	On	Off	Program start, duration approx. 14 s
WAITING	On ¹	Flashing	Off	Note 2
NORMAL	On ¹	Off	Off	Instrument in normal operation and there are no errors.
ERROR	On ¹	Flashing	Flashing	Instrument in error state (not a fatal error)
FATAL ERROR	On ¹	Flashing	On	Fatal instrument error such as corrupt parameters or HW failure.

Note 1: If the instrument is using a fixed IP-address from the USB memory instead of configured IP-address the Green LED will flash instead of being constantly lit. This applies to all states but BOOT.

Note 2 If **Manual Start Mode** is configured a message will be displayed and the yellow LED will flash until the user (or controller) has acknowledged the manual start mode. When acknowledged the Starting-up sequence is finished. If **Auto Start Mode** is configured this stage is bypassed.