PROGRAM DESCRIPTION
G4

Program: G4MI_1.2.111.0

This description is valid for:

G4 Weighing Instrument with application program **1.2.111.0**

See also the following descriptions

G4 Weighing Instrument, Technical Manual RM (www.vishaypg.com/doc?35131)
G4 Weighing Instrument, Operating instructions, Quick installation RM (www.vishaypg.com/doc?35134)

If these descriptions in any case are contradictory, this description is valid.

Function

This special program has functions, special for selective billet weighing.

Hardware requirements

This special program is required to have a DIO8 module in slot 2, when it has dedicated the digital inputs 21 – 24 for billet type selection, and input 25 for 'ready for weighing' signal. Digital output 21 is dedicated for 'weighing ready' signal.
The above mensioned inputs and outputs will therefore not be available for other configurations.

Operation

There are four different types of billets with their own 'standard' weight . These different 'standard' weights should be entered into G4 set-up parameters 'Billet weight 1' to 'Billet weight 4'.

'Level 1' should be configured to be a 'low level' with a value that indicate no billets on the scale.

What type of billet that is on the scale is defined by activating 1 of 4 defined digital inputs (Input 21 to input 24)

Input 25 is defined as 'Ready for weighing' , and when this input is activated it means that a number of billets of the selected type is on the scale (all billets on the scale should be of the same type).

When input 'Ready for weighing' is activated, G4 waits for stable weight (if 'Motion check' parameter is on) and when stable, calculates the number of billets on the scale by dividing the weight on the scale with the 'standard' billet weight according to which input is activated.

Then the number of billets and the weight on the scale will be added to the accumulating registers for this billet type, and also to the total accumulating registers for 'all types'. .When the accumulating is done, the digital output 21 will be activated. This output will then be activated until weight on scale goes below 'Level 1' value.

The accumulating registers can be read from any of the avialiable communication ports.

The accumulating registers can be zeroed through serial communication by sending command ‘8’ to the ‘command register’ (register 42000 for integers and register 46000 for float format, see technical manual), or by pressing the button ‘Z.Acc’ in the Viewpan display (reached by pressing the ‘Up arrow’ and then ‘+’ or ‘-‘ keys until the function is displayed. See technical manual). If the operator password is active, this key function is password protected.

Parameters

Added or changed menus and parameters.

Menu ‘Billet weights’

This new menu has four set-up parameters with the ‘standard weight’ for the four billet types.

Billet type 1 to Billet type 4

Range: 0 - 999999 <0>	**Defines** the standard weight for the respective billet type.

Menu ‘Inputs/Slot 2’

Parameter ‘Input 21’ to ‘Input 25’ removed when these inputs are used for dedicated functions as follows:

Input 21:	Billet type 1 selected
Input 22:	Billet type 2 selected
Input 23:	Billet type 3 selected
Input 24:	Billet type 4 selected
Input 25:	Ready for weighing

Menu ‘Outputs/Slot 2’

Parameter ‘Output 21’ removed when this output is used for dedicated functions as follows:

Input 21:	Weighing ready (activated when weight and numbers has been accumulated after ‘Ready for weighing’ input has been activated. The output will be deactivated when ‘Level 1’ is deactivated, meaning no weight on scale).

New Modbus registers

Data type: Integer	Data type: float (2 reg./value)	Explanation	R/W
41000 (1 reg)	45800	Current number of billets on scale	R
41001 (1 reg)	45802	Accumulated numbers of billet type 1	R
41002 (1 reg)	45804	Accumulated numbers of billet type 2	R
41003 (1 reg)	45806	Accumulated numbers of billet type 3	R
41004 (1 reg)	45808	Accumulated numbers of billet type 4	R
41005 (1 reg)	45810	Accumulated numbers of ALL billets	R
41006 (3 reg)	45812	Accumulated weight of billet type 1 LOW	R
41009 (3 reg)	45814	Accumulated weight of billet type 1 HIGH	R
41012 (3 reg)	45816	Accumulated weight of billet type 2 LOW	R
41015 (3 reg)	45818	Accumulated weight of billet type 2 HIGH	R
41018 (3 reg)	45820	Accumulated weight of billet type 3 LOW	R
41021 (3 reg)	45822	Accumulated weight of billet type 3 HIGH	R
41024 (3 reg)	45824	Accumulated weight of billet type 4 LOW	R
41027 (3 reg)	45826	Accumulated weight of billet type 4 HIGH	R
41030 (3 reg)	45828	Accumulated weight of ALL billets LOW	R
41033 (3 reg)	45830	Accumulated weight of ALL billets HIGH	R

Accumulated weights are represented by two values (HIGH, LOW). To get the resulting value multiply value HIGH by 10000 and add value LOW. LOW is a value between 0 - 9999.999 with 3 decimals. HIGH is a value without decimals between 0 - 999999.

The range for the accumulating registers is for the number registers 65000 and for the weight registers 10 000 000 000. If the range is exceeded the values start from zero again.

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