

EASY 8

This will describe the function blocks, what each does and the input and output data each uses along with the data types for each of the parameters. It will also define the parameters.

FUNCTION BLOCKS

1. Read_Wt_status
2. Zero
3. Tare
4. Cal_Low
5. Cal_High
6. Get_Version
7. Read_Configuration
8. Set_Config
9. Set_defaults
10. Save
11. Get_Cmd_Status
12. Set_Sensitivity_Filter

DESCRIPTION OF FUNCTION BLOCKS

Describes what each function block does and the parameter types it uses as inputs and outputs. The user will need to create variables, either local or global to input or output the data to these parameters.

1. **Read_Wt_status:** Reads the weight and status from the EASY 8 module.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. Gross Weight – Data type DINT.
 - ii. Net Weight – Data type DINT.
 - iii. Motion indication – Data type BOOL.
 - iv. ADC Status – Data type DINT.
 - v. ADC Error – Data type STRING [80]
 - vi. Tare Weight – Data type DINT.

2. **Read_Configuration:** Reads the configuration parameters.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. Averages – Data type USINT.
 - ii. Motion_Tolerance – Data type DINT.
 - iii. Cal_Low_Ref – Data type DINT.
 - iv. Cal_High_Ref – Data type DINT.
 - v. Filter_bypassed - Data type Bool.
 - vi. Sensitivity – Data type String.
 - vii. Filter_Setting – Data type DINT.

3. **Set_Config:** Writes the configuration parameters to the module.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - ii. Averages – Data type USINT.
 - iii. Motion_Tolerance – Data type ULINT.
 - iv. Cal_Low_Ref – Data type ULINT.
 - v. Cal_High_Ref – Data type ULINT.
 - b. **Outputs:**
 - i. None.

4. **Cmd_Status:** Returns status of a command after being run.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. Command_Status – Data type DINT.
 - ii. Status – Data type STRING [80].

5. **Set_Sensitivity_Filter:** This allows the user to set the sensitivity based on their load sensors, the condition of the FIR filter, and the filter setting.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - ii. Bypass_filter – Data type Bool.
 - iii. New_sensitivity – Data type REAL.
 - iv. New_Filter_Setting – Data type DINT.
 - b. **Outputs:**
 - i. Filter_bypassed – Data type Bool.
 - ii. sensitivity – Data type STRING [5].
 - iii. Filter Setting – Data type DINT.

6. **Get_version:** Reads the version of firmware in the module.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. Version – Data type USINT.

7. **Zero:** command to zero the gross weight.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. None.

8. **Tare:** command to zero (tare) the Net weight.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. None.

9. **Cal_Low:** command to run the Calibration low command.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. None.

10. **Cal_High:** command to run the Calibration High command.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. None.

11. **Save:** Saves all settings and calibration to non-volatile memory.
 - a. **Inputs:**
 - i. Slot number – Data type USINT.
 - b. **Outputs:**
 - i. None.

12. **Set_defaults:** sets the module back to default settings.

a. Inputs:

- i. Slot number – Data type USINT.

b. Outputs:

- i. None.

PARAMETER DEFINITIONS:

ADC Error: Value returned indicating an A/D converter error.

ADC_Status: String return indicating the type of A/D converter error.

Averages: Number of weight readings the module will average together and report as current weight.

Bypass_Filter: Set if user wishes to bypass the filter. Set to off if does not wish to bypass.

Cal_high_ref: The calibration high reference weight.

Cal_Low_Ref: The calibration low reference weight.

CMD_Status: String return indicating the command error that occurred.

Command_Status: Value returned indicating the status of a command.

Filter_bypassed: Indication the filter has been bypassed.

Sensitivity: String indicating the sensitivity setting.

Gross Weight: Total weight of the live load weight on the scale.

Motion: indication the weight on the scale is changing or is in motion.

Motion_Tolerance: Sets the amount of change in weight over a one second period to determine if the weight is changing or scale is in motion.

New Filter: New filter setting. 0 = 1 Hz; 1 = 3.5 Hz; 2 = 7 Hz.

Net Weight: Live load weight since the last Tare command was run. Net wt = Gross wt – Tare wt.



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New_sensitivity: The new sensitivity value to write to the module.

Slot: The slot in the chassis the module resides in.

Tare_Weight: The tare weight is the difference between the Gross weight and the Net weight.

Version: Firmware version of the module.