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# **PM100 User Manual Gen3 Features**

**Revision 0.1**



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## Revision History

Version	Description of Versions / Changes	Responsible Party	Date
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# 1.



## Introduction

The new Gen3 PM100 units have following changes:

- (a) Different number of RTDs
- (b) New excitation filter for resolver
- (c) Additional Digital Inputs
- (d) Additional Analog Inputs

The above changes require the user to set up these options properly through the GUI.

### 1.1 Setting up RTDs:

In the new Gen3 units, there are only two RTDs available instead of five as previously. The two available RTDs are RTD1 and RTD2. These RTDs are now configurable to select either a 100 Ohms RTD or a 1000 Ohms RTD through a GUI parameter, RTD\_Select\_Command\_(BITS\_1\_0).

Following GUI parameters can be used to configure and confirm the set up of RTD1 and RTD2:

Parameter	Description
RTD_Select_Command_(BITS_1_0)	<p>This parameter is used to select values for the two RTDs as follows:</p> <p>Bit 0: Configures RTD1 Bit 1: Configures RTD2</p> <p>Set this parameter to one of the following values to select the desired configuration for RTD1 and RTD2:</p> <p>0: RTD1 = 1K Ohms RTD2 = 1K Ohms</p> <p>1: RTD1 = 100 Ohms RTD2 = 1K Ohms</p> <p>2: RTD1 = 1K Ohms RTD2 = 100 Ohms</p> <p>3: RTD1 = 100 Ohms RTD2 = 100 Ohms</p>



RTD_1_Select_Output_Status	This is the hardware output pin that shows the status of RTD1 configuration.  0: RTD1 is selected for 1K Ohm 1: RTD1 is selected for 100 Ohm
RTD_2_Select_Output_Status	This is the hardware output pin that shows the status of RTD2 configuration.  0: RTD2 is selected for 1K Ohm 1: RTD2 is selected for 100 Ohm
RTD_1_Selected_Value_(Ohms)	This parameter can be used for additional confirmation of RTD1 selection. This shows the value of RTD1 as either 100 or 1K based on the chosen configuration.
RTD_2_Selected_Value_(Ohms)	This parameter can be used for additional confirmation of RTD2 selection. This shows the value of RTD2 as either 100 or 1K based on the chosen configuration.



## 1.2 Excitation Filters:

New Gen3 units are equipped with three excitation filter outputs that can be configured to provide a reference signal to the resolver attached to the motor. PM100 units come with pre-configured units and hence it is not necessary for the user to change this configuration. The following information is only provided so that the user is aware of the process in case this configuration has to be changed.

Following GUI parameters can be used to configure excitation filter for the resolver:

Parameter	Description
Exc_Filter_Command_(BITS_2_1_0)	<p>This parameter is used to select values for the three Excitation Filter outputs as follows:</p> <p>Bit 0: Configures 'Excitation Filter 1' Bit 1: Configures 'Excitation Filter 2' Bit 2: Configures 'Excitation Filter 3'</p> <p>Set this parameter to a value between 0 and 7. Any value above 7 will reset the parameter back to 0.</p> <p>The default value for this parameter is 5.</p>
EXC_Filter_1_Output_Status	0: Clears the output 1: Sets the output
EXC_Filter_2_Output_Status	0: Clears the output 1: Sets the output
EXC_Filter_3_Output_Status	0: Clears the output 1: Sets the output

## 1.3 Additional Digital and Analog Inputs:

Please contact RMS regarding the use of additional analog or digital inputs.