



EMU200A PID100

Specifications

SUNGROW

Revision

Version	Date	Subject	Modification	Reviser
V1	2022-8-4	New document	New document	Liu Jianyuan
V2	2022-8-11	Revise	Revise the section of SUNGROW PID100 about the content of 'ISO function'. Add the picture of PID100.	Liu Jianyuan

1 Introduction

This document describes the specifications of PID100 module .

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2 SUNGROW PID100

PID100 is mainly used to prevent the attenuation of PV panel output power due to the Potential Induced Degradation (PID) effect in PV power generation system. The picture of PID100 is as follow:



Figure 1 PID100 product picture

It has the following functions:

PID suppression function:

By injecting voltage between phase line and ground line of isolation transformer, PID module can adjust PV+ or PV- to ground voltage of panel to prevent panel PID effect, so as to improve power generation and increase revenue.

PID repair function:

The PID100 module injects voltage between the power grid and the ground, and then adjusts PV+ to ground voltage of the panel to be less than the set threshold (N-type panel), or PV- to ground voltage to be greater than the set threshold (P-type panel), so as to repair the panel potential induced attenuation, so as to improve the power generation of the power station and increase revenue.

ISO function:

The PID100 module integrates isolation impedance detection to ground (ISO) which injects a fixed voltage into the power grid through sampling resistance, so as to measure the isolation impedance of the power grid to the ground, detect the abnormal AC isolation impedance, and protect equipment and personal safety.

3 PID100 specifications

Table 1 specifications

Items	Parameters	Specifications	Remarks
Suitable System	Nominal System Voltage (Un)	DC Max.1500V; AC Max.800V+10%	
Input Voltage	Rated Input Voltage (Us)	220Vac	
	Voltage Range	198~242V	
	Rated Input Frequency (f)	50/60Hz	
	Input Frequency Range	45~55Hz/55~65Hz	
	Rated Power Grid Voltage	800Vac	

Suitable Power Grid	Power Grid Voltage Range	720~880V	
	Rated Power Grid Frequency	50/60Hz	
	Power Grid Frequency Range	45~55Hz/55~65Hz	
	Power Grid Type	□TN、□TT、■IT	Excluding corner grounded delta system
PID Parameter	PID Max. Output	0.5A dc	
	PID Functions	PID suppression after grid connection	
		PID repair at night	Inverters in SVG mode
ISO Parameter	Measuring Voltage	<120V	IEC 61557-8
	Response Value	0.2 ~100 kΩ	
	Response Inaccuracy	7~100 kΩ ±15%@25°C	IEC 61557-8
		0.2~7 kΩ ±1 kΩ@25°C	
	Max. Measuring Current	<8mA	
	Response Time	<100s@Ce=1uF	
	Nominal Consumption	Max.12W	
	Internal Resistance (AC/DC)	>150 kΩ	
Protection	Over Current Protection	√	
	Low Insulation Resistance Protection	√	
	Over Thermal Shutdown	√	

System Block Diagram:

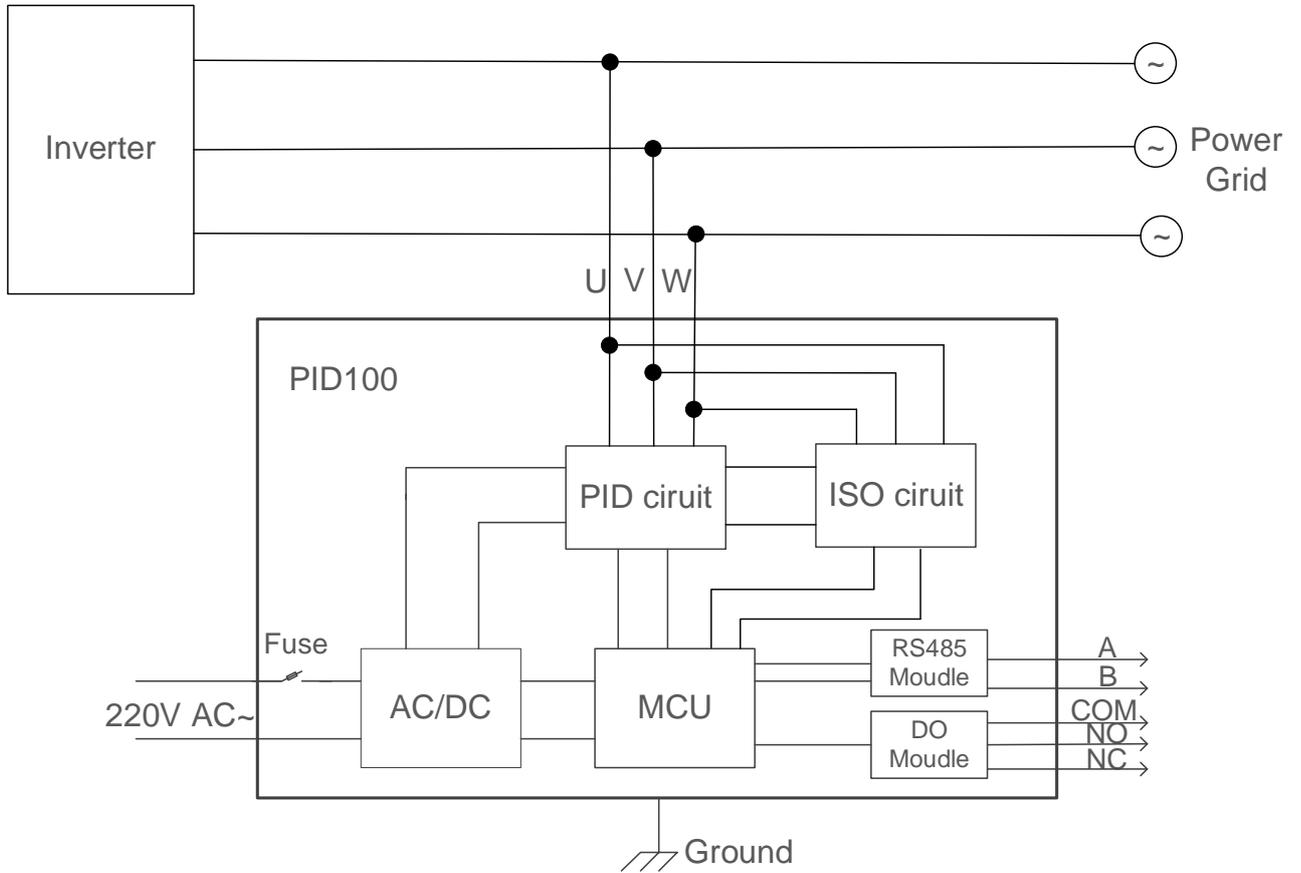


Figure 2 System Block Diagram