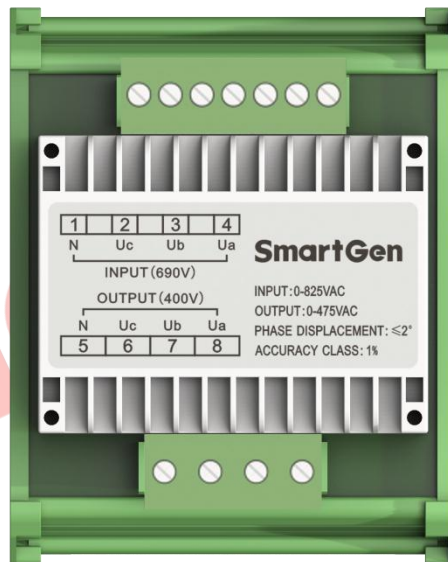




SmartGen
ideas for power

PTM6940 POTENTIAL TRANSFORMER MODULE USER MANUAL



SMARTGEN (ZHENGZHOU) TECHNOLOGY CO.,LTD.



Chinese trademark

SmartGen English trademark

SmartGen — make your generator *smart*

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Table 1 Software Version

Date	Version	Note
2019-11-13	1.0	Original release.
2020-11-20	1.2	Added instructions to typical application.

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1 OVERVIEW

PTM6940 Potential Transformer Module is a kind of PT module which transforms input voltage 690VAC (Rated) to output 400VAC (Rated). It can be applied in higher voltage collection scenario together with a controller.

2 PERFORMANCE AND CHARACTERISTICS

- Input voltage range: 0~825VAC;
- Output voltage range: 0~475VAC;
- Phase shift: $\leq 2^\circ$;
- Accuracy: $\leq 1\%$;
- Realize signal insulation;
- Suitable for 3Ph 3W, and 3Ph 4W.

3 SPECIFICATION

Table 2 Technical Parameters

Items	Contents
Input Voltage (Rated)	690VAC
Output Voltage (Rated)	400VAC
Case Dimensions	72.0mmx89.6mmx63.2mm
Working Conditions	Temperature: (-25~+70)°C; Humidity: (20~93)%RH
Storage Condition	Temperature: (-30~+80)°C
Weight	0.39kg

4 WIRE CONNECTION

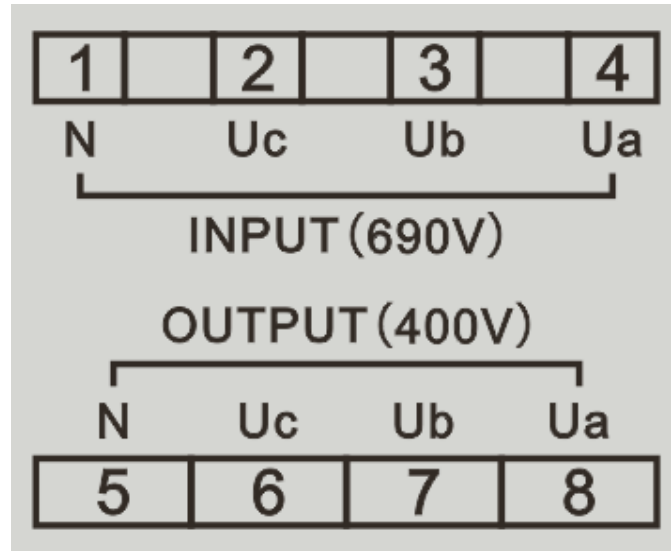


Fig. 1 PTM6940 Terminals

Table 3 Connection Terminal Description

No.	Function	Cable Size	Remark
1	N Wire Input	1.0mm ²	Connects sampling voltage N wire;
2	U _c Phase Voltage Input	1.0mm ²	Connects sampling voltage C Ph;
3	U _b Phase Voltage Input	1.0mm ²	Connects sampling voltage B Ph;
4	U _a Phase Voltage Input	1.0mm ²	Connects sampling voltage A Ph;
5	N Wire Output	1.0mm ²	Connects controller N wire;
6	U _c Phase Voltage Output	1.0mm ²	Connects controller U Ph, or R Ph voltage monitoring input;
7	U _b Phase Voltage Output	1.0mm ²	Connects controller V Ph, or S Ph voltage monitoring input;
8	U _a Phase Voltage Output	1.0mm ²	Connects controller W Ph, or T Ph voltage monitoring input;

5 TYPICAL WIRING DIAGRAM

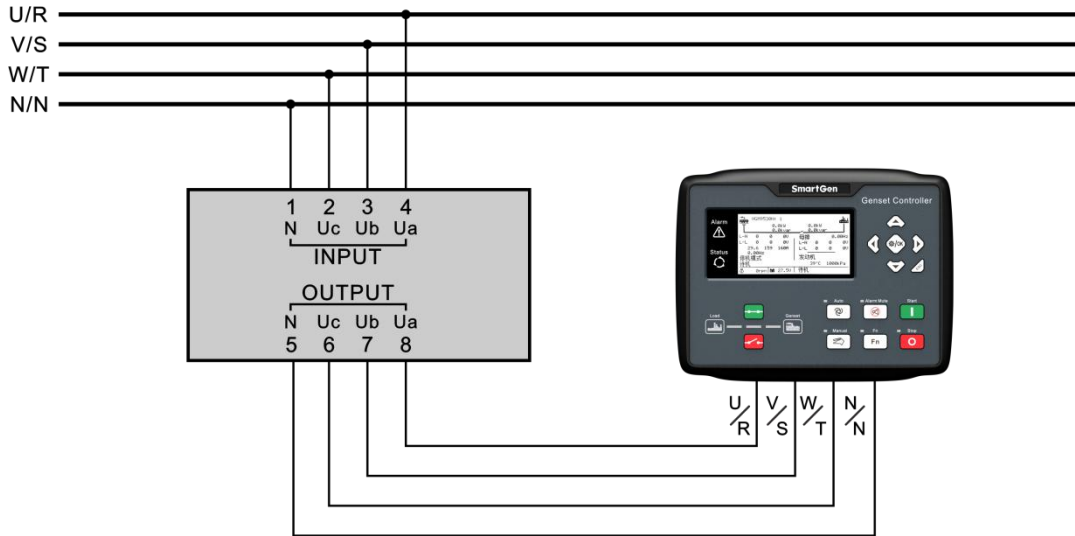


Fig. 2 Generating Voltage Sampling Wire Connection

NOTES:

- (1) PT ratio of controller can be set according to the site situation (705:400 is recommended.)
- (2) This module is only applicable to genset controller of SmartGen and PT ratio needs to be set.
- (3) This module is used for signal transformation, not for both signal transformation and power supply.

6 INSTALLATION

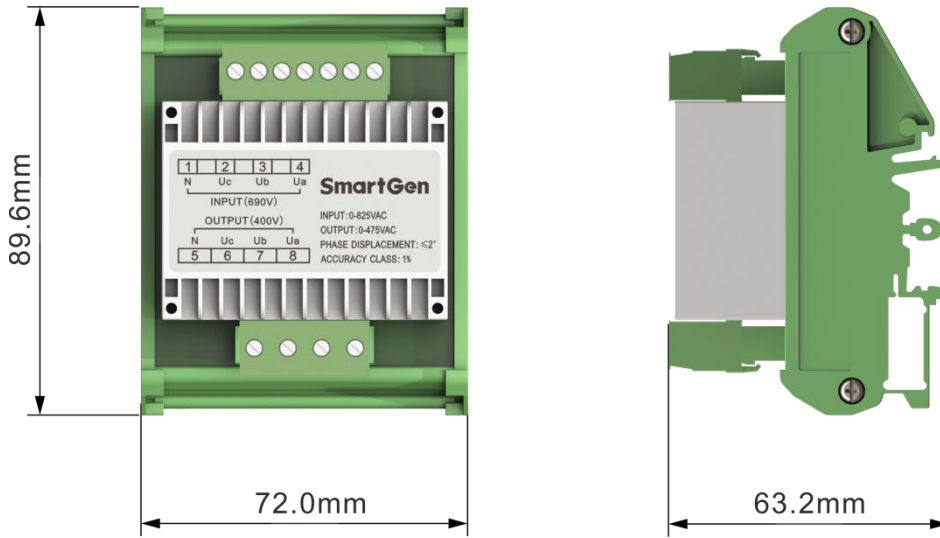


Fig. 3 PTM6940 Overall Dimensions

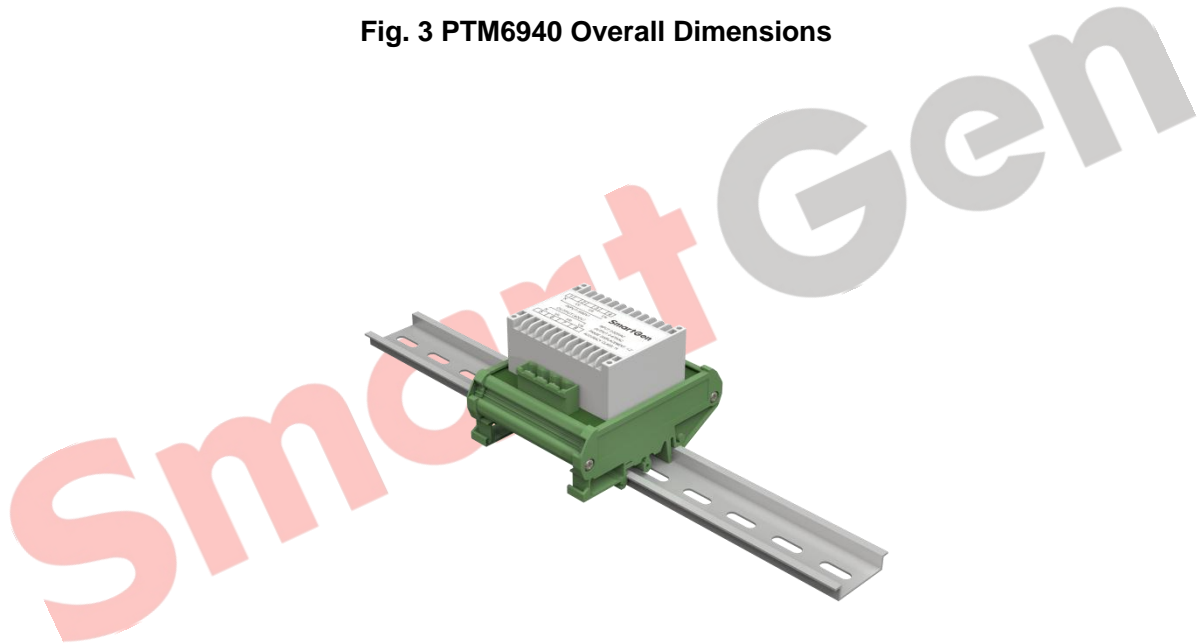


Fig. 4 PTM6940 Rail Installation

7 TROUBLE SHOOTING

Table 4 Troubleshooting

Symptoms	Possible Solutions
Sampling voltage value abnormal on controller; Sampling voltage phase sequence abnormal on controller; Sampling voltage loss of phase on controller;	Check module wire connection or the PT ratio of the controller; Check module wire connection; Check module wire connection.

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