

SUZLON INFRASTRUCTURE SERVICES LTD.



Regd. Office:
5th Floor, Godrej Millennium, 9, Koregaon Park Road, Pune - 411 001, India

P : +91-20-40122000
F : +91-20-40122100 / 40122200
E : pune@suzlon.com
W : www.suzlon.com

02/08/2008

To,
M/s Shah Promoters and Developers.
"Hyde Park " , S.No.587,
Near Market Yard,
Pune - 411 037.

Sub : Calibration of WTG Controller for Dhule and Sangli Site.

Dear Sir ,

This is with reference to your query regarding Calibration of Controller of your WTG at Dhule and Sangli Site . In this regards, we would like to clarify as follows: -

*** Mita Controller WP 3000** is a micro-processor based intelligent controller which has been specially designed for control of wind turbines, where control functions, data collection and storage, real time grid monitoring and storage and such other functions are integrated. In order to measure Electrical Energy and Grid Parameters, the controller uses an interface card WP3090. The controller has three current inputs from CT and three voltage inputs from PT. The analog values of current / voltage is converted into digital signal internally using A/D Converters at very high sampling rate. A software program reads these values and displays instantaneous values of parameters such as voltage, current, frequency, power factor, kVA, kVAR and kW. These instantaneous values are then time integrated to display kVAh, kVARh and kWh and displayed / stored. WP3000 being main controller for controlling entire turbine operation and is calculating energy generation with the basic signal of CT and PT connected to through I/O hence, not possible to calibrate.



* **SCS Controller** is also a micro-processor based intelligent controller which has been specially designed for control of wind turbines. It uses a Woodward Multi function Relay that has three current inputs from CT and three direct voltage inputs (690 Volts). The analog values of current / voltage is converted into digital signal internally using A/D Converters at very high sampling rate. A software program reads these values and displays instantaneous parameters such as voltage, current, power factor, kVAh, kVArh and kWh. These instantaneous values are then time integrated and displayed / stored. Woodward relay is having no display and needs special protocol to view energy readings as this relay is communicating digital signal through special communication protocol hence, it is not possible to calibrate. Moreover, turbine can not run without this relay hence it can not be removed for calibration during operation.

As far as Accuracy class is concern it is +/- 0.2 % tolerance for our controller systems.

Warm Regards

For Suzlon Infrastructure Services Ltd.

A handwritten signature in black ink, appearing to read "S. Patel".

Authorized Signatory.