TRUST. WELL EARNED.

PRISMIC® A32 Excitation Controller

The BRUSH PRISMIC® A32 excitation controller or automatic voltage regulator (AVR) incorporates all the features usually required for control of a Brushless generator equipped with a single phase permanent magnet generator (PMG) pilot exciter.

Introduction

The A32 includes two fully featured independent controllers and two independent power circuits within a single 6U 19 inch enclosure.

Each controller acts as a hot standby for the other and each channel is independently controlled with automatic tracking included to enable smooth transfer from one controller to the other.

The A32 provides features such as an integrated power system stabiliser, a colour TFT display and Ethernet connectivity integrated into a single standard 19 inch rack package.

Key Features

- High integrity dual redundant excitation system in a single 19 inch enclosure
- Built in power system stabiliser
- Negative forcing of exciter field voltage
- SCADA/DCS communications using Ethernet EGD or RS232/RS485 Modbus protocol
- Conforms to CE directives and CSA/UL approved
- Compatible connections with earlier BRUSH products for easy upgrades
- Automatic tracking between channels in all modes
- Built in colour TFT operator interface
- Including PC Human Machine Interface (HMI) software for advanced maintenance diagnostics and downloading of data
- Digital (discrete) outputs for remote status indication
- Analogue input signal for special applications
- Modes of operation include generator terminal voltage control, power factor control, var control and offload vars
- Monitoring of rotating rectifier health and diode failure indication

- The following limiters are included:
  - Over excitation limiter
  - Under excitation limiter
  - Over flux limiter
  - Fast acting field current limiter
  - Stator current limiter

- Automatic switching to standby initiated by the following conditions:
  - Over voltage monitor triggered
  - Under voltage monitor triggered
  - Over excitation monitor triggered
  - Under excitation monitor triggered
  - Over flux monitor triggered
  - Voltage sensing error

- Speed detector included eliminating the need for separate speed switch unit
- Rotor earth fault detector input included eliminating the need for separate unit
- Auxiliary power supply input allows easy setting of unit without PMG supply present
- Soft start for controlled application of excitation

Specification

Max continuous output current
20A

Max 10 second output current
30A*

Excitation supply voltage
Single phase 110V to 330V

Supply frequency
50Hz to 480Hz

Nominal sensing voltage
100V to 120V selectable in 0.1V steps

Voltage sensing phases
3 phase or single phase

Nominal generator frequency
50Hz or 60Hz

Current transformer input nominal
5A or 1A

Current transformer input burden
0.3VA

Load taken by sensing inputs
0.3VA

Maximum field voltage for forcing
70% of available excitation supply voltage*

Minimum field voltage
-70% of available excitation supply voltage*

Voltage adjustment range
Selectable from +/-10% to +/-25%

Accuracy of control
+/-0.5%

Auxiliary power supply
24V d.c.

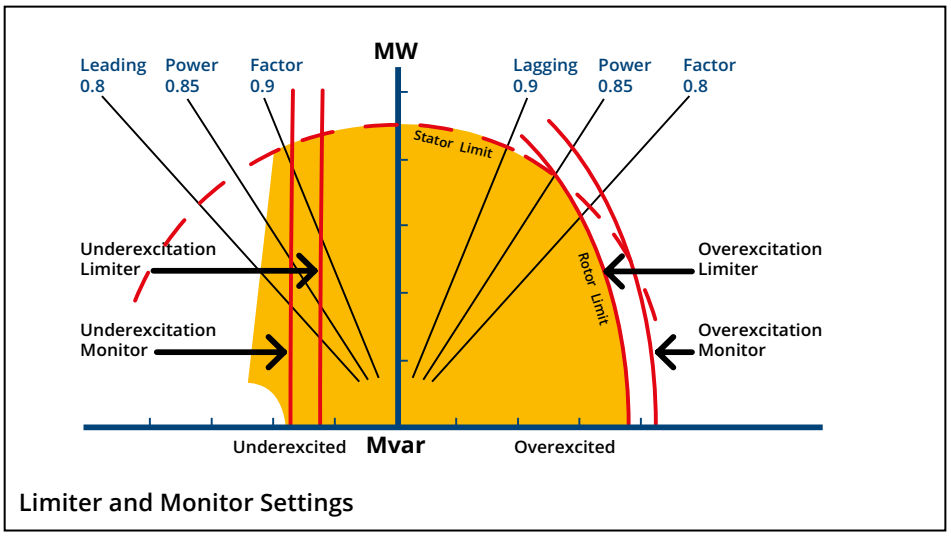
Operating temperature range
0C to +55C

Storage temperature range
-20C to +80C

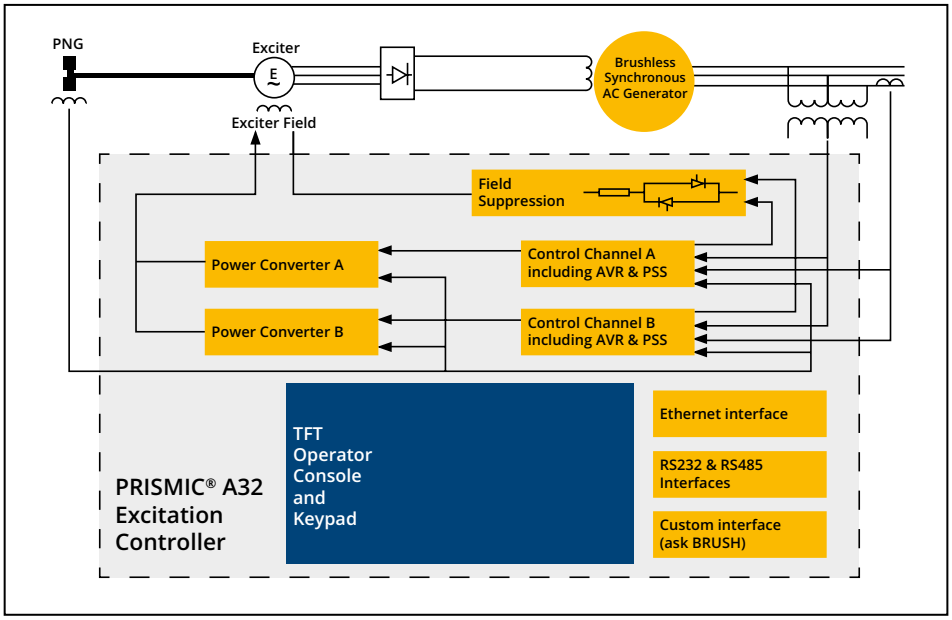
Dimensions
Width 483mm, height 266mm, depth 406mm

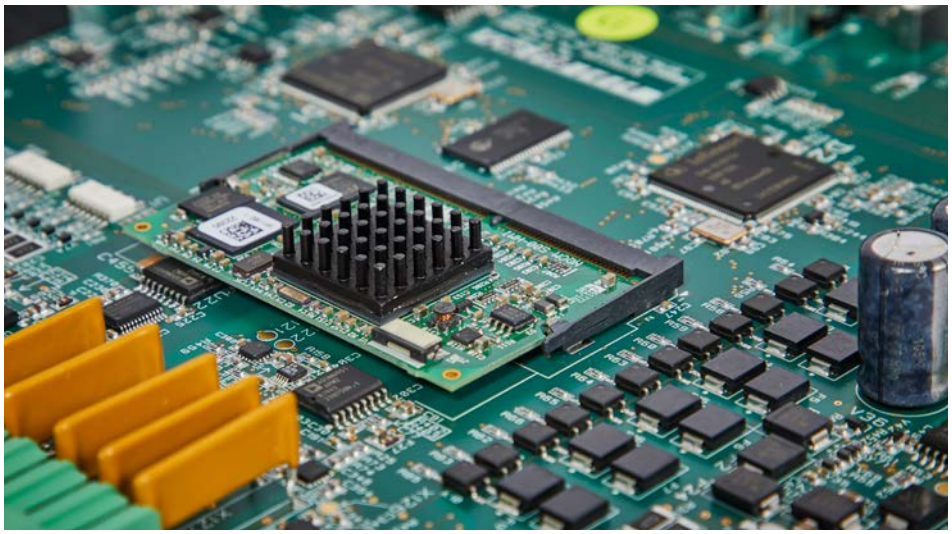
Weight
23kg

* Depending upon regulation of excitation power supply



Limiter and Monitor Settings





BRUSH
Head Office: Falcon Works, Nottingham Road, Loughborough, Leicestershire LE11 1EX United Kingdom

Tel: +44 1509 611 511

www.brush.eu

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