TRUST. WELL EARNED.

PRISMIC® A12 Excitation Controllers

The PRISMIC® A12 excitation controller has been designed to control the excitation of a brushless generator. It incorporates the latest digital micro controller technology to make it the most comprehensive and compact controller available.

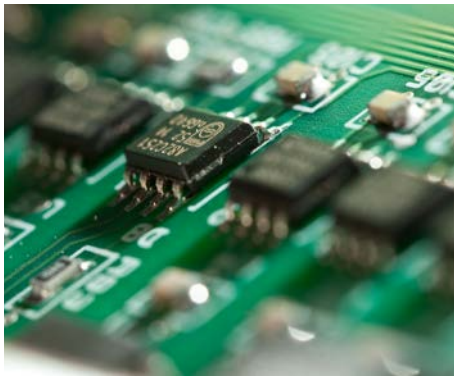
Introduction

The PRISMIC® A12 is based upon proven technology and combines the experience and hardware of the complete range of BRUSH PRISMIC® products.

It includes, additional features such as integrated speed detection, power system stabiliser and synchronisation.

The PRISMIC® A12 is produced on a plate mounted system either as a single channel or twin channel arrangement.

As a twin system each controller acts as a hot standby for the other and is independently controlled with auto tracking, and smooth transfer. An optional colour display screen is also available.



Key Features

- Complete excitation system mounted on a plate
- Available either as a single unit or as a high integrity twin configuration
- Integrated Power System Stabiliser (optional)
- Integrated auto synchroniser (optional)
- Integrated speed detection eliminating need for separate speed switch
- Rotor earth fault detector input included eliminating the need for separate unit
- Negative forcing of exciter field voltage
- Modes of operation include generator terminal voltage control, power factor control, VAr control and offload VArs
- Digital Outputs
- Analogue Input Signal for special application
- Auxiliary power supply input allows easy setting of unit without PMG supply present
- Manual Reference
- Soft start for controlled application of excitation
- Diode Failure Detection and Indication·
- HMI (Human Machine Interface) software for advanced maintenance diagnostics and downloading of data
- Oscilloscope style trending and analogue data logging (5ms resolution) via HMI
- Event Logging
- Externally mounted display interface computer (Optional)
- Automatic and manual excitation limiters

The following limiters are included:

- Under Excitation Limiter
- Over Excitation Limiter
- Over Flux (V/Hz) Limiter
- Stator Current Limiter
- Fast Acting Field Current Limiter
- Terminal Voltage Limiter

Automatic transfer of control to hot standby channel initiated by:

- Over Voltage Monitor Triggered
- Under Voltage Monitor Triggered
- Over Excitation Monitor Triggered
- Under Excitation Monitor Triggered
- Over Flux Monitor Triggered
- Voltage Sensing Error
- The PRISMIC® A12 includes the following communication port
  - 1 x RS232 service port
  - 1 x CANbus port for communication with hot standby unit in twin configurations
  - 1 x CANbus port available for connection of display interface computer
  - 1 x RS485 / RS232 Modbus RTU port for SCADA/ DCS communications
  - 1 x PROFIBUS port (optional)

Ratings

Max continuous output current
20A

Max 10 second output current
30A

Excitation supply voltage:
Single phase 85 to 264V

Excitation supply frequency:
48Hz to 480Hz

Nominal sensing voltage:
100V to 120V

Auxiliary power supply:
24V d.c.

Voltage sensing phases:
Either 3 phase or 1 phase

Nominal generator frequency:
50Hz or 60Hz

Current transformer input nominal:
Either 5A or 1A

Current transformer input burden:
Less than 0.5VA

Maximum field voltage for forcing:
75% of available PMG voltage*

Minimum field voltage:
75% of available PMG voltage*

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

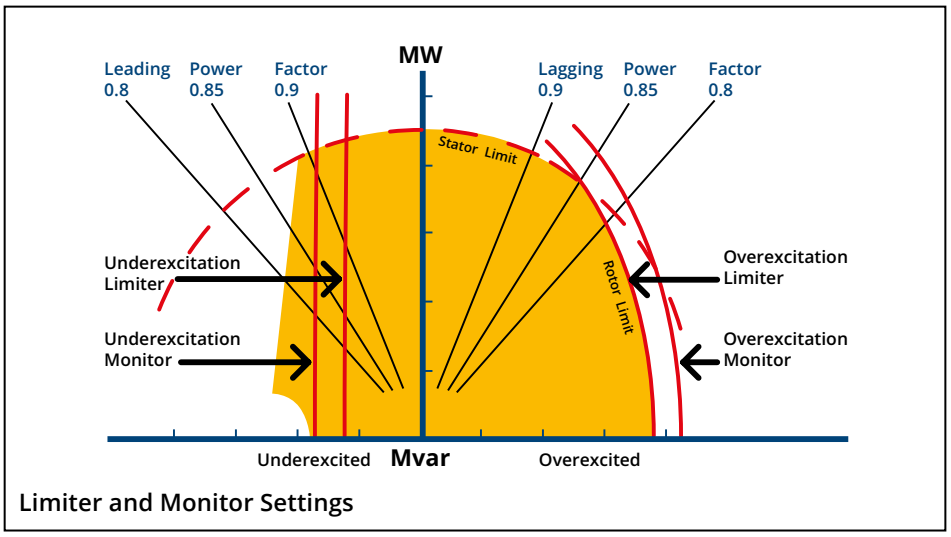
Accuracy of control
+/-0.2%

Operating temperature range:
-20DegC to +50 DegC

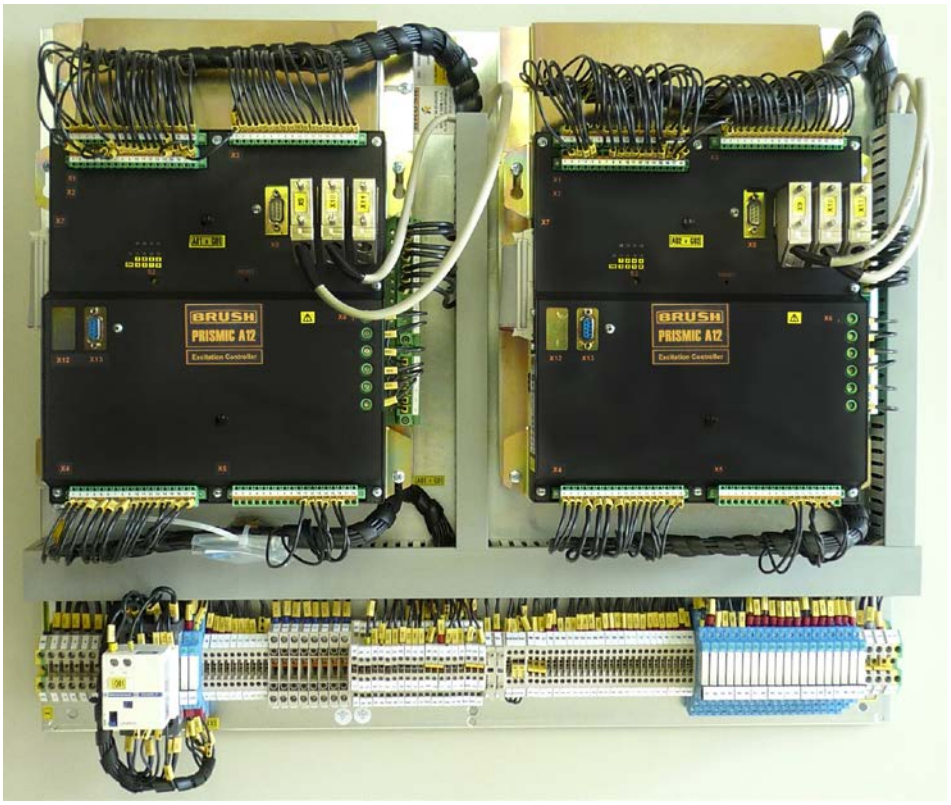
Storage temperature range
20DegC to +80 DegC

Dimensions
570x699x185mm (HxWxD)

Weight:
31kg



Limiter and Monitor Settings



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