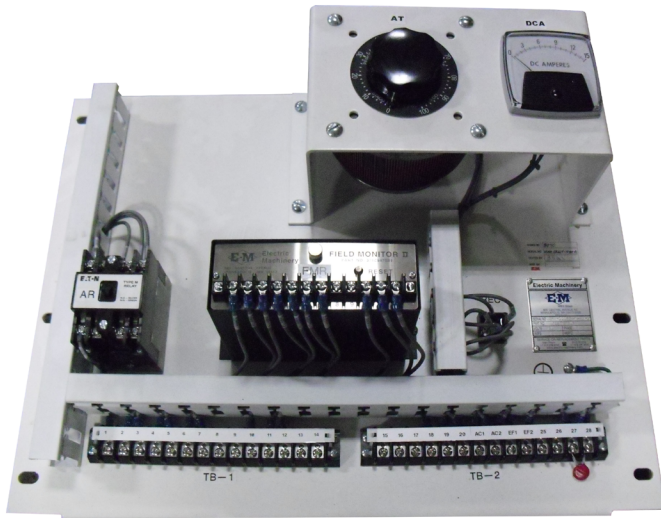


Exciter Field Power Supply

(EFPS)



Components

The standard exciter field supply consists of the following components:

- Manually adjustable variable auto transformer
- Direct-reading DC ammeter (exciter field current)
- Surge suppressor
- Full-wave bridge rectifier module
- FMR field monitor relay for loss of field and out-of-step protection, including output for optional power factor indication meter
- Terminal blocks for customer-supplied interconnection

The following options components are optional:

- Exciter diode failure detection module
- Constant voltage transformer
- Power factor meter
- Direct-reading DC voltage meter (exciter field voltage)

Introduction

The exciter field power supply assembly provides adjustable excitation to the synchronous motor's brushless exciter field (Figure 1).

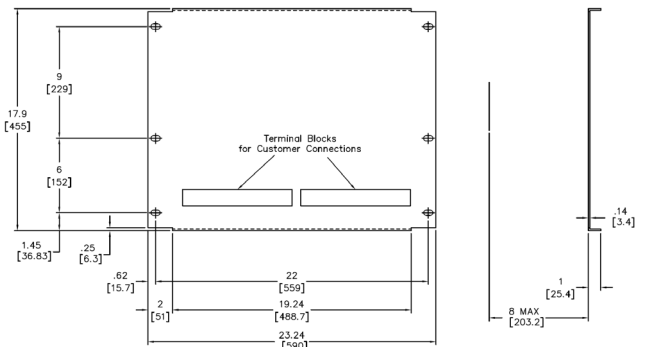
The exciter is an AC generator mounted on the synchronous motor's shaft. It produces AC voltage that is controlled in magnitude by the exciter field power supply.

This AC output voltage is rectified by the revolving rectifiers and is applied to the main rotor (field) of the synchronous motor by the rotating controls on the exciter diode wheel at the proper time for synchronizing.

Description

The exciter field power supply consists of control and power devices mounted and prewired on a steel insert panel.

It is normally mounted in a customer-supplied enclosure; however, the enclosure can be provided to customer-required specifications.



Above: Figure 1 showing typical EFPS interface dimensions

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