Excitation Control Upgrade

For large brushless synchronous motors

As an operator of GE's legacy excitation controls for large brushless synchronous motors, we are pleased to offer you GE's latest (ESP1) brushless exciter control for large synchronous motors with an upgraded exciter panel (RX3i) which enables sophisticated control and the use of self-diagnostics, without complexity.

GE Brushless Exciter Controls for Large Synchronous Motors have been designed to improve operation and surveillance of your critical equipment. GE Brushless Exciter Controls provide intelligent starting and reliability during running. Diagnostics have also been enhanced to give your operating personnel clear information about the motor and the electrical driver component of your process.

Lack of effective control may result in the motor failing to synchronize or remain in synchronism. This translates into down time and lost production.

Optimal use of the available motor torque characteristics depends on the effectiveness of the motor excitation control, synchronizing and pull out protection.

The GE's RX3i PLC enables sophisticated control and the use of self-diagnostics, without complexity. The human interface and serial and Ethernet communication options, mean that maintenance staff need not be PLC experts for you to benefit from the RX3i's high MTBF (reliability).

UPGRADE BENEFITS

Lower motor operating cost due to reactive power regulation.

Fast installation and start up due to factory customized setup for your motor.

Upgrade process does not require any changes to your automation system or existing drives communications, therefore **minimizing downtime**.

Built-in diagnostics with **user-friendly** HMI interface.

All-digital regulators ensure **consistent control** that does not depend on selecting analogue components.

Self-monitoring combined with watchdog circuits and very high MTBF lead to **maximum availability**.

Built in flexibility with a wide variety of control modes to suit your application.

Quality Assurance to ISO 9001 since 1994

ESP1 | Exciter Controls

For large brushless synchronous motors

PRODUCT FEATURES	
MOUNTINGS	
S	Open Panel (for customer's enclosures) 23"H x 22"W x 10"D
S	NEMA1 Wall Mounted Integral Enclosure 29"H x 22"W x 10"D
O	Free Standing Cubicle NEMA1 (IP21) 90"H x 30"W x 24"D
O	Free Standing Cubicle NEMA4 (IP54) 90"H x 30"W x 24"D
POWER CONVERTER	
S	Isolating Transformer 120/240VAC, 1PH, 50/60Hz
O	Primary 480 or 575 VAC
S	Incoming HRC Fuses
S	Thyristor Converter, 1 Phase, (1-20Amp), NRX
O	Control Constant Voltage Transformer
PLC CONTROL	
S	GE Intelligent Platforms Rx3i PLC
DIGITAL REGULATING FUNCTIONS	
S	Field Current Regulator (Optional Autotracking)
S	Max/Min Exciter Field Current Clamps
S	Non-Volatile Setpoint and Ramp
S	VAr/PF Regulator (Optional Autotracking)
O	Bus Voltage Support
O	Multi Motor VAr Control
S	Redundant PF Feedback System
START/ RUN CONTROL	
S	Initiated by Starter Interlock
S	Field Application By Timer
S	Field Application By Motor Speed (If Motor Sensor Fitted)
S	Clutch/Loading Interlocking
O	Reduced Voltage Start Control {1}
ROTOR PROTECTION	
S	Slipguard (PF) Pullout Function (Digital)
S	Incomplete Sequence
S	Under/Over Excitation (Independent of Feedback)
S	Stall Protection Using Motor Speed Sensor (if Fitted)
O	Brushless Exciter Diode Monitoring
OPERATOR INTERFACE	
S	Integral Field Analog Ammeter
S	6" Quick Panel HMI Interface
O	12" Quick Panel high-contrast HMI Interface
S	Mode and Reference Adjusting, Display of Key Variables
S	Event Log with Date/time Stamp
S	Lockable Access to Parameter Adjustment
O	Analog Power Factor Meter and/or Field Voltmeter
O	GE Multlilin SR469 Motor Protection Relay
REMOTE INTERFACE	
S	Ethernet TCP/IP, Modbus TCP
S	Web server for remote viewing of HMI parameters
O	GEnius, RS485 Modbus RTU, DeviceNet or Profibus

S = STANDARD. O = OPERATIONAL. (1) = CONSULT FACTORY.

Free Standing Cubicle Version (Shown with optional Multilin SR469, PF meter, and voltmeter)

CONTACT US

Email: services.powerconversion@ge.com

GEA32649 GEPC EXCITATION CONTROL UPGRADE FOR LARGE BRUSHLESS SYNCHRONOUS MOTORS (09/2016)