

IPIUA321

Automatic Voltage Regulator for PMG Generator

EA321 3 Phase Sensing Permanent Magnet Generator type voltage regulator is a compatible replacement for Newage Stamford MX321 regulator.



Features

- $< \pm 0.5\%$ RMS Regulation
- For Use In Parallel Operation
- RAMP, DIP, DWELL, DROOP, RMS, U/F, Over Voltage & Over Excitation Adjustment Functions
- Over Exc. / Over Volt. & UFRO LED Indicators
- Current Limiting Function

Specification

Sensing Input	Voltage 190~264 VAC, 2 or 3 Phase, Frequency 50/60 Hz Selectable
Power Input(PMG)	Voltage 170~220 VAC, 3 Phase 3 Wire, Current 3A/Phase, Frequency 100~120 Hz Nominal
Output	Voltage Max. 120 VDC, Current Continuous 3.7A, Intermittent 6A for 10 sec., Resistance Min. 15Ω
Voltage Regulation	$< \pm 0.5\%$ RMS (with 4% engine governing)
Voltage Build-up	Residual volts at AVR terminal > 5 VAC
Soft Start Ramp Time	0.4~4 sec. adjustment
Thermal Drift	0.05% per °C change in AVR ambient
Current Limit Input	Burden 10Ω Sensitivity Range 0.5~1A
Unit Power Dissipation	Max. 18 Watt
External Volts Adjustment	$\pm 10\%$ with 1 KΩ 1 watt trimmer
Over Excitation Protection	Set point 75 VDC, Time delay 8~15 sec.

IPUA321 Specification (cont)

Under Frequency Protection(UFRO)	Set point : 95% Hz (Factory set), Slope : 100~300% down to 30 Hz, Max. Dwell : 20% volts/sec. recovery
Analogue Input(Adjustable Parameters)	Max. Input ± 5 VDC, Sensitivity 1V for 5% generator volts, Input Resistance 1 K Ω
Droop Input	Burden 10 Ω , Max. Sensitivity 0.22A for 5% droop (PF=0), Max. Input 0.33A
Over Voltage Detector Input	Set Point 300V, Time delay 1sec.(fixed), CB Trip Coil Volts 10~30 VDC / 0.5 Amp
Environment	Operating Temperature : -40~70 °C, Storage Temperature : -40~85 °C, Relative Humidity : Maximum 95% Vibration : 3.3G @ 100~2 KHz
AVR Controls Functions	<p>VOLT : Output Voltage Adjustment</p> <p>STAB : Stability Adjustment</p> <p>UFRO : UFRO Knee Point Set</p> <p>DROOP : To Set the Droop to 5% at PF=0</p> <p>TRIM : To Optimize Analogue Input Sensitivity</p> <p>EXC : Over Excitation Trip Level Set</p> <p>DIP : Hz Related Voltage DIP Set</p> <p>DWELL : Hz Related Recovery Time Set</p> <p>I LIMIT : Stator Current Limit Set</p> <p>OVER V : Over Voltage Trip Level Set</p> <p>RAMP : No Load Voltage Ramp Set Time</p> <p>RMS : Root Mean Square of Generator</p>
Dimensions	203.0(L) x 153.0(W) x 39.1(H) mm
Weight	530 g \pm 2%

(UNIT : mm)

