

# APH Series

CE



Output Power  
**10kVA~600kVA**

## Applications

- Aerospace & Defense
- Industrial Power Supply
- IT / SMT Production Line
- Medical Industry
- Transportation
- Communication Industry

## APH Series

# Inductive Automatic Voltage Regulator

APH series is a cost-effective inductive type automatic voltage regulator with output power up to 600kVA and strong overload capability to sustain impulse loads. These features make it widely applied in motor industries, CNC machines, transportation system, production equipment, and factory for power conditioning purpose.

Applying electromagnetic inductive design, APH is different from conventional voltage regulators that it does not have carbon brush, which makes it easier to maintain. As the grid's voltage fluctuates, APH uses the internal rotation of the motor to adjust the angle of compensation transformer to step up or step down the output voltage and stabilize the voltage to the load.

APH series are three-phase voltage regulators with output power range from 10kVA to 1000kVA, input voltage range of -13% to +18% (or optional -22% to +30%), and voltage regulation of  $\pm 2\%$ . The APH units have strong overload capability for different types of loads.

- Inductive type voltage regulator without carbon brush for easy maintenance.
- High output power range: three-phase 10-600kVA.
- High overload capability: 125% for 40minutes, 150% for 20 minutes, 175% for 10minutes and 200% for 5 minutes.
- Sustainable for impulse load, capable to sustain surge, non-linear load.
- Comprehensive protection includes over voltage, over current, over load, input under voltage and over temperature.
- High cost-effective for high power conditioning.
- Optional surge protection with different levels.

## SPECIFICATIONS

### APH Series Three-Phase Output (10kVA - 75kVA)

Model	APH-330010	APH-330015	APH-330020	APH-330030	APH-330045	APH-330060	APH-330075
Capacity	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA	75kVA
<b>AC INPUT</b>							
Phase	Standard: 3 Ø 4W+G(γ) Optional: 3 Ø 4W+G(Δ)						
Voltage <sup>*1</sup>	220V / 380V						
Voltage Range	Standard: Voltage -13% ~ +17% Optional: -22% ~ +30%						
Frequency	47Hz ~ 63Hz						
<b>AC OUTPUT</b>							
Phase	Standard: 3 Ø 4W+G(γ) Optional: 3 Ø 4W+G(Δ)						
Voltage <sup>*2</sup>	Standard : 220V / 380V, 230V / 400V , 240V , Optional : 415V						
Accuracy	± 2% ( ± 2% ~ ± 5% adjustable )						
Frequency	47 -63Hz						
Power Factor	± 0.7 ~ 1						
<b>METER &amp; INDICATOR</b>							
Voltmeter	LED digital meter for voltage of each phase; Accuracy ≤ 1%						
Ammeter	LED digital meter for voltage of each phase; Accuracy ≤ 1%						
Error	Error code and message available when a abnormal condition occurs						
LED Indicator	NORMAL.ABNORMAL.OVER VOLTAGE.UNDER VOLTAGE.OVER LOAD.AUTO / MANUAL Mode						
<b>PROTECTION</b>							
Over/Under Voltage	Sound-light alarm with output shutdown						
Missing Phase	Sound-light alarm with output shutdown						
Incorrect Phase Sequence	Sound-light alarm with output shutdown						
Bypass Swich	Manual bypass switch (opt.)						
Over Load	Sound-light alarm						
<b>GENERAL</b>							
Efficiency	≥ 97% ( Full load )						
Voltage Modulation	≥ 4V/S						
Total Harmonic Distortion(THD)	Additional distortion ≤ 1%						
HMI	LED display for meter and auto/manual voltage adjustment						
Overload Capacity	125%- 4min · 150%- 20min · 175% - 10min · 200% - 5min						
Audible Noise (1 meter)	≤ 55dB						
Cooling System	Fan cooling						
Connections	Terminal						
Environment	Operational Temperature : -5°C ~ 40°C · Humidity : < 95% ( Non-condensing ) · Altitude : 1000m						
Dimension (H x W x D)	750 x 400 x 550 mm			950 x 450 x 600 mm			
	29.52 x 15.74 x 21.65 inch			37.4 x 17.71 x 23.62 inch			
Weight	150kg	160kg	165kg	240kg	260kg	280kg	295kg
	330.6lbs	352.7lbs	363.7lbs	529.1lbs	573.2lbs	617.2lbs	650.3lbs

\*1 Please contact for other voltage specification.

\*2 The rated input voltage is 380V.

\* all specifications are subject to change without notice.

## SPECIFICATIONS

### APH Series Three-Phase Output (100kVA - 600kVA)

Model	APH-330100	APH-330125	APH-330150	APH-330200	APH-330250	APH-330300	APH-330350	APH-330400	APH-330500	APH-330600	
Capacity	100kVA	125kVA	150kVA	200kVA	250kVA	300kVA	350kVA	400kVA	500kVA	600kVA	
<b>AC INPUT</b>											
Phase	Standard: 3 Ø 4W+G( Y ) Optional: 3 Ø 4W+G( Δ )										
Voltage <sup>*1</sup>	220V / 380V										
Voltage Range	Standard : Voltage -13% ~ +17% Optional : -22% ~ +30%										
Frequency	47Hz ~ 63Hz										
Power Factor	0.95 ~ 1										
<b>AC OUTPUT</b>											
Phase	Standard: 3 Ø 4W+G( Y ) Optional: 3 Ø 4W+G( Δ )										
Voltage <sup>*2</sup>	Standard : 220V / 380V, 230V / 400V , 240V , Optional : 415V										
Accuracy	± 2% ( ±2% ~ ±5% Adjustable )										
Frequency	47 -63Hz										
Power Factor	± 0.7 ~ 1										
<b>METER &amp; INDICATOR</b>											
Voltmeter	LED digital meter for voltage of each phase; Accuracy ≤ 1%										
Ammeter	LED digital meter for voltage of each phase; Accuracy ≤ 1%										
Error	Error code and message available when a abnormal condition occurs										
LED Indicator	NORMAL.ABNORMAL.OVER VOLTAGE.UNDER VOLTAGE.OVER LOAD.AUTO / MANUAL Mode										
<b>PROTECTION</b>											
Over/Under Voltage	Sound-light alarm with output shutdown										
Missing Phase	Sound-light alarm with output shutdown										
Incorrect Phase Sequence	Sound-light alarm with output shutdown										
Bypass Switch	Manual bypass switch (opt.)										
Over Load	Sound-light alarm										
<b>GENERAL</b>											
Efficiency	≥ 97% ( Full load )										
Voltage Modulation	≥ 4V/S										
Total Harmonic Distortion(THD)	Additional distortion ≤ 1%										
HMI	LED display for meter and auto/manual voltage adjustment										
Overload Capacity	125%- 4min · 150%- 20min · 175% - 10min · 200% - 5min										
Audible Noise (1meter)	≤ 55dB										
Cooling System	Fan cooling										
Connections	Terminal					Copper bar					
Dimension (H x W x D)	600 x 900 x 1500 mm					600 x 1100 x 1800 mm					-
	23.6 x 35.4 x 59 inch					23.6 x 43.3 x 70.9 inch					-

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Capacity	100kVA	125kVA	150kVA	200kVA	250kVA	300kVA	350kVA	400kVA	500kVA	600kVA	
<b>AC INPUT</b>											
Phase	3Ø 4W+G										
Voltage <sup>*1</sup>	220V / 380V										
Voltage Range	Standard: -13% - +17% Optional: -22% - 30%										
Frequency	47Hz ~ 63Hz										
<b>AC OUTPUT</b>											
Phase	3Ø 4W+G										
Voltage <sup>*2</sup>	220V / 380V, 230V / 400V , 240V / 415V( opt. )										
Accuracy	± 2% ( ±2% ~ ±5% adjustable )										
Power Factor	± 0.7 ~ 1										
Incorrect Phase Sequence	≥ 4V/S										
Overload Capacity	125% - 40min , 150% - 20min · 175% - 10min · 200% - 5min										
THD	Additional distortion ≤ 1%										
Efficiency	≥ 97%( Full load )										
<b>USER INTERFACE</b>											
HMI	LCD & Light,button										
Alarm	Sound-light alarm										
Communication	ISO RS-485										
Monitor	For monitoring only										
<b>GENERAL</b>											
PROTECTION	Missing Phase / Incorrect Phase Sequence · Sound-light alarm										
	Over/Under Voltage · Sound-light alarm										
	Over Load · Sound-light alarm										
	Over Heating · Sound-light alarm										
	Redundant Circuit Control										
	Event History Inside Memory for up to 200 events										
Measurement	Input line Voltage,Input Frequency,Line Voltage,Phase Voltage,Current,Frequency,VA,W,PF,Load% and Internal Temperature										
Environment	Operational Temperature : -5°C ~ 40°C · Humidity : < 95% (Non-condensing) · Altitude : 1000 m										
Cooling System	Fan cooling										
Audible Noise(1 meter)	≤ 50dB	≤ 55dB				≤ 50dB			≤ 60dB		
Optional	Autotransformer or Isolation Transformer										
	Surge Protection										
Dimension (HxWxD)	600 x 900 x 1500 mm				600 x 1100 x 1800 mm				-		
	23.6 x 35.4 x 59 inch				23.6 x 43.3 x 70.9 inch				-		

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