



Overview

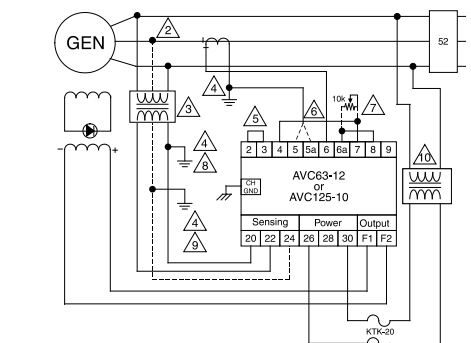
Enjoy proven, dependable, high performance with Basler Electric's AVC line. These extremely rugged and reliable regulators provide the performance and functionality that revolutionized the modern analog voltage regulator market, and they are still unrivaled today. Others have attempted to imitate the AVC's features and functions, but only the AVC remains the total solution.

Features

- Voltage regulation accuracy of $\pm 0.5\%$
- Accuracy from 0.5% up to 20% THD (harmonic associated with 6 SCR loads)
- Outputs of 63 Vdc @ 12 Adc and 125 Vdc @ 10 Adc from a PWM output stage
- 1 or 2X V/Hz limiting (jumper selectable)
- Selectable V/Hz slope characteristics for faster load pickup
- Single-phase or three-phase average sensing (jumper selectable)
- Paralleling input from 1-ampere or 5-ampere CT secondaries
- Nominal sensing inputs of 120 or 240 V and 50/60 or 400 Hz
- Power input from shunt connections or PMGs operating at 50 to 400 Hz
- Potted design allows installation in harsh environments.
- Accessory input
- Overexcitation shutdown

Benefits

- Voltage regulation performance is constant over the entire operating temperature range without derating or degradation.
- Volts per hertz limiting, overexcitation shutdown, and provisions for external voltage adjustments make the AVC line a good fit for most applications. It's the "universal" regulator that reduces inventory to one device on the shelf.
- Provisions to fine tune the generator's performance to maximize transient response.
- A PWM power stage provides high field forcing that's easily compatible with any power source including shunt-fed, PMG, or auxiliary winding.
- Integrated paralleling provides exceptional reactive-load sharing with simple setup for quick commissioning.
- Eliminate settings errors with simple adjustments.



1 ABC phase rotation shown.

⚠ Required for three-phase sensing.

⚠ Step-down sensing transformer required if generator terminal voltage does not match the sensing voltage range identified by the voltage regulator model number.

⚠ The secondary winding of the sensing transformers must be grounded as closely as practical. When multiple transformers are interconnected, ensure that the secondary winding of only one transformer is grounded.

⚠ Connect terminals 2 and 3 to SCP 250 and EL 200 as shown in Figure 7. Short 2 and 3 when SCP 250 and EL 200 are not used.

⚠ Connect terminal 5 to 1 Aac CT or connect terminal 5a to 5 Aac CT. Also see note 4.

⚠ For remote voltage adjustment: connect potentiometer across terminals 6a and 7. Remove link across terminals 4 and 7.

⚠ For V/Hz: jumper terminals 6a and 8. Remove jumper for 2 FU V/Hz.

⚠ Voltage sensing: jumper terminals 6a and 9 for three-phase sensing. Remove jumper for single-phase sensing.

⚠ Ground phase C of the voltage sensing transformer secondary winding when single-phase sensing is used.

⚠ Ground phase B of the voltage sensing transformer secondary winding when three-phase sensing is used.

⚠ Power step-down transformer is required if the generator voltage does not match the voltage regulator input power range.

Figure 1 - AVC63-12/AVC125-10 Connection Diagram for a Typical Three-Phase Application

Specifications

Input Power

Configuration:	1-phase or 3-phase
Frequency:	50 to 400 Hz
Voltage Range:	
AVC63-12:	90 to 153 Vac
AVC125-10:	180 to 264 Vac
Maximum Continuous Burden:	
AVC63-12:	1,092 VA
AVC125-10:	1,750 VA

Sensing Input

Configuration:	1-phase or 3-phase
Burden:	<1 VA per phase
Voltage Range Option A:	95 to 139 Vac
Voltage Range Option B:	180 to 264 Vac
Frequency Option 1:	50/60 Hz
Frequency Option 2:	400 Hz

Output Power

Max Continuous:	
AVC63-12:	12 Adc at 63 Vdc
AVC125-10:	10 Adc at 125 Vdc
Ten-second Forcing:	
AVC63-12:	24 Adc at 125 Vdc
AVC125-10:	20 Adc at 250 Vdc
Minimum Field Resistance:	
AVC63-12:	5.25 Ω
AVC125-10:	12.5 Ω

Accessory Input

Voltage Range: ±3 Vdc

Regulation Accuracy

±0.5% of voltage setpoint, average response

Voltage Drift

±0.5% variation for a 40°C (104°F) change

Response Time

<4 ms

Frequency Compensation

Adjustable knee frequency:
 50/60 Hz Model: 45 to 65 Hz
 400 Hz Model: 300 to 430 Hz

Overexcitation Shutdown

Field voltage shuts down after time delay if exciter field voltage exceeds:

AVC63-12:	
125 Vdc, ±10% in approximately 10 s	
210 Vdc, ±10% in approximately 1 s or less	
AVC125-10:	
250 Vdc, ±10% in approximately 10 s	
370 Vdc, ±10% in approximately 1 s or less	

Electromagnetic Interference (EMI) Suppression

Internal EMI filtering

Voltage Buildup

Automatic voltage buildup occurs for residual generator voltages as low as 6 Vac (AVC63-12) or 12 Vac (AVC125-10).

Agency/Certifications

UL 6200:2019 recognized, CSA certified, CE and UKCA compliant, China RoHS compliant

Environmental

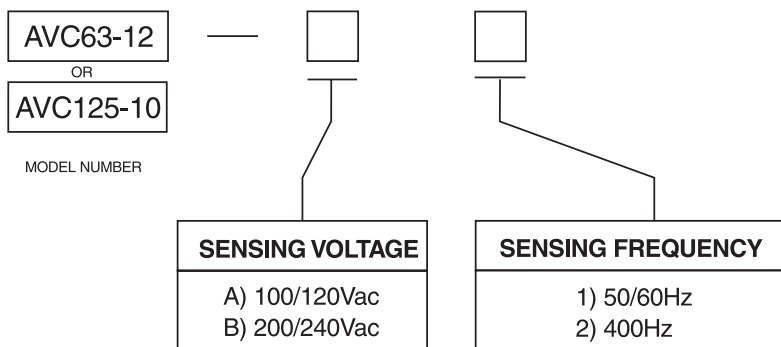
Operating Temp:	-40°C to 70°C (-40°F to 158°F)
Storage Temp:	-40°C to 70°C (-40°F to 158°F)
Humidity:	95%, non-condensing
Shock:	20 G in three perpendicular planes
Vibration:	4.5 G at 18 to 2,000 Hz

Physical

Weight:	2.5 lb (1.1 kg)
Dimensions (WxHxD):	6.38 x 8.38 x 3.03 inches (162 x 213 x 77 mm)

For complete specifications, download the instruction manual at www.basler.com.

Style Chart



Related Products

AVC63 Series Voltage Regulators provide the performance and functionality that revolutionized the modern analog voltage regulator market.

- AVC63-4, AVC63-4D
- AVC63-7, AVC63-7F

BE1-FLEX Protection, Automation and Control System

Designed to be configurable for nearly any Power System Application.

ES Series Protection Relays

Provide a wide variety of cost-saving options to simplify industrial application protection.

DECS-150 Digital Excitation Control System

Provides precise voltage regulation, exceptional system response, and valuable protection of the generator and excitation system.

DECS-250 Digital Excitation Control System

Provides precise voltage, var and Power Factor regulation, and exceptional system response, plus generator protection.

DGC-2020ES Digital Genset Controller

Total system solution for emergency and stand-alone generator set applications.

DGC-2020HD Digital Genset Controller

An advanced but rugged, genset control system designed for paralleling and complex load sharing schemes.