

VOLTAGE SAG COMPENSATION SYSTEM

AVC SET DVR

Voltage sag compensation systems to assure the continuity of industrial processes

Description



AVC SET DVR is an innovating system designed to mitigate and eliminate the effect of electrical disturbances on critical industrial processes through the elimination of sags and transitory overvoltages. Power generation, transport and distribution systems are limited and their problems can affect production processes as well as to produce economic consequences.

AVC SET DVR guarantees the quality of the network, meeting the demands of industrial production processes, keeping stable & constant the output voltage regardless of input voltage variations.

AVC SET DVR is a flexible voltage compensator capable of correcting variations of input voltage, to offer a highly stable voltage ($\pm 0,5\%$) with immediate response ($>3\text{msec}$).

It consists of a transformer, a reversible rectifier unit, plus an inverter. The aim of the AVC SET DVR is to offset disturbances, voltage imbalances, and to regulate them in case of possible fluctuations and overvoltages.

The system also supervises controls and logs all events.

The output voltage stabilisation is assured both for balanced (all three phases) and unbalanced (some of the phases) voltage variations.



AVC SET DVR

Features

- > Mitigate voltage sags up to 70% of depth
- > Continuous operation to offer high stabilization ($\pm 0.5\%$)
- > High efficiency supply system $>98.5\%$
- > From 30 to 900 kVA (other on demand)
- > Minimises the required investment
- > It does not require battery or other energy storage components
- > Compensation of voltage sags even for long times (up to 30 sec)
- > Swell compensation up to $+20\%$
- > Compensation irrespective of phase
- > Compensation of balanced and unbalanced voltage drops
- > Automatic bypass
- > Withstand 150% overload for 1 sec
- > Less than 3ms response
- > Energy flow in both directions
- > Improved response in time
- > Reduction of operating costs
- > Guarantees maximum sturdiness of the system
- > Never interrupts service
- > Modular design which facilitates maintenance and repairs
- > Easy for connecting in parallel up to 3 equipments
- > Turnkey project: tailor-made design for special needs

Telecommunications

Railway

Industrial

Logistics centres

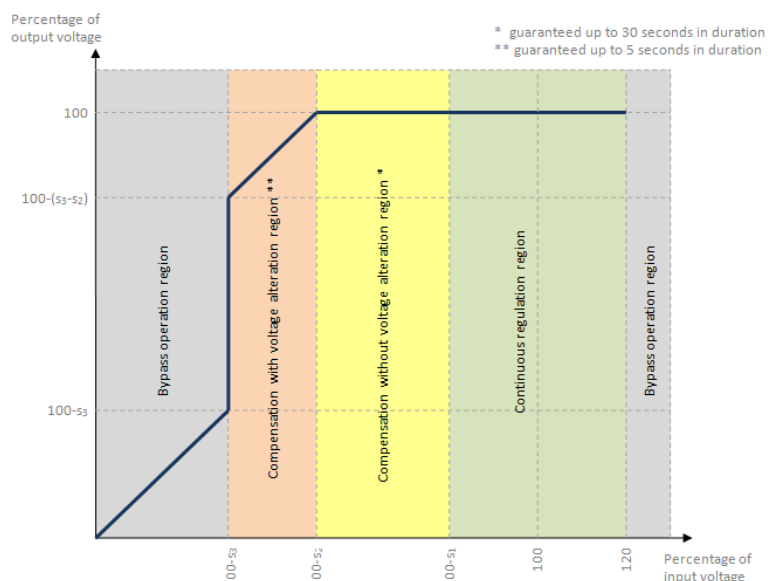
Industrial processes

Robots



GENERAL SPECIFICATIONS						
Model	AVC SET DVR 30	AVC SET DVR 40	AVC SET DVR 50	AVC SET DVR 150	AVC SET DVR 220	AVC SET DVR 300
INPUT						
Nominal voltage ^{(1) (2)}	208/380/400/415/480 Vac					
Admissible voltage range ⁽³⁾	+20% -60%	+20% -50%	+20% -40%	+20% -60%	+20% -50%	+20% -40%
Admissible frequency	50/60 Hz ±10%					
OUTPUT						
Power kW/kVA	30	40	50	150	220	300
Voltage ^{(1) (2)}	208/380/400/415/480 Vac ±0.5%					
Frequency	50/60 Hz programmable					
Response time	< 3 msec					
Transfer time to bypass	< 0,5 msec					
Overload	110% during 30 seconds, 150% during 1 second					
CORRECTION CAPABILITY ⁽³⁾						
Maximum value for continuous regulation (s1)	25%	20%	15%	30%	25%	20%
Maximum sag without voltage alteration (s2)	60%	50%	40%	60%	50%	40%
Maximum sag without switching to bypass (s3)	70%					
OTHERS						
Maximum efficiency	98%			98,5%		
Dielectric rigidity	2,5 kV – 1 minute					
Communications	Standard: Web HTTP, SNMP, ModBus; Optional: modem or router					
Control panel	Display, keyboard and leds			Touch screen		
Protections	Short-circuits, current limitation, overload, RFI filter, required disconnections					
Maintenance switch	Only Master system: optional ; Parallel system: Yes					
Protection	IP 21					
Cooling	Forced ventilation					
Noise	<65 dB					
Working temperature	0~40°C					
Altitude	< 1000m					
Relative Humidity	0-95%					
STANDARDS						
Certifications	CE					
Directives	UNE-EN 50178 (98), EN 61000-6-2, EN 61000-6-3					
PARALLEL SYSTEM						
Master + 1 slave system	60kVA	80kVA	100kVA	300kVA	440kVA	600kVA
Master + 2 slaves system	90kVA	120kVA	150kVA	450kVA	660kVA	900kVA
DIMENSIONS AND WEIGHTS ⁽²⁾						
Dimensions (high x wide x depth)	1495x653x703 mm			2145x1212x660 mm		
Weight	330 kg			1050 kg		
MANUAL BYPASS CABINET ⁽²⁾						
Only master system (optional)	700x653x703 mm, 50 kg			1745x614x625 mm, 250 kg		
Master + 1 slave system	2 (700x653x703) mm, 100 kg			2145x814x625 mm, 300 kg		
Master + 2 slaves system	3 (700x653x703) mm, 150 kg			2145x1000x625 mm, 400kg		

- (1) Other voltages on demand
(2) If voltage is not 380/400V, an input transformer will be necessary. Consult dimensions and weights
(3) Other dynamic response to voltage sags, on demand
Specifications may be changed without notice.



Correction capability curve of AVC SET DVR