

MSR

SERIES

3-3000 kVA

3:3
PHASE

1-50 kVA

1:1
PHASE

SERVO VOLTAGE STABILIZER

Servo Drive Structure, Microcontroller Controlled Heavy Duty Devices which Regulates Mains Voltage for Critical Loads

(P-P) 208/220/230/240/380/400/415/440/460/480/500 V
IP20, IP21, IP31, IP44, IP54,
Versions Available



INDUSTRY



TRANSPORT



MEDICAL



FEATURES

- Non-Linear Charges Drive
- Wide Power and Voltage Interval
- Fast Regulation
- High Reliability Thanks to Microprocessor and Smart Driver
- High Efficiency
- Load Transfer to Bypass Via Pole Charge Switch
- Safe and Economic Usage
- Digitally Displayed Status, Input & Output Measurements

CERTIFICATES



MODEL (3:3 Phase)																													
Capacity (kVA)		3	6	10,5	15	22,5	30	45	60	75	100	120	150	200	250	300	400	500	600	800	1000	1250	1600	2000	2500	3000			
MODEL (1:1 Phase)																													
Capacity (kVA)		1	2	3,5	5	7,5	10	15	20	25	30	40	50																
INPUT																													
In. Vol. Correction Interval		1:1 Phase: 160~260 VAC • 3:3 Phase: 275~450 VAC (Standard), 215~415 VAC (Optional)																											
In. Vol. Working Interval		1:1 Phase: 90~285 VAC • 3:3 Phase: 155~490 VAC																											
Operation Frequency		47~65 Hz																											
Line Input Protection		Overcurrent, Low and High Voltage Protection (Optional)																											
OUTPUT																													
Output Voltage		1:1 Phase: 220 VAC RMS ±2% • 3:3 Phase: 380 VAC RMS ±1%																											
Overloading		10sec 200% Load																											
Correction Speed		~90 Volt/sec																											
Upturn Period		~90 Volt/sec (160 VAC~250 VAC)																											
Output Protection		Short Circuit - Overcurrent Protection, Overvoltage Protection (Optional)																											
WORKING PRINCIPLE		Servo Motor, Microprocessor Controlled, Full Automatic																											
GENERAL																													
Cooling		Smart Fan System																											
Measured Value Monitor		MSR Panel Voltmeter (74x74mm) Output Voltage and Line Voltage Monitorization																											
Total Efficiency		1:1 Faz: >96% • 3:3 Faz: >97%																											
Mechanical Bypass		"Manually Controlled Line-PAKO SWITCH Selects Voltage Regulator" Switch Turn On/Off																											
Protection Level		IP 20																											
ENVIRONMENT																													
Operating Temperature		-10°C~50°C																											
Storage Temperature		-25°C~60°C																											
Relative Humidity		<90%, DIN (40040)																											
Altitude		<2000m																											
Noise Level		<50 dB (1 metersquare)																											
Documents		CE/TÜV Austria Hellas (ISO 9001)																											

MODEL (3:3 Phase)																																									
Capacity (kVA)		3	6	10,5	15	22,5	30	45	60	75	100	120	150	200	250	300	400	500	600	800	1000	1250	1600	2000	2500	3000															
DIMENSIONS & WEIGHT																																									
Cabinet Dimensions (mm)	Width	500				600				850				900				600				600				700				800				1400				1400			
	Depth	440				440				640				690				700				1170				800				1000				1000				1000			
	Height	1100				1190				1400				1630				1720				1700				1850				1950				1750				2050			
Net Weight (Kg)		55	65	120	135	154	183	237	330	356	456	545	565	1050	1150	1250	1500	2000	2500	2750	3500	3750	4500	5500	7000	8500															

MODEL (1:1 Phase)																									
Capacity (kVA)		1	2	3,5	5	7,5	10	15	20	25	30	40	50												
DIMENSIONS & WEIGHT																									
Cabinet Dimensions (mm)	Width	420				450				550				600				500				500			
	Depth	230				350				350				400				500				700			
	Height	230				270				270				320				850				850			
Net Weight (Kg)		15	16	29	40	47	55	75	125	136	163	180	210												

Makelsan reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Makelsan products previously or subsequently sold. Makelsan does not guarantee the items of the accuracy and completeness.