



REMO-HSE

MSR-P Series 30W / 60W / 90W / 120W

Regulated High Voltage Modules

Datasheet



Description:

- Regulated high voltage modules designed for OEM applications.
- Different maximum voltage ratings up to 30 kV with positive or negative polarity
- Maximum 30W, 60W, 90W or 120W output power
- The output voltage is adjustable between 0% and 100% of the rated output.

Features:

- 115V AC or 230V AC input
- Soft start
- Automatic crossover from constant-voltage to constant-current regulation and vice versa
- Spark protection
- High voltage output 100% short-circuit proof to ground
- Potentiometers to adjust output voltage and current

- Potential-free relay contact indicates the "Load" status
- Two LEDs indicate the U/I mode and over-temperature

Options:


- Second high-voltage output: either double output or, e.g. for electrostatic precipitators, with a second high-voltage output for the collector. In the event of flashovers in the filter, the module automatically regulates the high voltage.

Typical Applications:

- Electrostatic filters
- Electrostatic charging and discharging
- Capacitor Charging Systems
- Ion getter pumps
- Etc.

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Technical Specifications

Input and Output				
Input:	N1 = 115V AC or N2 = 230V AC (-10 %, +10%) 50 to 60Hz			
	30W	60W	90W	120W
	N1 max. 0,6A	max. 1,2A	--	--
	N2 max. 0,35A	max. 0,6A	max. 0,8A	max. 1,2A
Output:	Continuous adjustment from 0% to 100% of the rated voltage or current by potentiometer. Automatic crossover from constant-voltage to constant-current regulation. Accuracy better than 2% of the rated voltage. Available with either positive or negative polarity with respect to chassis ground.			
Efficiency:	At rated values typically:			
	30W	60W	90W	120W
	80%	84%	86%	88%

Special Features	
Soft Start:	At startup, recovery from sparks or short circuit the modules provide controlled ramp up to prevent dangerous voltage overshooting. At full load, the output voltage will rise in approximately 150 ms to the rated voltage (other ramp-up times available on request).
Spark Sensing:	Internal circuitry senses sparks caused by external discharges. In case of a spark, the module turns off for approximately one second and then ramps up automatically.

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Environmental Data	
Operating Temperature Range:	0 to +40°C
Storage Temperature Range:	-25 to +70°C
Humidity:	80% maximum relative humidity up to +31°C, reducing linearly to 50% at +40°C Non-condensing (ref. EN61010-1)
Altitude:	0 to 2000m

Status Messages	
Green/yellow LED:	Green indicates the normal constant voltage mode and yellow the constant current mode
Red LED	Red LED on signals over-temperature
Potential Free Relay Contact, (250V AC, max 1A)	Signals the crossover from normal constant voltage operation to constant current operation at the preset maximum current

Protection	
❖ Over-voltage and over-current limitation	
❖ High voltage output 100% short-circuit-proof to ground	
❖ Spark protection: In case of a spark, the module turns off for approximately one second and then ramps up automatically.	
❖ In case of over-voltage, over-current or over-temperature the module shuts down and must be disconnected from mains supply before resetting.	

Additional Information	
Recovery Time:	Approximately 15 seconds following a disconnection of mains supply
EMC:	This high voltage module is intended for installation as part of a system. Basic EMC filtering is provided.

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Mechanical Data	
Housing	Aluminum case
Dimensions:	Up to 15kV output voltage: 86 mm wide, 60 mm high, 178 mm deep (without fixing points) Above 15 kV output voltage with one output: 86 mm wide, 90 mm high, 178 mm deep (without fixing points) Above 15 kV output voltage with two outputs: 86 mm wide, 109.5 mm high, 178 mm deep (without fixing points)
Weight:	Approx. 0.7 to 1.6kg (depending on output voltage)
Classification:	IP 20
Ventilation:	Cooling vents (convection)

Options
❖ Second high voltage output (fixed ratio compared to first high voltage output e.g. 50%)
❖ Holder for top-hat rail

Model Code								
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: left;"> <p>Polarity Selection: P: Positive Output N: Negative Output</p> </div> <div style="text-align: center;"> <p>u: mikro Ampère m: milli</p> </div> <div style="text-align: right;"> <p>Input Voltage: N1: 115 V AC N2: 230 V AC</p> </div> </div> <div style="text-align: center; font-size: 1.2em;"> MSR-P-XXX <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>P</td></tr><tr><td>N</td></tr></table> XXX <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>P</td></tr><tr><td>N</td></tr></table> XXX -XXX <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>u</td></tr><tr><td>m</td></tr></table> - <table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr><td>N1</td></tr><tr><td>N2</td></tr></table> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: left;"> <p>Output Power: 30, 60, 90 or 120 Watt</p> </div> <div style="text-align: center;"> <p>Output: Rated Voltage in kVolt</p> </div> <div style="text-align: center;"> <p>Optional 2nd Output: Rated Voltage in kVolt</p> </div> <div style="text-align: center;"> <p>Total Rated Output Current</p> </div> </div>	P	N	P	N	u	m	N1	N2
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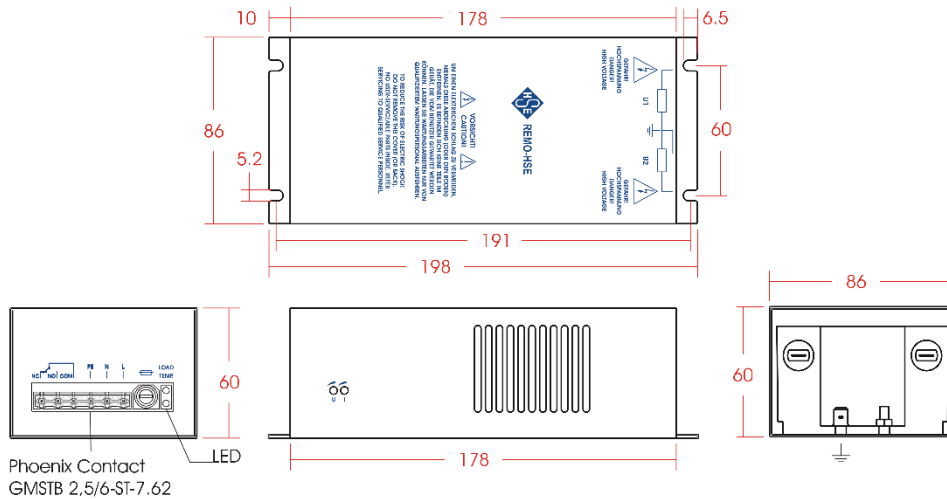
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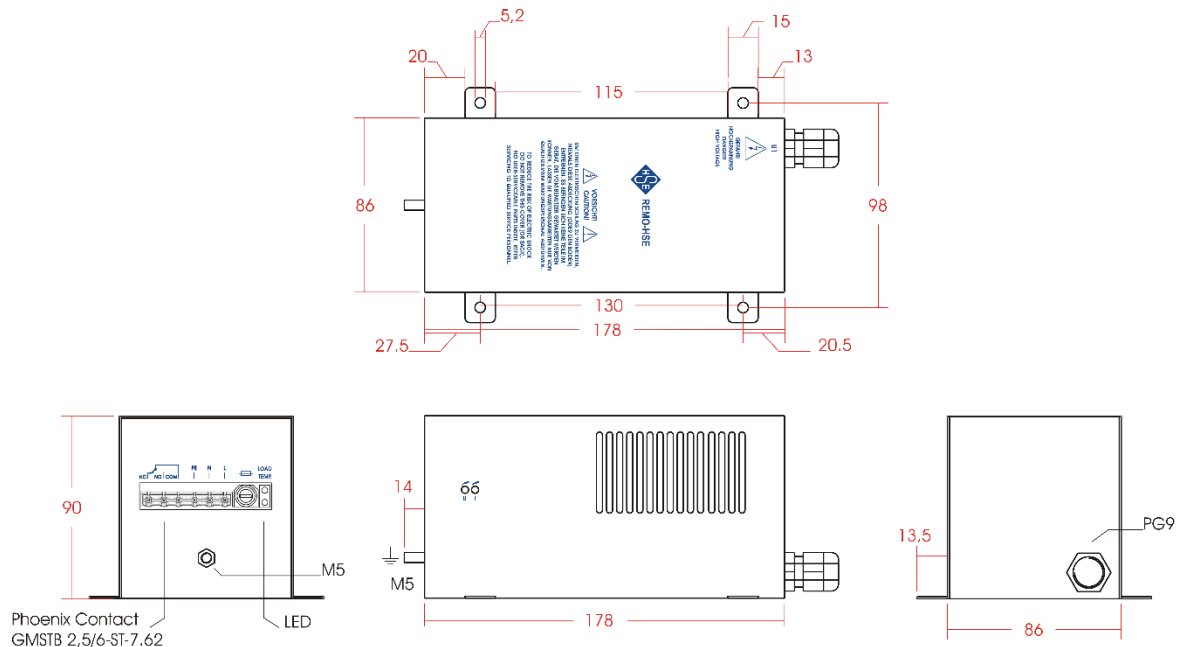
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Mechanical Drawings: MSR-P Series



Output Voltage up to 15kV: Dimensions: +/- 0,5mm



Output Voltage above 15kV with one output: Dimensions: +/- 0,5mm

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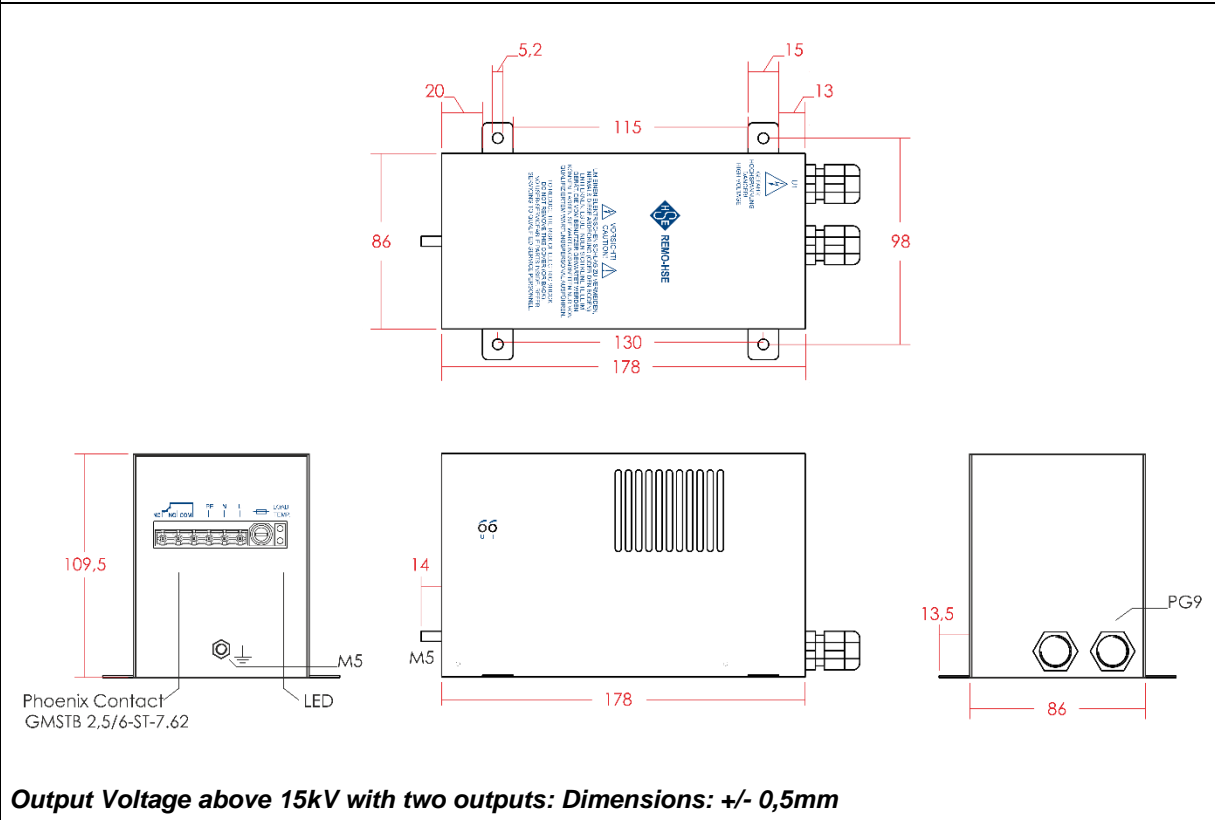
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Mechanical Drawings: MSR-P Series



Output Voltage above 15kV with two outputs: Dimensions: +/- 0,5mm

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