 REMO-HSE	MSR-S Series from 150W to 240W	Datasheet
	Regulated High Voltage Modules	



Description:

- Regulated high voltage modules designed for OEM applications.
- Different maximum voltage ratings up to 30kV with positive or negative polarity
- Maximum 240W output power
- The output voltage is adjustable between 0% and 100% of the rated output.

Features:

- 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
- PLC controls and monitors; signals are scaled 0-10V DC equals 0-100% of full scale

Options:


- Second high-voltage output (depending on output voltage): 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.
- Extended interface with ON/OFF-, temperature and spark monitoring
- IDC interface connector for ribbon cable connection

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:	N2 = 230VAC (-10 %, +10%) 50 to 60 Hz		
	150W	200W	240W
	N2 max. 1.8A	max. 2.3A	max. 2.8A
Output:	Continuous adjustment from 0% to 100% of the rated voltage and current by external 0 to 10V signals. 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:	Typical values at nominal conditions:		
	150W	200W	240W
	89%	89%	90%

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 will turn off for approximately one second and will then ramp 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


PLC Controls and Monitors	
Controls (Input Resistance: approx 10kOhm)	
Voltage Demand:	0 to 10V DC demands 0 to 100% of rated output voltage
Current Demand:	0 to 10VDC demands 0 to 100% of rated output current
High Voltage ON/OFF	24VDC (10...30VDC) active high In case of over-voltage, over-current or over-temperature the module shuts down and the high voltage must be turned off before restart
Monitors (Output Current: max 1mA)	
Voltage:	0 to 10V DC for 0 to 100% of rated voltage
Current:	0 to 10V DC for 0 to 100% of rated current

Protection	
<ul style="list-style-type: none"> ❖ Over-voltage and over-current limitation ❖ High voltage output 100 % short-circuit-proof to ground ❖ Spark protection: In case of a spark the module will turn off for approximately one second and will then ramp up automatically. ❖ In case of over-voltage, over-current or over-temperature the module shuts down and the high voltage must be turned off before restart. 	

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.

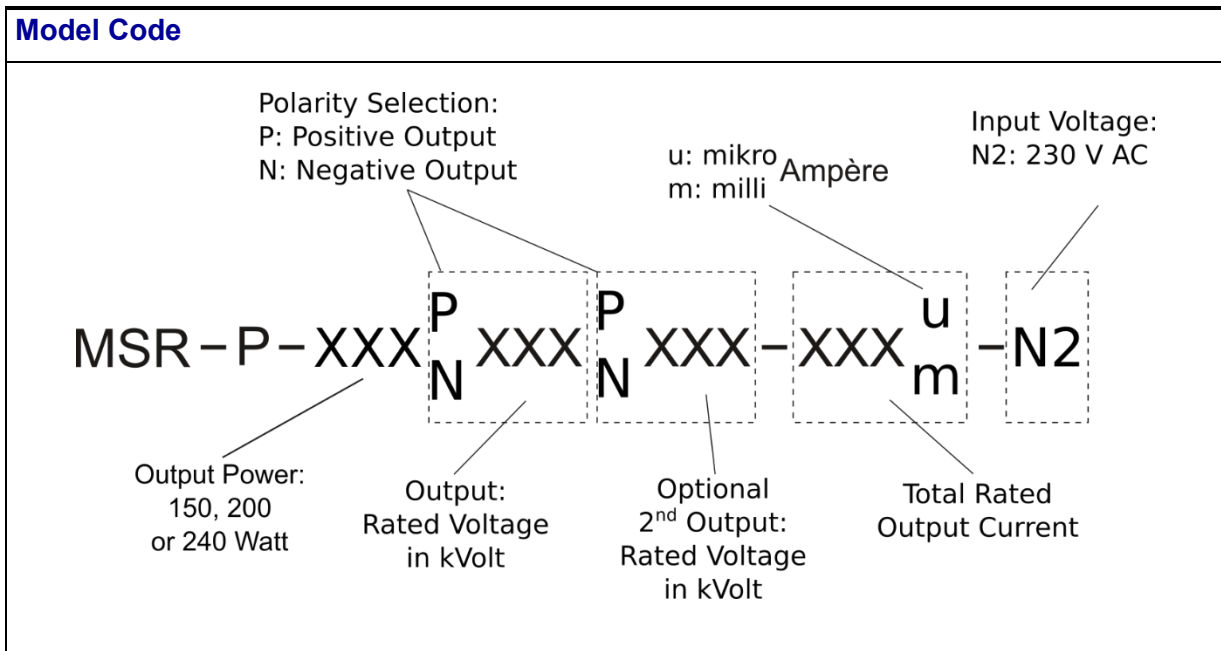
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Mechanical Data	
Housing	Aluminum case
Dimensions:	110 mm wide, 109.5 mm high, 210 mm deep (without fixing points)
Weight:	Approx 2.2kg
Classification:	IP 20
Ventilation:	Cooling vents (convection)

Options	
❖	Second high voltage output depending on output voltage (fixed ratio compared to first high voltage output e.g. 50%)
❖	Extended interface with ON/OFF-, temperature and spark monitoring
❖	IDC interface connector for ribbon cable connection
❖	Holder for top-hat rail
❖	In case of over-voltage, over-current or over-temperature the module shuts down and must be disconnected from mains supply before resetting.



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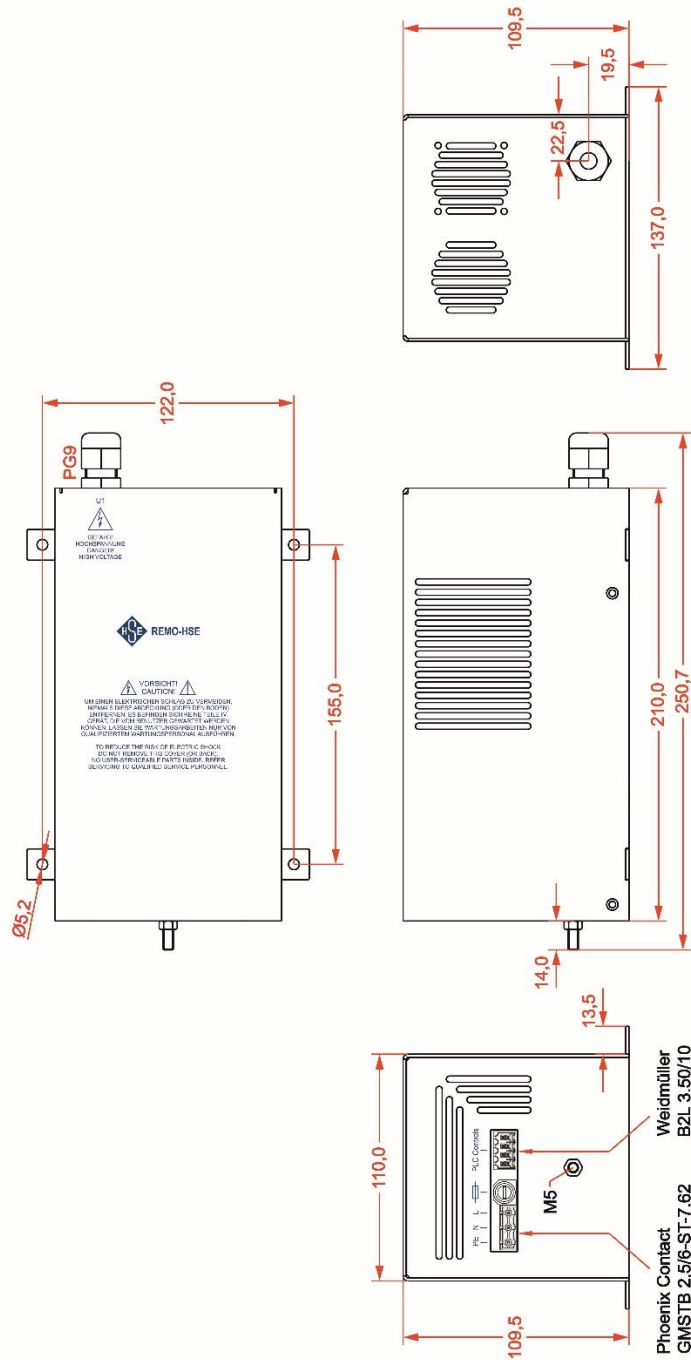
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Mechanical Drawings:



Dimensions: +/- 0,5mm

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