

SM 6000 Series

6000 WATTS PROGRAMMABLE DC SUPPLY

Features

- Constant voltage and constant current operation
- Parallel operation master/slave
- EMC standard EN61204-3
- CE marked
- Optional ethernet, RS232, IEEE 488 programming
- IEEE 488 programming option
- Ethernet, RS232 option



Specifications

INPUT

Input voltage	342-457Vac 3 phase
Frequency	48Hz–62Hz
Inrush current	20A (electronic limit)
Isolation	I/P to O/P: 3750V rms (8mm creepage), I/P – Case: 2500V rms, O/P – Case: 600VDC

OUTPUT

Output voltage	See table.
Output voltage adjustment	0%–100%
Output current	See table.
Output current adjustment	0%–100%
Resolution	0.03% voltage and current control with 10 turn potentiometers.
Temperature coefficient	CV: 35×10^{-6} /°C, CC: 60×10^{-6} /°C
Load regulation	0%–100% load see table
Line regulation	Line $\pm 10\%$ – see table
Ripple & Noise	See table.
Stability	CV: 5×10^{-5} , CC: 10×10^{-5}
Output impedance (0-1kHz; 1-100kHz)	SM15-400: < 0.5m Ω ; < 2.3m Ω SM30-200: < 1.2m Ω ; < 5m Ω SM45-140: < 1.7m Ω ; < 10m Ω SM60-100: < 1.5m Ω ; < 12m Ω SM70-90: < 1.8m Ω ; < 12m Ω SM120-50: < 11m Ω ; < 90m Ω SM300-20: < 34m Ω ; < 330m Ω
Recovery time	(50%–100% load step): 100 μ S; 120 μ S for SM 15-400.
Remote sense	2V max. per lead compensation.

OPERATING

Efficiency	87%–91%
Switching frequency	100kHz
Thermal protection	Yes
Programming	Analogue Programming of voltage and current by 0-5V.
Programming speed	See table
Master/Slave operation	Parallel and series operation with equal current and voltage sharing. In this way two or more SM-units can together be used as one high power unit. Voltage and current of the units is controlled by the master (by potentiometers or by programming). Series operation up to 600V
Metering	Digital meters standard
Indicators	CV/CC mode, OVP triggered LEDs

BATTERY CHARGING

The CV/CC regulated power supplies are very suitable for battery charging. Ask for the special datasheet "BATTERY CHARGING WITH SM-series POWER SUPPLIES". This datasheet contains information about protective measures against accidental battery reversing.

ENVIRONMENTAL

Operating temperature	-20°C to 50°C
Cooling	Low noise blower, fan speed adapts to temperature of internal heatsink. (from left to right).

STANDARDS AND APPROVALS

Safety standards	EN60950 / EN61010
EMC standards	EN61204-3, EN61000-6-2
EMI standards	EN61000-6-3 (EN55022B)

MECHANICAL

Mounting	Bench or 19" rack mounting
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Selection Table

MODEL NUMBER	OUTPUT VOLTAGE (OV TO)	OUTPUT CURRENT (OA TO)	RIPPLE & NOISE		PROGRAMMING SPEED	LOAD REG. 0%-100%		LINE REG. 200-264VAC	
			CV	CC		CV	CC	CV	CC
SM15-400	15V	400A	8mV pk-pk	300mA pk-pk	3.3mS	2.5mV	24mA	0.2mV	4mA
SM30-200	30V	200A	8mV pk-pk	60mA pk-pk	6.4mS	5mV	12mA	0.5mV	2mA
SM45-140	45V	140A	10mV pk-pk	25mA pk-pk	2.7mS	5mV	9mA	1mV	1.5mA
SM60-100	60V	100A	10mV pk-pk	10mA pk-pk	5.4mS	5mV	6mA	2mV	1mA
SM70-90	70V	90A	10mV pk-pk	10mA pk-pk	6.8mS	5mV	5mA	2mV	1mA
SM120-50	120V	50A	25mV pk-pk	10mA pk-pk	5.1mS	8mV	3mA	2mV	0.5mA
SM300-20	300V	20A	50mV pk-pk	5mA pk-pk	8.5mS	15mV	1.2mA	3mV	0.2mA

OPTIONS

Screwdriver adjustment - option P001

Master / slave operation

Battery charging

SM45-140: P151, SM120-50: P152, SM300-20: P153

Increased max. output voltage / current - option P069

Enforced secondary isolation 1000V - option P089

High speed programming - SM15-400: P166, SM30-200: P167, SM45-140: P168, SM60-100: P169, SM70-90: P170, SM120-50: P171, SM300-20: P172.

Built-in ISO AMP CARD for isolated analog programming - option P154

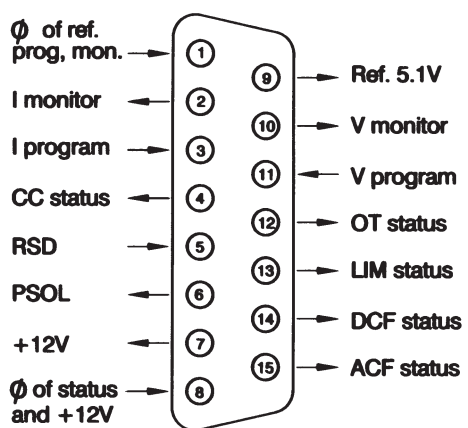
Built-in ethernet power supply controller - option P157

Built-in RS232 power supply controller - option P155

Built-in IEEE488 power supply controller - option P156

440 and 480 Vac input - option P165

Technical Illustrations



connections analog programming connector

CV= Constant Voltage
CC= Constant Current

Specifications measured at
 $t_{amb} = 25 \pm 5^\circ C$ and $V_{in} = 400V AC, 50 Hz, 3 phase, unless otherwise noted.$

The information in this document is subject to change without notice

