SUNGROW
Wind Power

SGD100 Medium-voltage Motor Drivers

Relying on extensive experience and technological accumulation in the field of ultra high power converter, Sungrow independently developed the SGD100 series of medium-voltage drivers, which is suitable for motor drives with voltage levels from 3kV to 13.8kV.

SGD100 Medium-voltage Motor Drivers

Overview

SGD100 medium-voltage drivers, adopting cascade multi-level technology, is able to realize the precise control of tens MW medium/high-voltage motors, also be selectable in different forms such as cabinet type and container type, two-quadrant and four-quadrant. High-voltage motor drive can be used in transmission test bench, metallurgy, petroleum, natural gas, chemical industry, building materials, mining, municipal engineering and etc, as well as pumped storage, gravity energy storage, compressed air energy storage, flywheel energy storage, photo-thermal power generation, hydrogen energy and other renewable energy fields.

Characteristics

01 **Perfect performance**
Cascaded multi-level technology, outstanding harmonic input and output performance.

02 **Multi-function**
Compatible with asynchronous motor, permanent magnet synchronous motor and electro-excited synchronous motor.

03 **Advanced Control**
Integrate speed sensor/sensorless vector control, V/F control, constant frequency variable voltage and other control methods.

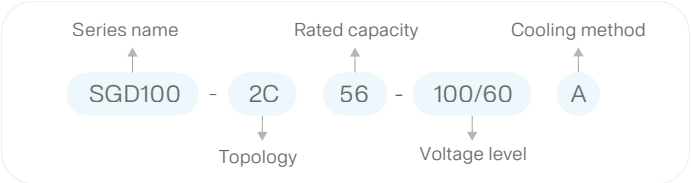
04 **Feedback**
With four-quadrant operation model, grid-side PWM rectification, and the function of energy feedback.

05 **Expandable**
Supprot working in paralle to expand capacity.

06 **High Reliability**
All products adopt long-life metal film capacitor, adapting to long interval and periodical use occasions.

07 **Flexible Configuration**
Manual/automatic bypass cabinet.

Naming rule



Name: SGD100 Medium-voltage Drivers
Topology: 2C - 2-quadrant cascade type; 4C - 4-quadrant cascade type
Rated capacity: Output rated capacity, unit 100kVA
Voltage level: input/output voltage, unit 0.1kV
Cooling method: A - Air cooling; L - Liquid cooling

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Technical indicators

Name	Category	Parameters
Electrical parameters	Input voltage	3kV-13.8kV
	Grid frequency	50/60Hz
	Input power factor	> 0.95 (2-quadrant)； > 0.99 (4-quadrant)
	Output frequency range	0-120Hz，customizable
	Overload capacity	Rated current 120%,1min overload
	Efficiency	≥96%
	Output control method	Speed sensorless vector control (OLVC); Speed sensor vector control (CLVC); Variable Voltage and Variable Frequency (VVVF); Variable Voltage and Constant Frequency (VVCF)
	Rev accuracy	±0.01% (with sensors)，or ±0.5% (without sensors)
	Speed ratio	50：1 (VVVF); 100：1 (speed sensorless vector control); 1000：1 (speed sensor vector control);
	Acceleration/deceleration time	1-3600s, customizable
	Digital input	8-channel digital input (extensible)
	Digital output	8-channel digital input (extensible)
	Analog input	2-channel digital input (extensible), In both 4-20mA and 0-10V
	Analog output	4-channel digital input (extensible), In both 4-20mA and 0-10V
	Communication interface	Modbus-RTU, CAN, Modbus-TCP (optional)、 Profbus-DP (optional)、ProfNet IO (optional)
	Variable frequency	Flying restart, frequency hopping, high and low voltage ride-through, automatic temperature and humidity control, virtual oscilloscope, fault recording, synchronous switching (optional), automatic bypass (optional), etc.
	Protection	Over/under voltage protection, over current protection, overload protection, phase loss protection,temperature protection, IGBT unit fault protection, over/under frequency protection, three-phase unbalance protection,etc
Mechanical parameters	IP grade	IP31 (Air cooling) / IP54 (Liquid cooling)
	Cooling method	Air cooling/Liquid cooling
Environmental condition	Operating temperature	-30~+40℃
	Operating humidity	5%-95%,no condensation
	Altitude	≤2000meters，derating when over 2000m

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