

Goodrive100 Series

Economic Vector Control Inverter

Innovation, Value, Teamwork



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Brief introduction of Goodrive100 inverter

Goodrive100 series inverters are compact high-performance type products in the universal market. Applying V/F and sensorless vector control mode, separately air-duct design, book structure, brand-new design platform, and built-in C3 input filter, the products enhance its performance to meet the complicated and rugged enviroment.

Product Advantages

Excellent Motor Drive

Perfect EMC Performance

Reliable quality certificated
by TÜV SÜD





Product Features

1、 More Accurate Motor Autotuning

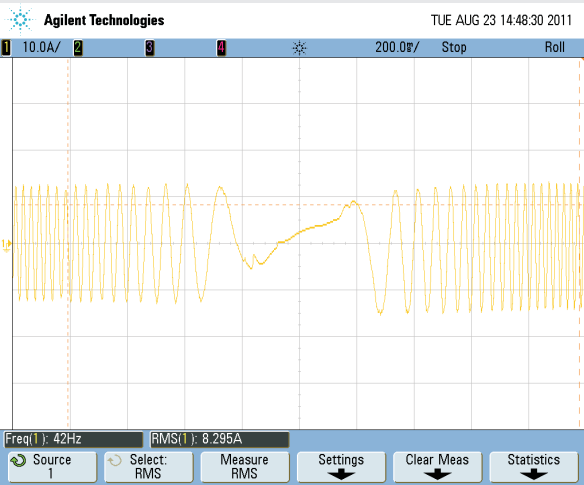
Correct rotating and static motor autotuning.
Convenient debugging,easy operation.

Rotating Autotuning	Static Autotuning
De-couple from the load, Applied to the situation with high control accuracy	No need to de-couple from the load,Applied when rotating autotuning is not available

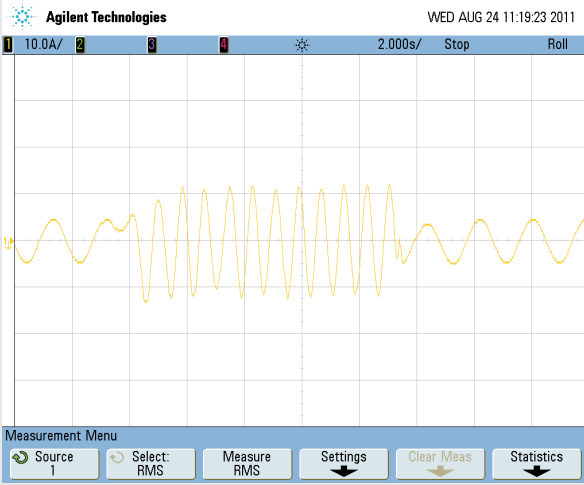
2、 Excellent Performance

AM sensorless vector control mode:

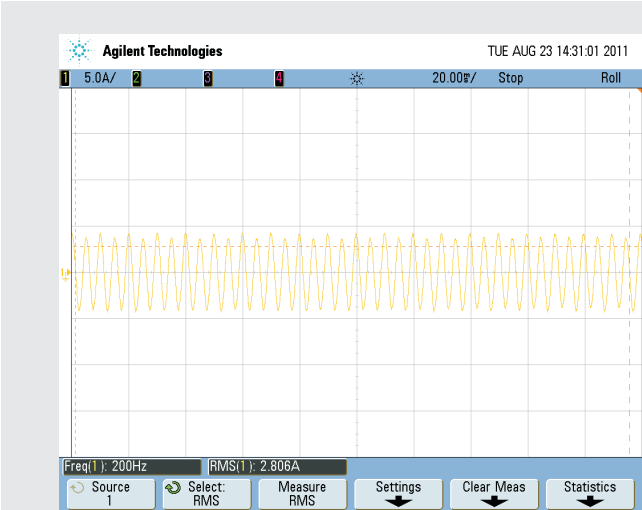
Starting Torque	Dynamic Response	Speed Ratio	Steady Speed Accuracy
0.5Hz/150% rated torque	< 50ms	1: 100	± 0.2%



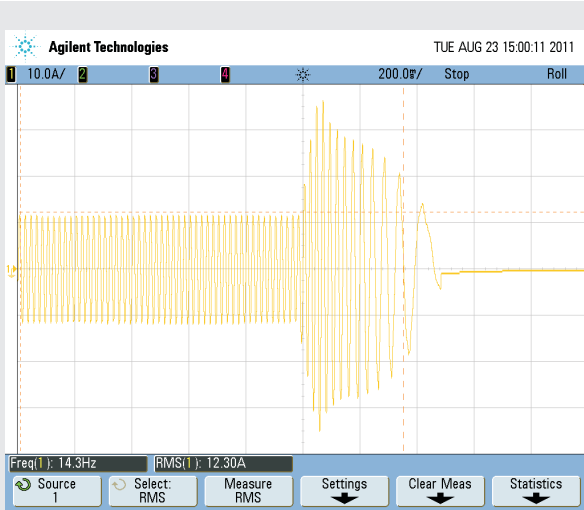
FWD/REV current waveform in sensorless vector control mode with 50Hz full load



Load/Unload current waveform in sensorless vector control mode with 0.5Hz



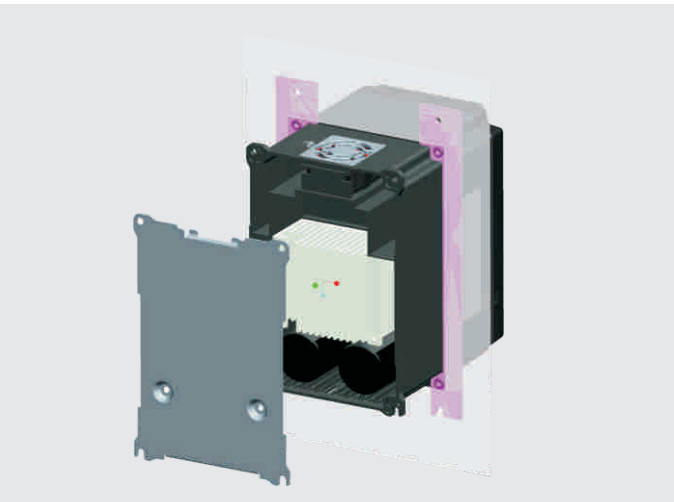
Running current waveform in sensorless vector control mode with 200Hz



Flux braking current waveform in sensorless vector control mode with 50Hz (deceleration time: 0.5s)

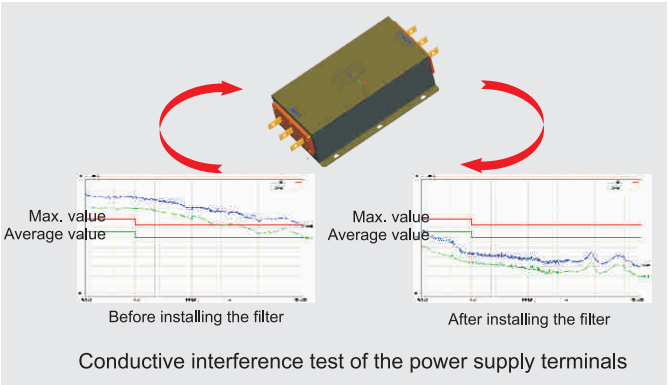
3、 Separate Air-duct

The separate air duct prevents the contaminants into the electronic parts/components and greatly improves the protective effect of the inverter, as well as its reliability and service life, to adapt various complicated site environments. It can also facilitate the heat-releasing in control cabinets and the heat-releasing design of the customer.



4、 C3 input filter (standard configuration) and C2 filter (optional)

C3 input filter is embedded in the factory to meet different application requirements, save installation space and avoid the electromagnetic interference caused by incorrect selection and site installation



Remarks:
(1)C2 filter: EMC performance of the inverter achieves the limited usage requirement in civil environment.
(2)C3 filter: EMC performance of the inverter achieves the limited usage requirement in industrial environment.

5、 External Keypad



Remark:
Special extension cable for keyboard is needed when installation.

6、TÜV SÜD. INVT is the unique manufacturer having TÜV–MARK marks in Chinese industrial control field.



Remarks:
(1)Each Goodrive100 inverter has past the test certification.
(2)Visit http://www.tuev-sued.de/industry_and_consumer_products/certificates for the TUV certifications.

7、 Outstanding reliability test system ensures the product adapt complicated site environment

Experiment Type	Experiment Name	Classification
Mechanical Reliability Experiments	Package Experiments	Package compression experiments
		Package resonance imaging and storage test
		Package random vibration test
		Package dropping test
		Package rolling test
		Package dumping test
		Package inclined impact test
	Impact Test	Half-sine wave impulse test(working and non–working state)
		Trapezoidal wave impulse test (non-working state)
	Vibration Test	Sinusoidal vibration test (working state)
		Random vibration test (working and non-working state)
Climatic Environmental Reliability Test	Temperature Experiment	Low temperature storage test
		High temperature storage test
		Low temperature experiments
		High temperature experiments
		Temperature gradient experiments
		Temperature impact test
	Thermal Test	Constant thermal test
		Alternation thermal test
	Salt Spray Test	Constant salt spray test
		Alternation salt spray test
	Low Air Pressure Test	Low temperature and low pressure test
		High temperature and low pressure test

Remark:
The full name of ACT is Acceptance of Client's Testing, which means the German TÜV SÜD admit the technology level of the lab and accept their separate testing data and test reports officially.

Technical Specifications

	Function	Specification
Input	Input Voltage (V)	AC 3PH 400V±15%
	Input Frequency (Hz)	47~63Hz
Output	Output Voltage (V)	0~input voltage
	Output Frequency (Hz)	0~400Hz
	Output Power (kW)	0.75~15 kW
Technical Control Feature	Control Mode	V/F, sensorless vector control
	Motor Type	Asynchronous motor
	Speed Ratio	1:100 (SVC)
	Speed Control Accuracy	± 0.2% (sensorless vector control)
	Speed Fluctuation	± 0.3%(sensorless vector control)
	Torque Response	<50ms(sensorless vector control)
	Torque Control Accuracy	10%(sensorless vector control)
Running control Feature	Starting Torque	0. 5Hz/150%(sensorless vector control)
	Overload Capability	150% of rated current: 1 minute 180% of rated current: 10 seconds 200% of rated current: 1 second
	Frequency Setting Method	Digital setting, analog setting, pulse frequency setting, multi-stage speed running setting, simple PLC setting, PID setting, MODBUS communication setting Realize the shifting between the set combination and set channel.
Peripheral Interface	Fault Protection	Provide over 30 fault protection functions: overcurrent, overvoltage, undervoltage, overheating, phase failure and overload, etc.
	Analog Input	1 channel (AI2) 0~10V/0~20mA and 1 channel (AI3) -10~10V
	Analog Output	2 channels (AO1, AO2) 0~10V /0~20mA
Others	Relay Output	2 channels programmable relay output RO1A NO, RO1B NC, RO1C common terminal RO2A NO, RO2B NC, RO2C common terminal Contactor capability: 3A/AC250V
	Mountable Method	Wall mountable and flange mountable
	Temperature of the running environment	-10~50℃, derate above 40℃
	Protective Degree	IP20
	Cooling	Air-cooling

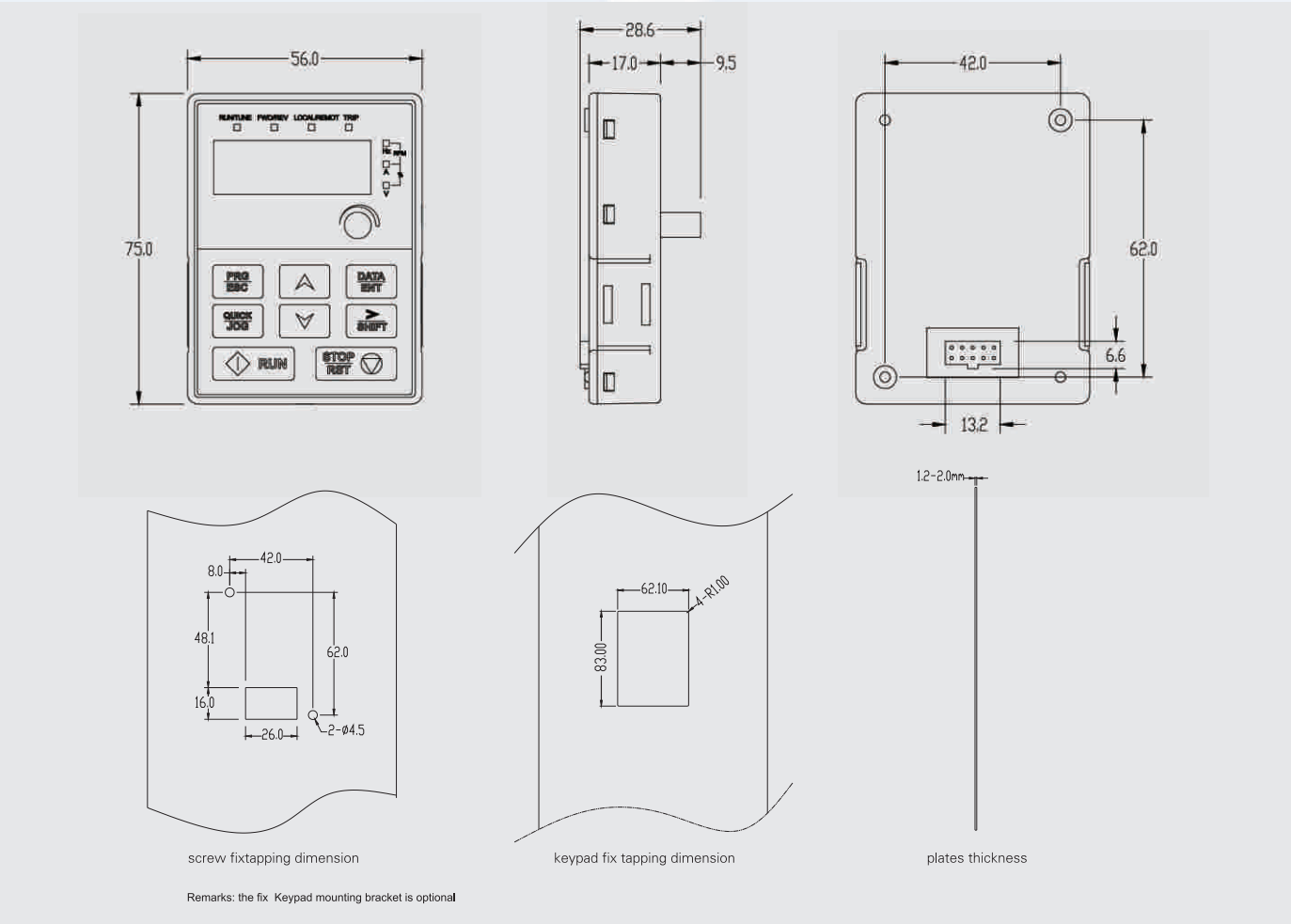
Power Ratings

Model NO.	Output Power (kW)	Input Current (A)	Output Current (A)	Carrier Frequency (kHz)
GD100-0R7G-4	0.75	3.4	2.5	2 ~ 15(8)
GD100-1R5G-4	1.5	5.0	3.7	2 ~ 15(8)
GD100-2R2G-4	2.2	5.8	5	2 ~ 15(8)
GD100-004G-4	4	13.5	9.5	2 ~ 15(8)
GD100-5R5G-4	5.5	19.5	14	2 ~ 15(8)
GD100-7R5G-4	7.5	25	18.5	2 ~ 15(8)
GD100-011G-4	11	32	25	2 ~ 15(8)
GD100-015G-4	15	40	32	2 ~ 8(4)

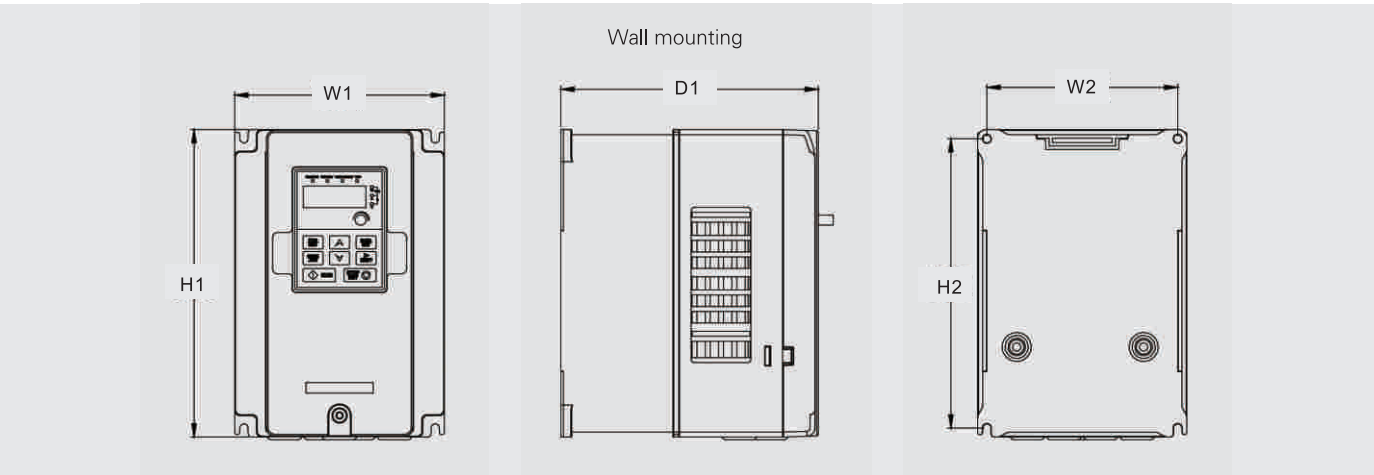
Remarks:
1.The input current is tested when no reactor and 380V input voltage.
2.The output current is defined as the rated value when the output voltage is 380V . The output current needs to be calculated when the output voltage is 400V, 415V or 440V .

Dimensions (unit:mm)

1、Keypad dimension

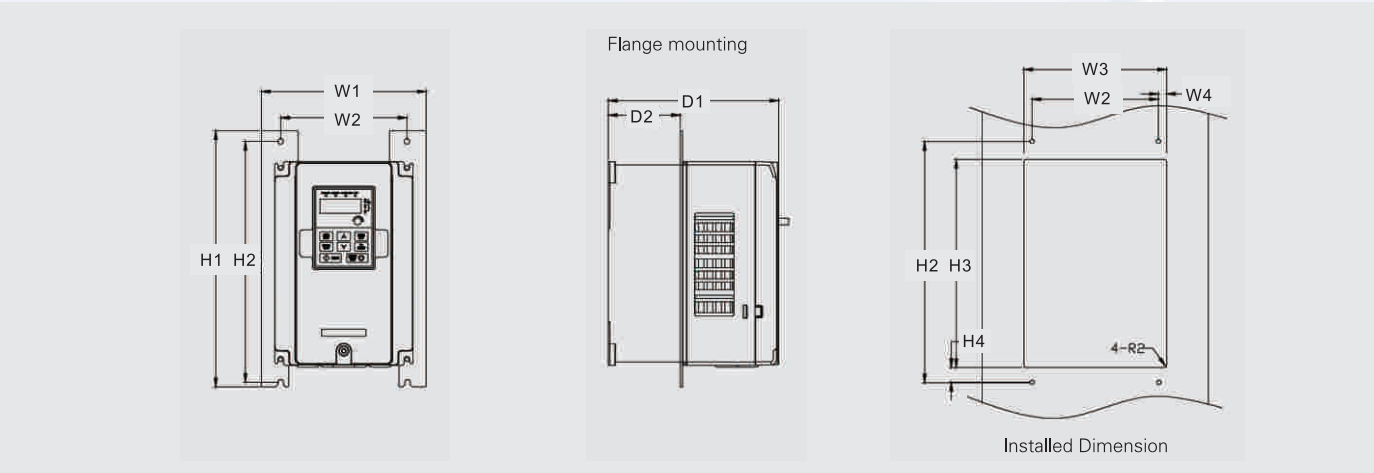


2、Installation dimensions when wall mounting



Model	W1	W2	H1	H2	D1	Installation hole
0.75kW~2.2kW	126.0	115.0	186.0	175.0	155.0	5
4kW~5.5kW	146.0	131.0	256.0	243.5	167.0	6
7.5kW~15kW	170.0	151.0	320.0	303.5	196.3	6

3、Installation dimensions when flange mounting

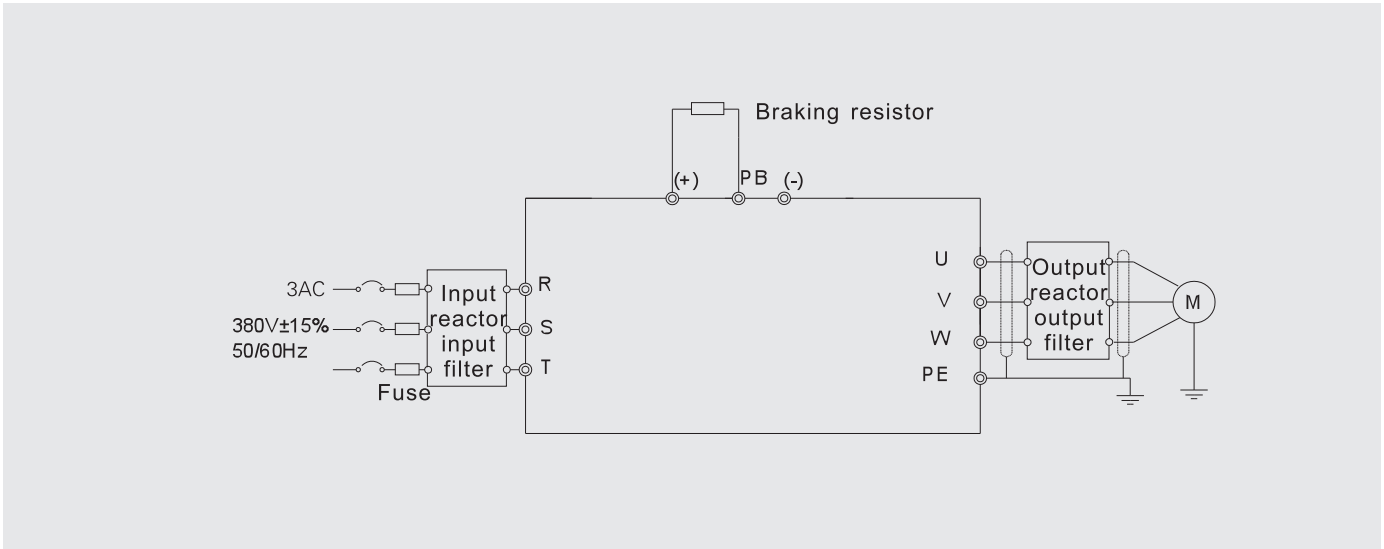


Model	W1	W2	W3	W4	H1	H2	H3	H4	D1	D2	Installation hole
0.75kW~2.2kW	150.2	115.0	130.0	7.5	223.9	220.0	190.0	13.5	155.0	65.5	5
4kW~5.5kW	170.2	131.0	150.0	9.5	292.0	276.0	260.0	6	167.0	84.5	6
7.5kW~15kW	191.2	151.0	174.0	11.5	370.0	351.0	324.0	12	196.3	113.0	6

Remarks:
1.The flange installation board is optional.
2.The installation dimension is compatible with the same power product of Goodrive300 except the 15kW product which is the same as 11kW Goodrive300.

Connection Diagrams

1、 Connection diagram of the main circuit



2、 Connection diagram of the control circuit

