In addition to gear reduction motors, we are also producing frequency converters.

WE HAVE BEEN WORKING HARD

2019 Edition

TAILI® TAILI MOTOR CO.,LTD

Any changes in product contents without notice.

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FIRST CHOICE OF HIGH-END BRAND COOPERATION
WE HAVE BEEN WORKING HARD

COMPANY PROFILE

Enterorise Culture

Business philosophy:

Strive for perfection and pursue perfection.

Service purposes:

Customer first, reputation first.

Sanmen Taili Motor Co.,Ltd,which was founded since 2005,is specialized in mini or small AC geared motor and high precision planetary reducer's development ,production and sales.The company was located in Dashawan Industrial area ,Liuao Town,Sanmen County,Zhejiang Province.It covers an area of 8100 square meters,and annual production capacity is 1000000 units.The company has more than 400 employees,including eight senior engineers,five gear engineers and a larger number of professional talents with university,college degre.

Company has more than 80 units of Shenyang P Series machining centre,American Hass machining centre,80 units Hexagon of Ningjiang3610IV CNC gear hobbing machine, 2 units of arc gear hobbing machine and 1 unit fully automatic high-speed gear hobbingmachine, 1 unit of universal gear measurement center from Harbin Measuring Tool Factory,

1 unit of automatic three coordinatesand other advanced production equipments and quality testing equipments. Company has got ISO9001 international qualitysystem certification and 3C certification.

The company produces the mini AC geared motor 6w-400W,Small gear motor 0.1kw-7.5kw,Linear motor 25w-400w,right-angle reducer 25w-400w, hyperboloid rectangular axis reducer 25w-750w,permanent magnet DC motor 6w-750w,high precision economical type planetary gear reducer PL60-160 with precision stepper,servo motor,the RV warm gear motor and precision speed controller,etc.

Products are widely used in packaging machinery,food machinery,tea machinery,agricultural machinery,biomass boiler,precision machine and tool automation control equipment,etc.

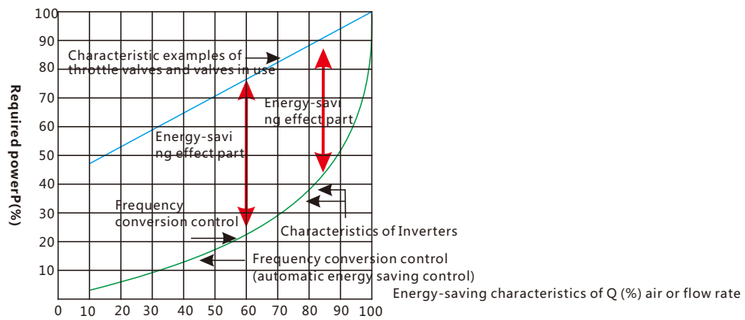
Company's products with high efficiency,low noise,long life,light weight,maintenance-free,excellent quality,reasonable price and perfect after-sales service,are favored by the majority of new and old users.To meet customer requirements is the only enterprise purpose.to meet customer expectations is the forever pursuit of the enterprise.

MADE IN CHINA, EXCELLENT PERFORMANCE

◊ Equipped with functions most suitable for fans and pumps.

Equipped with two kinds of PID control functions:

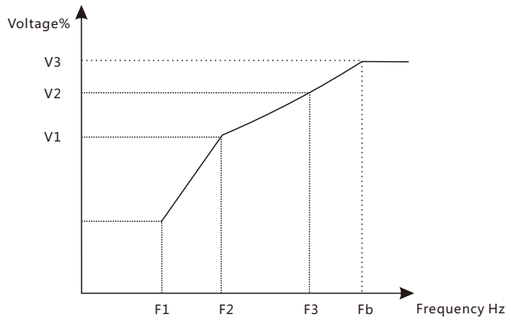
- Control of pressure, flow and temperature , etc. without external regulator
- The characteristics of the motors are different, and their effect is different.



◊ Multi-point voltage flux function

Three kinds of curve setting methods:

- The multi-point curve is suitable for the dehydrator, the centrifuge load, the square curve is suitable for the load like fan and pump, and the straight line is suitable for the ordinary constant torque load.
- The three points of the curve can be adjusted, and the most suitable curve and the optimal excitation control match can be set according to the torque characteristics of the equipment.
- The better energy-saving effect can be achieved.



◊ Product model description

T L	G1	0	110	G	3
①	②	③	④	⑤	⑥

①Taili frequency converters	③frequency converter model : 0 : Standard configuration 1 : Special 1 configuration 2 : Special 2 configuration	⑤Adaptive motor type : P: Light load type G:Standard type M:Middle load type H: Heavy load type	⑥Voltage level : 1、Single phase 220V 2、Three phases 220V 3、Three phases 380V 4、Three phases 440V 5、Three phases 580V 6、Three phases 660V
②frequency converter series: M1: M series small cover type M2: M series standard type US: Us series standard type G1: G series standard type	④Adaptive motor power : 0.2KW-400KW		

Catalog

US Series

◊ Production introduction

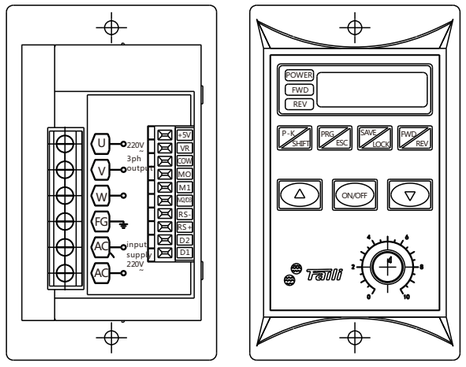
US series frequency converter is small in size and easy to install. It is easy to debug, its parameters are simple and easy to understand. it can meet the requirements of ordinary occasions. It is specially designed for three-phase AC motors below 220V/0.75KW and provides an integrated solution for the majority of customers in equipment manufacturing industry, which has high value for reducing the cost of the system and improving the reliability of the system.

◊ Technical characteristics

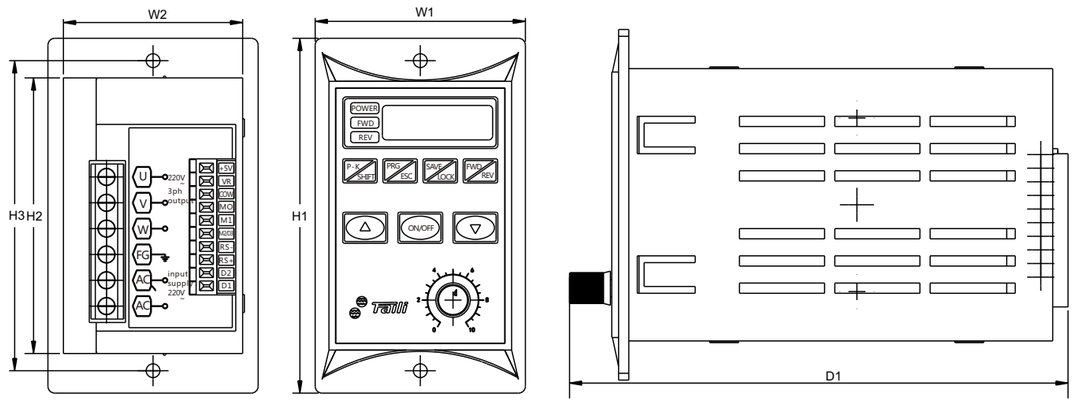
- The output frequency range is 1.0-99.0HZ, which can meet general speed regulation occasions.
- It is with adjustable speed potentiometer or externally adjustable speed potentiometer.
- It is with a built-in intelligent logic controller, which can realize the function of simple logic control.
- It has the function of electronic thermal relay and other traditional motor protection devices.
- It is with an external light-emitting diode indicator, which is convenient for on-site use requirements.
- User-friendly operation interface, concise and clear parameter setting mode, easy to operate
- The V/F curve function can be set arbitrarily to meet the requirements of special occasions.
- Real-time parameters can be viewed by usingshift keys.
- It adopts the new generation PIM module, which has complete protection function.

◊ US series models and technical specifications

Frequency converter model	Power supply capacity KVA	Input current A	Output current A	Adaptive motor KW
Single-phase power supply : 200~240VAC , 50/60Hz				
TL-US00R2G1	3.0	3.2	1.6	0.2
TL-US00R4G1	3.8	4.3	2.1	0.4
TL-US00R7G1	5.6	6	3.1	0.75



◊ US series installation dimension drawing



Frequency converter specification	H2	W2	H3	W1	H1	D1	安装孔径
0.4KW~0.75KW	80	52	90	61	103	146.5	4

◊ Application industries

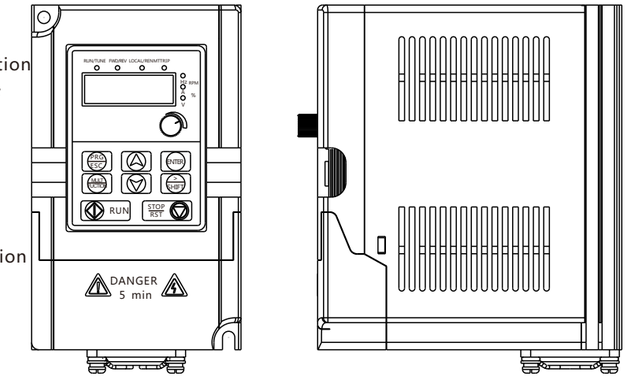
M Series

◊ Production introduction

M series inverter is an economical product designed by the company for mass users. It adopts the DSP control system and high-efficient V/F control mode. It is positioned forOEM customers and the application of fan and pump load with specific requirements. Based on Taili's accurate understanding of customers'needs and the constant pursuit of high quality, high reliability and high economy, M series brings you a completely new use experience.

◊ Technical characteristics

- Broadband input 47-63 HZ, suitable for the use of other export countries
- High-performance V/F control, high low-frequency force
- It has a complete user password function, which can set the running time.
- It is with the adjustable speed potentiometer, the panel can be externally connected to facilitate your use and operation.
- The panel can be hot-plugged to save working time and workload.
- Multiple frequency segment settings for free combination
- Built-in MOBUS communication for easy automation
- It has the jumping function, which can effectively avoid the mechanical resonance.
- It has the function of viewing multiple faults to easily understand product usage.
- It is built in the brake unit, which can save your cost plan.
- 16-speed control, free to switch modes of operation
- Built-in PID control for feedback disconnection detection and sleep shutdown

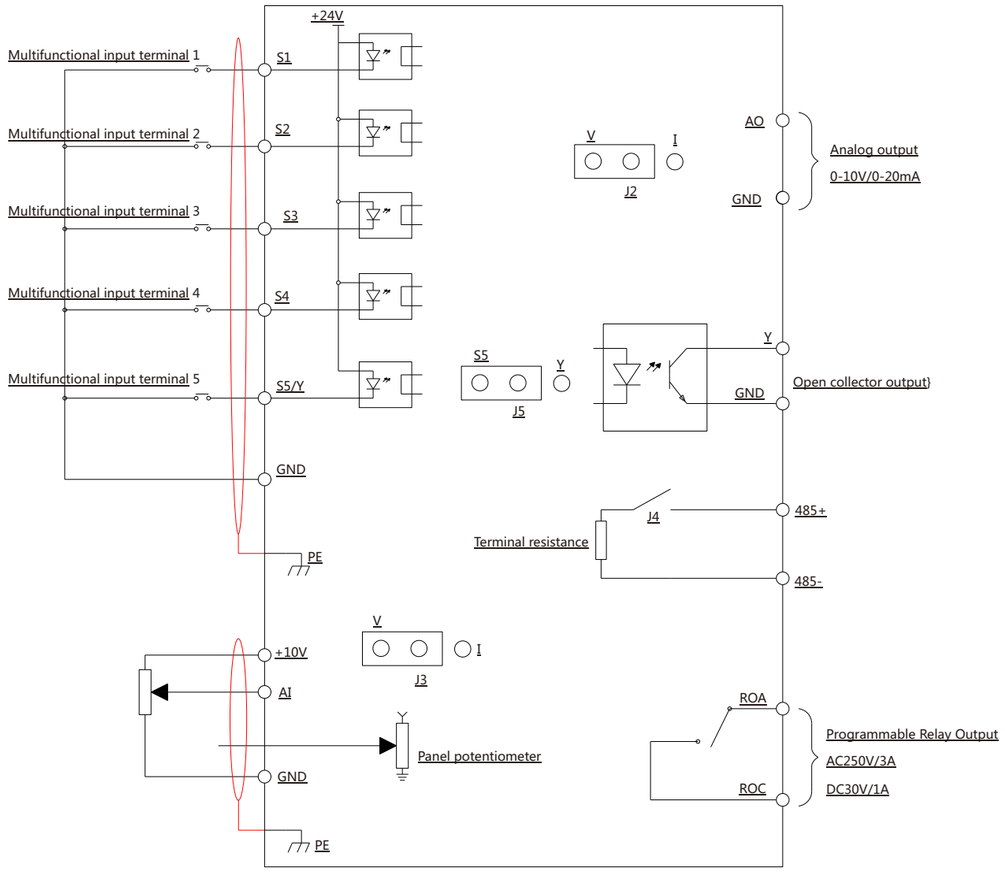


◊ Application industries

◊ M series models and technical specifications

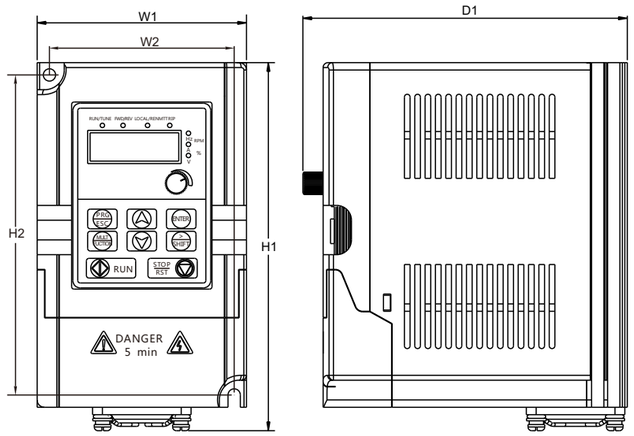
Inverter model	ower supply capacity KVA	Input current A	Output current A	Adaptive motor KW
Single-phase power supply : 200～240VAC , 50/60HZ				
TL-M100R2G1	4.0	4.9	1.6	0.2
TL-M100R4G1	6.0	6.5	2.5	0.4
TL-M100R7G1	8.7	9.2	4.2	0.75
TL-M200R7G1	8.7	9.2	4.2	0.75
TL-M201R5G1	13.0	15.0	7.5	1.5
TL-M202R2G1	21.0	23.0	11.0	2.2
Three-phase power supply : 350～420VAC , 50/60HZ				
TL-M200R7G3	3.4	3.3	2.5	0.75
TL-M201R5G3	5.0	4.8	4.2	1.5
TL-M202R2G3	6.7	6.5	5.5	2.2

◊ M series control loop wiring diagram



M Series

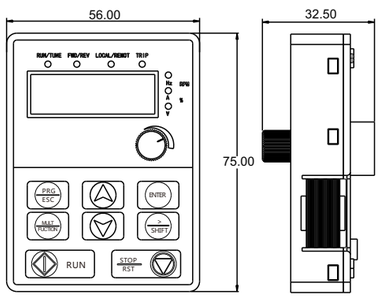
◊ M series installation dimension drawing



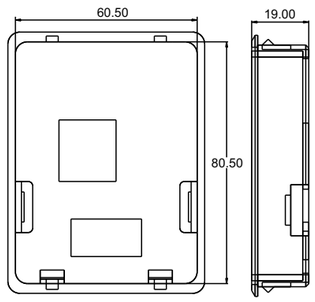
Frequency converter specification	H2	W2	H1	W1	D1	Installation aperture
0.2KW~0.75KW	130	75	149	85	132	5
0.75KW~2.2KW	154	89	165	100	153	5

◊ M series operation panel and operation panel frame

- **Profile dimensions of M series operating panel**



- **Opening size of M series operation panel frame**



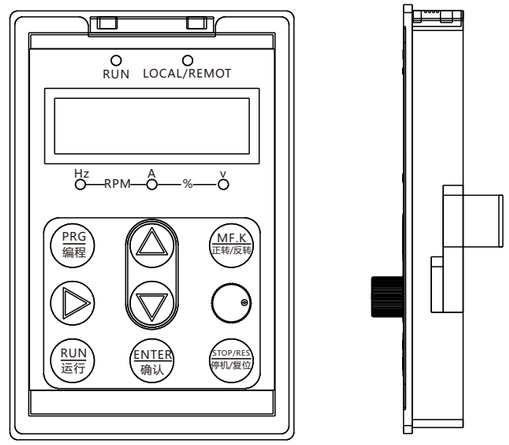
G Series

◊ Product introduction

G series frequency converter adopts advanced control mode with three V/F control modes, high precision and high torque. The main chip adopts 32-bit processor to respond quickly to dynamic signals, completes the omnidirectional protection of the motor.It has intelligent carrier control technology and multiple input and output modes. It can realize self-learning function and has the functions of fast start-up and fast shutdown. It has adiversified output mode.

◊ Technical characteristics

- IGBT modular settings, non-decentralized single transistor settings, higher stability and consistency
- Efficient three-protection treatment for different occasions
- It adopts the fan with high protection level IP52.
- A variety of V/F control modes can realize low frequency and high torque control.
- 0.75-18.5KW built-in brake unit to reduce the cost of the external device.
- Built-in simple PLC control logic, free time setting
- The DC bus runs at low voltage, and it does not stop when subjected by the instantaneous impact of the power grid.
- It has rich PID control and 2kinds of sleep wake-up methods.
- It has the jumping function, which can effectively avoid mechanical resonance.
- Deceleration with DC brake, fast shutdown.
- Low interference, low radiation and strong anti-interference
- Built-in MOBUS communication for easy automation



◊ Application industries

◊ G series product model

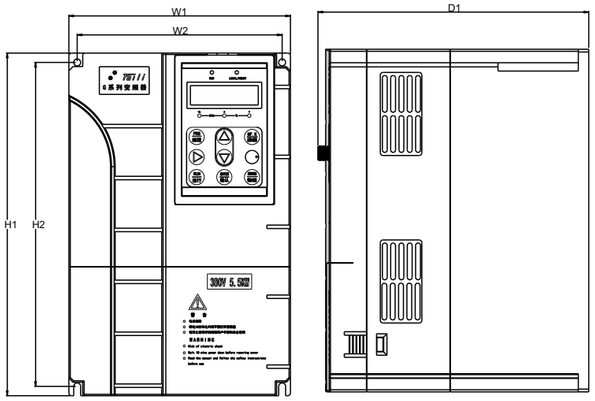
Frequency converter model	Power supply capacity KVA	Input current A	Output current A	Adaptive motor KW
Three-phase power supply：350～420VAC，50/60HZ,-20%～+20%				
TL-G100R7G3	2.8	2.4	2.2	0.75
TL-G101R5G3	5.0	4.6	3.9	1.5
TL-G102R2G3	6.7	6.3	5.0	2.2
TL-G104R0G3	12.0	11.4	9.2	4.0
TL-G105R5G3	17.5	16.7	13.0	5.5
TL-G107R5G3	22.8	21.9	17.0	7.5
TL-G10011G3	33.24	32.2	25.0	11.0
TL-G10015G3	42.8	41.3	31.0	15.0
TL-G10018G3	45.0	49.5	37.0	18.5
TL-G10022G3	54.0	59.0	45.0	22.0
TL-G10030G3	52.0	57.0	60.0	30.0
TL-G10037G3	63.0	69.0	76.0	37.0
TL-G10045G3	81.0	89.0	91.0	45.0
TL-G10055G3	97.0	106.0	112.0	55.0
TL-G10075G3	127.0	139.0	151.0	75.0
TL-G10090G3	150.0	164.0	175.0	90.0
TL-G10110G3	179.0	196.0	210.0	110.0
TL-G10132G3	220.0	240.0	252.0	132.0
TL-G10160G3	263.0	287.0	303.0	160.0
TL-G10185G3	301.0	320.0	350.0	185.0
TL-G10200G3	334.0	365.0	375.0	200.0
TL-G10220G3	375.0	410.0	426.0	220.0
TL-G10250G3	404.0	441.0	465.0	250.0
TL-G10280G3	453.0	495.0	520.0	280.0
TL-G10315G3	517.0	565.0	585.0	315.0
TL-G10350G3	565.0	617.0	650.0	350.0
TL-G10400G3	629.0	687.0	750.0	400.0
Single-phase power supply：220VAC，50/60HZ，Three-phase output：380VAC				
TL-G110R7G1	2.8	2.4	2.2	0.75
TL-G111R5G1	5.0	4.6	3.9	1.5
TL-G112R2G1	6.7	6.3	5.0	2.2
TL-G114R0G1	12.0	11.4	9.2	4.0
TL-G115R5G1	17.5	16.7	13.0	5.5
TL-G117R5G1	22.8	21.9	17.0	7.5
TL-G11011G1	33.4	32.2	25.0	11.0
TL-G11015G1	42.8	41.3	31.0	15.0
TL-G11018G1	45.0	49.5	37.0	18.5

◊ G series product technical indicators

	Items	Specification
basic functions	Maximum frequency	500HZ
	Carrier frequency	1KHZ~16KHZ. The carrier frequency can be automatically adjusted according to the characteristics of the load.
	Control mode	V/F control
	Start-up torque	Low frequency 150% rated torque
	Speed regulation range	1 ： 50
	Steady speed accuracy	±1%
	Overload capability	150% rated current 1minuter
	Torque lifting	Automatic torque lifting, manual torque lifting 0.1-30.0%
	V/F curves	Linear V/F，Multipoint V/F，Square V/F
	Acceleration and deceleration curve	Linear acceleration and deceleration mode, S curve acceleration and deceleration mode
		Acceleration and deceleration time of two groups
		Acceleration and deceleration time range:0.00s(m) ~ 300s(m)
	DC brake	DC brake frequency：0.00HZ~Maximum frequency, brake time：0.0s-36.0s
		Brake current value: 0.0%~100.0%
	Step control	Step frequency range：0.00Hz~Maximum frequency；Step acceleration and deceleration time: 0.00s~300.00s
	Multistage speed	Maximum 8-segment speed operation can be realized through multi-function terminals
	Simple PLC	Functional time range of built-in PLC: 0.0~6553.5H
	Built-in PID	It can realize the closed-loop control system and set a variety of PID parameters
	Automatic voltage regulation AVR	When the voltage of the power grid changes, the output voltage can be kept constant automatically.
	Overcurrent stallcontrol	Self-limiting of the output current during operation to prevent frequent over-current protection
	Fast current limiting function	Minimize overcurrent faults and protect the frequency converter from normal operation
	Speed tracking start	It can start the motor that is rotating smoothly.
	Instantaneous outage operation	Even if the power grid has a short period of power outage, it can ensure the continuous operation free of failure.
Personalization functions	Peripheral device safety self-test when powered on	It can realize grounding, short circuit detection, etc. for peripheral devices online.
	Common DC bus function	It can realize the function of sharing the DC bus with multiple inverters
	Forward/reverse	Programmable key, command channel switching/step operation switching/forward and reverse switching
	Textile pendulum frequency control	A variety of triangular wave frequency control functions
	Multi-motor switching	It can realize the switching control of two motors and the parameter setting of two sets of motors.
Terminal functions	Command source	Operation panel setting, control terminal setting and serial communication setting
	Frequency source	Digital setting, analog voltage and current setting, pulse setting and serial port setting
	Auxiliary frequency source	Auxiliary frequency source can be combined with flexible addition, subtraction and switching.
	Input terminal	Five digital input terminals (one supporting the high-speed pulse up to 100KHz) and two analog input terminals
	Output terminal	One relay output terminal, two analog output terminals (It can be switched to the high-speed pulse), and one digital output terminal
Others	Place of use	Indoor, not exposed to direct sunlight, non-corrosive gases, flammable gases, oil mist, dripping water or salt, etc.
	Ambient temperature	-10℃ ~ +50℃ (The environment is above 40 °C, please reduce the rated value for using it.)
	Altitude	No reduction is needed for use below 1000 meters. 1% reduction of the rated value for every 100 meters increase above 1000 meters The highest can be within 3000 meters for use.
	Humidity	Less than 95%RH，with no water drip condensation
	Shock	Less than 5.9m/s² (0.6g)
	Storage temperature	-20℃ ~ +60℃
	Cooling mode	Forced air cooling

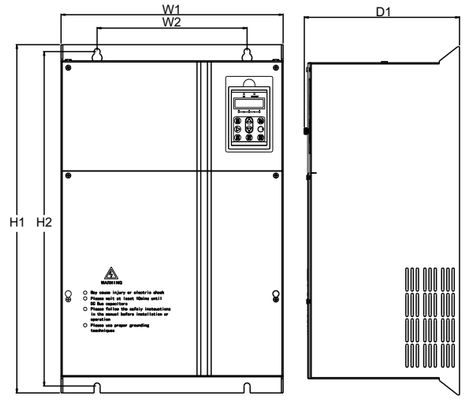
◊ G series installation dimension drawing

- 0.75KW～18.5KW outline dimension diagram



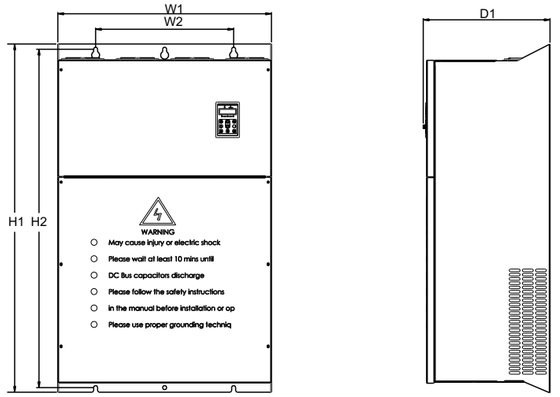
Plastic cover

- 22KW～90KW outline dimension diagram



Iron cover

- 110KW～400KW outline dimension diagram

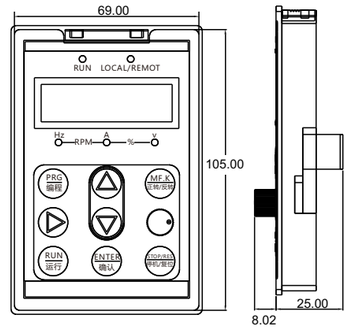


Iron cover

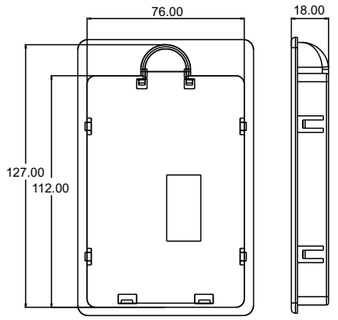
Frequency converter specifications	H2	W2	H1	W1	D1	Installation aperture	Note
0.75KW～2.2KW	173.0	113.0	187.0	126.0	172.5	5.0	
4KW～7.5KW	234.0	148.0	247.5	160.0	195.5	5.0	
11KW～18.5KW	306.0	190.0	321.0	207.5	203.5	6.0	
22KW～37KW	448.0	234.0	446.0	284.0	228.0	6.5	
45KW～55KW	580.0	260.0	604.0	385.0	269.0	10.5	
75KW～90KW	680.0	349.0	702.0	475.0	316.0	10.5	
110KW～185KW	902.5	449.0	928.5	579.0	386.0	10.5	No base seat
200KW～280KW	1030.0	420.0	1060.0	650.0	386.0	12.0	No base seat
315KW～400KW	1300.0	520.0	1359.0	800.0	403.0	16.0	No base seat

◊ G series operation panel and operation panel frame

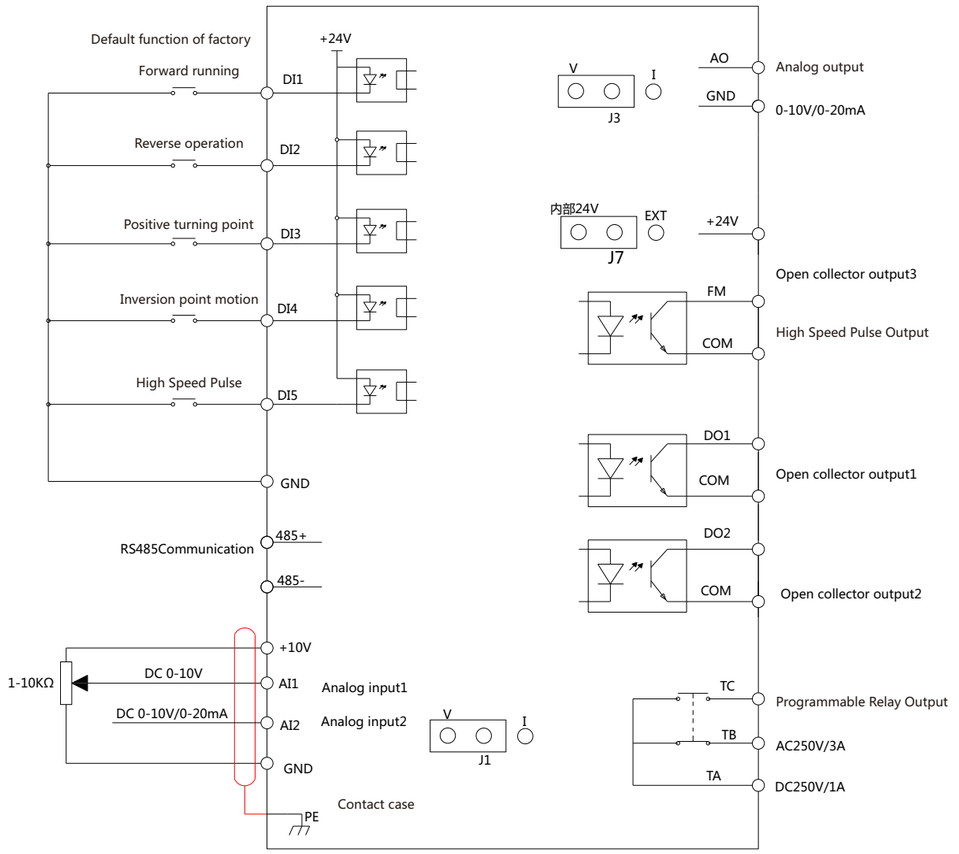
- Profile dimensions of Gseries operating panel



- Opening size of G series operation panel frame



◊ G series control loop wiring diagram



S18 Series

◊ Product introduction

S18 series high-performance vector control frequency converter adopts 32-bit DSP control system. It can realize fast response and accurate control of torque through decoupling control of motor flux current and torque current. it can be widely used in occasions with high precision of speed control, fast response of torque and large demand of low-frequency output torque.

◊ Technical characteristics

Three kinds of speed control: V/F control, open-loop vector control of SVC without PG, closed-loop vector control of FVC with PG;
180% of the torque output can be achieved at low-speed, the control accuracy is±5%FVC.
The speed tracking restart function realizes the smooth tracking start of the motor without impact.
Rich expansion card options: 485 communication card, IO expansion card and PG card and other occupied expansion cards Rich on-site buses support two kinds of buses: Modbus and CANopen buses.
16-stage speed, simple PLC, PID control and swing frequency control
It has the PG closed-loop vector control, its speed accuracy can reach±0.1, and it provides a speed control range of 1:1000.
The panel adopts the encoder for the speed regulation and precise speed regulation.
It supports the differential encoder, open circuit collector encoder, rotary encoder and UVW encoder.

◊ S18series product technical indicators

Items	Terminal symbol	Terminal name	Functional description
Power supply	'+10V,GND	External 10V power supply	It provides +10V power supply to the outside, the maximum output current is 10mAGenerally, it is used as the power supply of external potentiometer, the range value of the potentiometer is 1-5KΩ
	'+24V,COM	External 24V power supply	It provides + 24V power supply to the outside, it is generally used as digital input and output terminals.The power supply is used asthe working power supply of the external sensor. The maximum output current is 200mA
	OP	External power input terminal	It is connected with +24V at the factory default condition. When driving S1-S5 with an external signal, the OP needs to be connected to an external power supply. And disconnected from the power terminal +24V
Analog input	AI1,GND	Analog input terminal 1	Input voltage range: DC 0V-10V Input impedance:22KΩ
	AI2,GND	Analog input terminal 2	Input range: DC 0V-10V/0mA-20mA, determined by the selection of the jumper J3on the control board. Input impedance: voltage input 22KΩ, current input through impedance 500Ω.
Digital input	S1,COM	Digital input 1	Optocoupler isolation, compatible bipolar inputs Input impedance: 2.2KΩ Effective level input voltage range: 9-30V
	S2,COM	Digital input 2	
	S3,COM	Digital input 3	
	S4,COM	Digital input 4	
	S5,COM	Digital input 5, High-speed pulse input	It has the characteristics of S1-S5 and can also be used as a high-speed pulse input channel.Maximum input frequency: 100KhzInput impedance: 1.2KΩ
Analog output	AO1,GND	Analog output 1	The voltage or current output is determined by the selection of the jumper J2 on the main control board. Output voltage range: 0-10V Output current range: 0mA-20mA
Digital input	DO1,CME	Digital input 1	Optocoupler isolation, bipolar open collector output Output voltage range: 0-24V Output current range: 0mA-50mA Note: The digital output grounding CME is internally isolated from the output and input grounding COM, but CME and COM have been short-connected through the jumper J8 when it leaves the factory. When DO1 wants to be driven by an external power supply, the jumper J8 selects an external connection.
	FM,CME	High-speed pulse output	It is constrained by the parameter A5-00: When It is used as a high-speed pulse output, the highest frequency is 100Khz; When it is used as an open collector output, it is the same as the specification of DO1.
Relay output	TA,TC	Normally open terminal	Contact drive capability: 250Vac/3A, cosø0.4 30Vdc/1A
	TA,TB	Normally closed terminal	
Jumper	J2	AO1	Selection of voltage and current output, default voltage output
	J3	AI2	Selection of voltage and current input, default voltage input

◊ S18 series product models

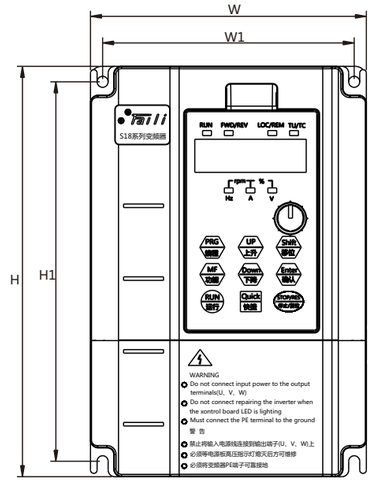
Frequency converter model	Power supply capacity KVA	Input current A	Output current A	Adaptive motor KW
S18-00R7G3/01R5P3	1.5	3.4	2.1	0.75/1.5
S18-01R5G3/02R2P3	3.0	5.0	3.8	1.5/2.2
S18-02R2G3/04R0P3	4.0	5.8	5.1	2.2/4.0
S18-04R0G3/05R5P3	5.9	10.5	9/13	4.0/5.5
S18-05R5G3/07R5P3	8.9	14.6	13/17	5.5/7.5
S18-07R5G3/0011P3	11.0	20.5	17/25	7.5/11
S18-0011G3/0015P3	17.0	26.0	25/32	11/15
S18-0015G3/0018P3	21.0	35.0	32/37	15/18.5
S18-0018G3/0022P3	24.0	38.5	37/45	18.5/22
S18-0022G3/0030P3	30.0	46.5	45/60	22/30
S18-0030G3/0037P3	40.0	62.0	60/75	30/37
S18-0037G3/0045P3	57.0	76.0	75/91	37/45
S18-0045G3/0055P3	69.0	92.0	91/112	45/55
S18-0055G3/0075P3	85.0	113.0	112/150	55/75
S18-0075G3/0090P3	114.0	157.0	150/176	75/90
S18-0090G3/0110P3	134.0	180.0	176/210	90/110
S18-0110G3/0132P3	160.0	214.0	210/253	110/132
S18-0132G3/0160P3	192.0	265.0	253/304	132/160
S18-0160G3/0185P3	231.0	307.0	304/340	160/185
S18-0185G3/0200P3	242.0	350.0	340/377	185/200
S18-0200G3/0220P3	250.0	385.0	377/426	200/220
S18-0220G3/0250P3	280.0	430.0	426/465	220/250
S18-0250G3/0280P3	355.0	468.0	465/520	250/280
S18-0280G3/0315P3	396.0	525.0	520/585	280/315
S18-0315G3/0350P3	445.0	590.0	585/650	315/350
S18-0350G3/0400P3	500.0	665.0	650/725	350/400
S18-0400G3/0450P3	565.0	785.0	725/820	400/450

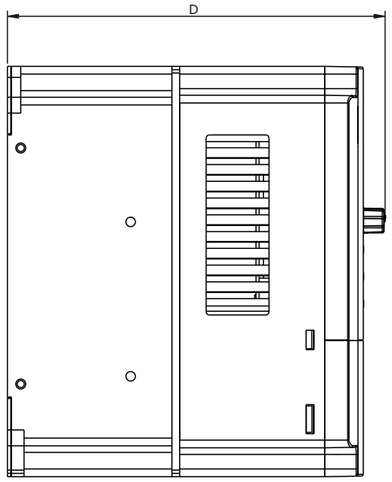
◊ Technical specifications

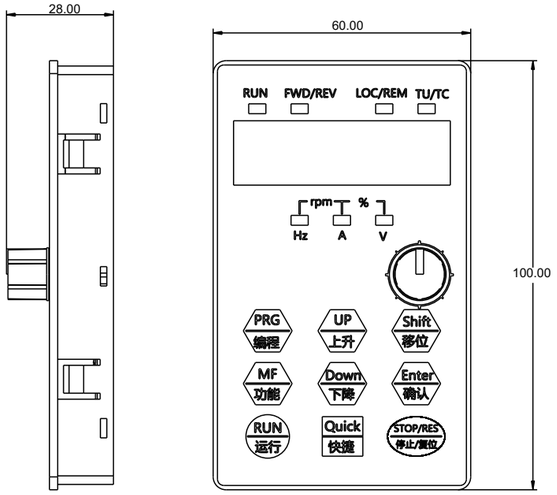
Power KW		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	250	280	315	350	400
Adaptive motor		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	250	280	315	350	400
Input	Rated voltage frequency	Three-phase: 380V~480V , 50/60hz																										
	Voltage range	320-490V; allowablefrequency fluctuation±5%																										
	Rated current A	2.8	4.2	6	10	15	18.5	26.2	33	42	49	65	82	99	122	164	177	196	232	282	326	352	385	437	491	580	624	670
Output	Overload capability	150% 1minuter , 180% 10 seconds , 200% 0.5 seconds																										
	Voltage V	Three-phase: 0V ~ rated input voltage																										
	Rated current A	2.2	3.8	5.2	9	13	17	24	30	39	45	60	75	91	112	150	176	210	252	304	350	380	426	470	520	600	650	730
Brake unit		Standard configuration									Built-in optional			External unit required			External unit required											
Cooling method		Forced air cooling																										

Standard external DC reactor for the above products

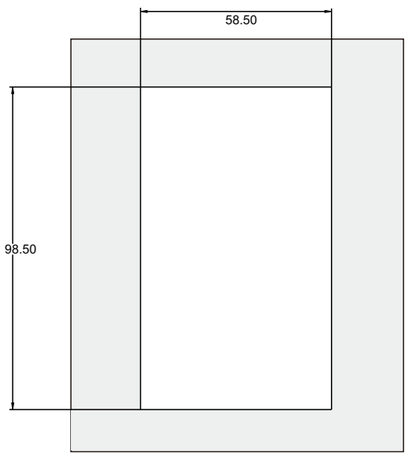
◊ S18 series installation dimension diagram







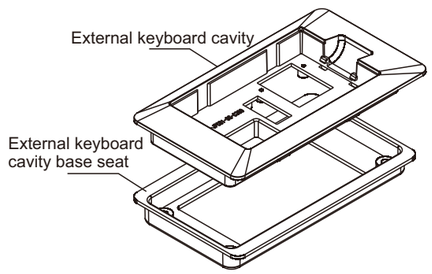
S18 series installation dimension diagram

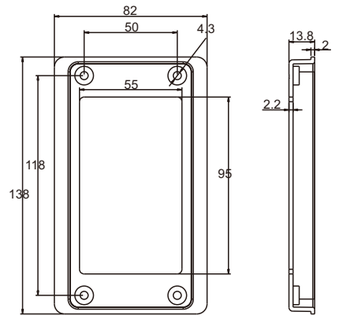


S18operation panel opening size

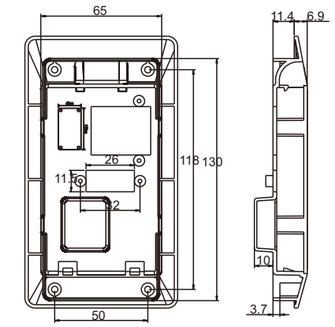
Frequency converter specifications	H2	W2	H1	W1	D1	Installation aperture	Note
0.75KW～2.2KW	172.0	114.0	185.6	125.0	171.1	5.0	
4KW～7.5KW	237.0	149.0	248.0	160.0	191.5	6.0	
11KW～18.5KW	304.0	190.0	322.0	208.0	201.9	6.0	
22KW～37KW	448.0	234.0	446.0	284.0	228.0	6.5	
45KW～55KW	580.0	260.0	604.0	385.0	269.0	10.5	
75KW～90KW	680.0	349.0	702.0	475.0	316.0	10.5	
110KW～185KW	902.5	449.0	928.5	579.0	386.0	10.5	No base seat
200KW～280KW	1030.0	420.0	1060.0	650.0	386.0	12.0	No base seat
315KW～400KW	1300.0	520.0	1359.0	800.0	403.0	16.0	No base seat

◊ External keyboard cavity





S18 External keyboard cavity



S18 External keyboard cavity base seat

◊ S18 series control loop wiring diagram