



**FR150A Series**  
Multifunctional Inverter

INDUSTRIAL AUTOMATION



FRECON ELECTRIC (SHENZHEN) CO.,LTD.

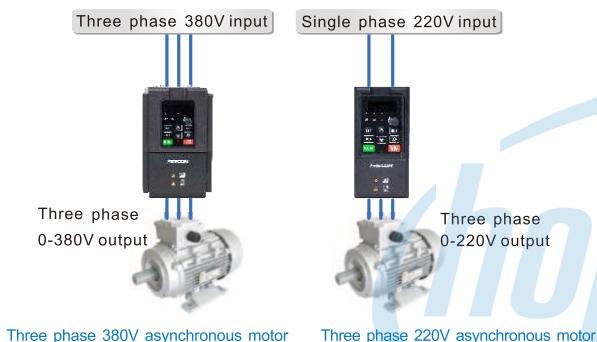
Hotline: 1900.6536 - Website: [HOPLONGTECH.COM](http://HOPLONGTECH.COM)

### FR150A Series Summary

FR150A series multifunctional Inverter is a product developed on the latest technology platform of FRECON, with advanced control modes for high torque, high precision, high reliability, and wide-speed drive. The FR150A features multifunctional control such as built-in PID, simple PLC, programmable input and output terminals, RS485, analog input and output etc, ideal for equipment matching, engineering reconstruction, automation control and other special industry applications.

#### Suitable for Several Types of Motor

- Standard application wiring



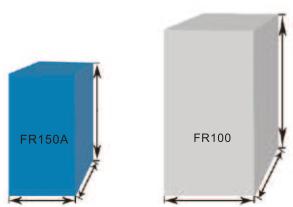
- Special application wiring

(※ Please contact factory if using below application wiring)



#### Leading Technology Platform and Optimized Structural Design

- Latest technology platform
- More compact design for saving installation space, maximum volume reduced by 50%



#### Common DC Bus

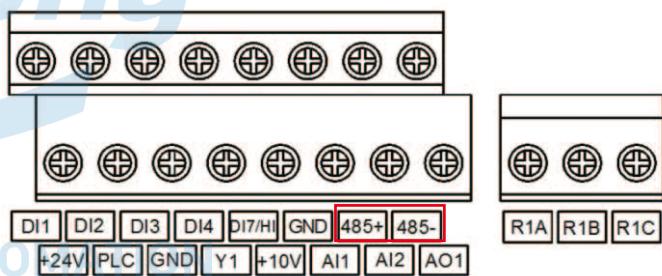
- Multiple FR150A units can be connected in parallel to share regenerative braking energy, thus the power of braking resistor can be reduced or cancelled.

#### Rich Protection Functions

- Comprehensive protection to ensure reliable operation

#### Built-in RS 485 Communication (Modbus)

- RS 485 terminals, support standard Modbus RTU communication for system integration



#### Convenient Debugging

- Powerful background software



- Short-cut menu

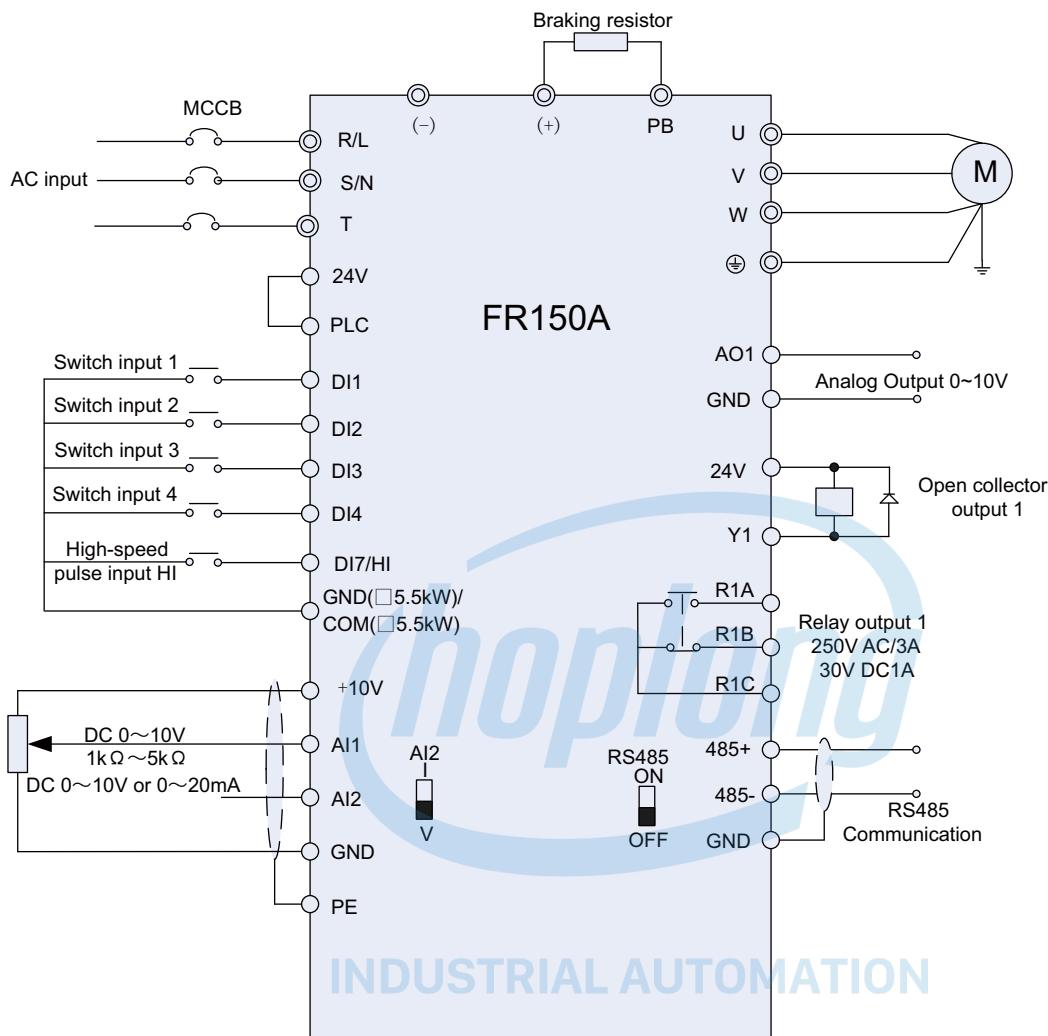
Common parameters setting rapidly to save customer's time

- Customized application macro according to industry demand

## Technical Parameters

	Item	Specification
Input Power	Rated input voltage (V)	Single phase 220 V (-15%~+20%) ; Three phase 380 V (-15%~+30%)
	Rated input frequency (Hz)	50Hz/60Hz, ±5%
Output Power	Rated output voltage (V)	0~Rated input voltage, Error<±3%
	Rated output frequency(Hz)	0.00~600.00 Hz, Units: 0.01Hz
Control Characteristic	Control mode	V/F control ; Sensor-less vector control 1 ; Sensor-less vector control 2
	Speed range	1:50 (V/F control) ; 1:100(sensor-less vector control 1) ; 1:200(sensor-less vector control 2)
	Speed accuracy	±0.5% (V/F control) ; ±0.2 %(sensor-less vector control 1 & 2)
	Speed fluctuation	±0.3% (sensor-less vector control 1 & 2)
	Torque response	<10ms (sensor-less vector control 1&2)
	Starting torque	0.5Hz: 180% (V/Fcontrol, sensor-less vector control 1) 0.25Hz:180 % (sensor-less vectorcontrol 2)
Basic functions	Carrier frequency	0.7kHz~16kHz
	Overload capability	150% Rated current 60s ; 180% Rated current 10s ; 200% Rated current 1s
	Torque boost	Automatic torque boost ; Manual torque boost 0.1%~30.0%
	V/F curve	Three ways: Straight ; Multi-point type ; N Th-type V/F curve
	Acceleration and deceleration curve	Line or curve acceleration and deceleration mode Four kinds of acceleration and deceleration time, Ramp time range: 0.0~6000.0s
	DC brake	DC brake start frequency: 0.00~600.00Hz DC brake time:0.0s~10.0s; DC brake current : 0.0%~150.0 %
Run	Command source	The control panel, control terminal, serial communication port given
	Frequency given	8 kinds of frequency sources
	Input terminal	5 switch input terminals, one way to make high-speed pulse input 2-channel analog inputs, including 1-channel voltage input,1-channel voltage and current options
	Output terminal	1 switch output terminal,1 relay output terminal,1 analog output terminal
Featured functions	Parameter copy, parameter backup, flexible parameter displayed & hidden. Reliable speed search started.Timing control, fixed length control, count function, three faults recorded, overvoltage stall protection, undervoltage stall protection, restart upon power loss, Motor thermal protection, Wobble frequency control, High-precision torque	
Protection function	Provide fault protection function: overcurrent, overvoltage, undervoltage, overtemperature, overload protection etc.	
Environment	Place of operation	Indoors, no direct sunlight, free from dust, corrosive gases, flammable gases, oil mist, water vapor, water drop and salt, etc.
	Altitude	0~2000m De-rate 1 % for every 100m when the altitude is above 1000 meters
	Ambient temperature	-10°C~50°C
Others	Efficiency	Rated power; ≥93%
	Installation	Wall-mounted or Flange mounting
	IP grade	IP20
	Cooling method	Fan cooled

## Wiring diagram



## Selection rules

## FR150A-4T-0.7B

Master series code of product:  
FR150: Multifunctional Compact Inverter

Industry-specific series code:  
A: Standard Machine  
B~Z: Industry-specific retention

Input voltage:  
2:220V(-15%~+20%)  
4:380V(-15%~+30%)

Brake unit:  
B: Built-in brake unit

Adaptable Motor (kW) And Type of Motor: 0.7:0.75kW(General type)

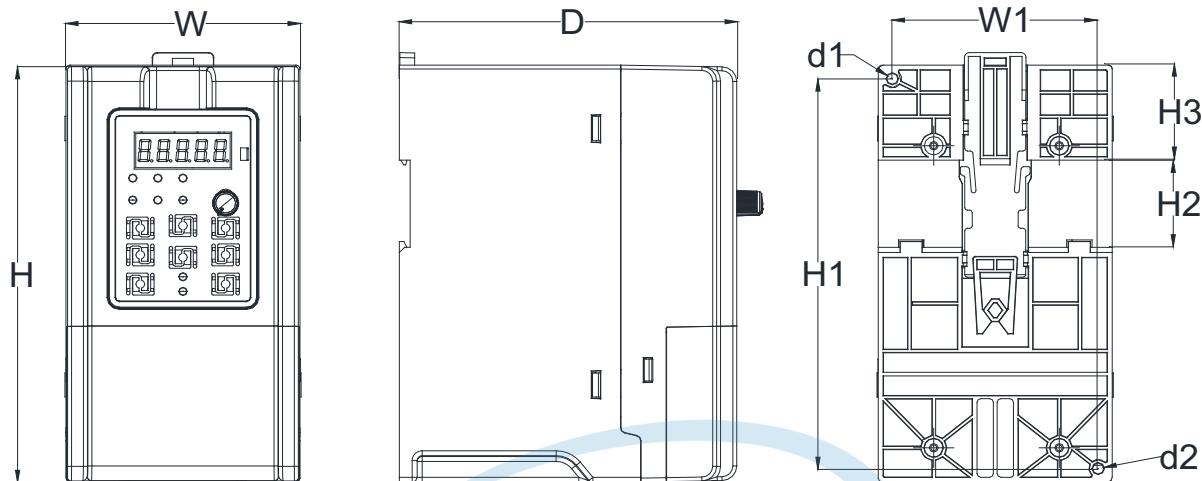
Input voltage phases:  
S: Single-phase  
T: Three-phase

Electrical Specifications

Model	Power capacity (KVA)	Rated input current (A)	Rated output current(heavy load) (A)	Rated output current(light load) (A)	Adaptive motor	
					kW	HP
FR150A-2S-0.2B	0.5	4.9	1.6	2.5	0.25	0.25
FR150A-2S-0.4B	1	6.5	2.5	3	0.37	0.5
FR150A-2S-0.7B	1.5	9.3	4.2	4.6	0.75	1
FR150A-2S-1.5B	3	15.7	7.5	8.5	1.5	2
FR150A-2S-2.2B	4	24	9.5	10.5	2.2	3
FR150A-4T-0.7B	1.5	3.4	2.5	3	0.75	1
FR150A-4T-1.5B	3	5	4.2	4.6	1.5	2
FR150A-4T-2.2B	4	5.8	5.5	6.5	2.2	3
FR150A-4T-4.0B	6	11	9.5	10.5	4.0	5
FR150A-4T-5.5B	8.9	14.6	13	17	5.5	7.5
FR150A-4T-7.5B	11	20.5	17	20	7.5	10
FR150A-4T-011B	17	26	25	32	11	15
FR150A-4T-015B	21	35	32	37	15	20
FR150A-4T-018B	24	38.5	37	45	18.5	25
FR150A-4T-022B	30	46.5	45	49	22	30
FR150A-4T-030B	40	62	60	75	30	40
FR150A-4T-037B	57	76	75	82	37	50
FR150A-4T-045	69	92	91	112	45	60
FR150A-4T-055	85	113	112	134	55	70
FR150A-4T-075	114	157	150	168	75	100
FR150A-4T-090	134	186	176	210	90	125
FR150A-4T-110	160	220	210	253	110	150
FR150A-4T-132	192	260	253	304	132	175
FR150A-4T-160	231	310	304	340	160	210

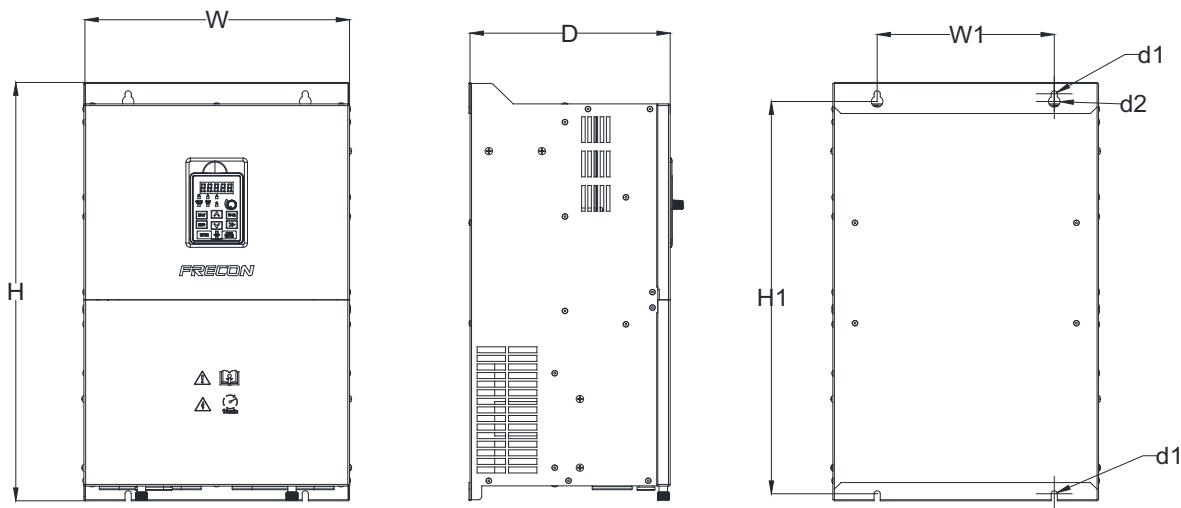
Product installation dimension drawing

◆ 0.2~22kW installation size



◆ 30~160kW installation size

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Product installation size table

Model	External and Install dimensions (mm)									N.W (kg)
	W	H	D	W1	H1	H2	H3	Install hole (d1)	Install hole (d2)	
FR150A-2S-0.2B	75	150	120	65	140	35	39	4.5	4.5	0.95
FR150A-2S-0.4B										
FR150A-2S-0.7B										
FR150A-4T-0.7B										
FR150A-4T-1.5B										
FR150A-2S-1.5B	93	171	132	82	160	35	39	4.5	4.5	1.46
FR150A-2S-2.2B										
FR150A-4T-2.2B										
FR150A-4T-4.0B										
FR150A-4T-5.5B	117	187	160	102	172	-	-	4.7	4.7	2.5
FR150A-4T-7.5B										
FR150A-4T-011B	146	249	174	131	236	-	-	5.5	5.5	3.9
FR150A-4T-015B	198	300	182	183	287	-	-	5.5	5.5	6.2
FR150A-4T-018B										
FR150A-4T-022B										
FR150A-4T-030B	245	390	187	200	375	-	-	7	13	11.6
FR150A-4T-037B										
FR150A-4T-045	300	485	226	200	581	-	-	7	13	14.8
FR150A-4T-055										
FR150A-4T-075	335	600	236	200	581	-	-	9.5	17.5	22.8
FR150A-4T-090	310	620	280	200	601	-	-	9.5	17.5	25
FR150A-4T-110	310	650	309	200	620	-	-	11.5	22	40
FR150A-4T-132										
FR150A-4T-160	400	750	320	300	723	-	-	11.5	22	69



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**FRECON**

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