

Tek-Drive Inverter

Sensorless Vector

TDS-V8



TDS-F8

Your Best Choice

Tek Drive



TDS-V8 Series(Sensorless Vector Control)Best Choice

- ▲ Standard LED operator. Dialogic LCD operator(English/Chinese) with the function of parameters copying is optional.
- ▲ PID Control, Simple PLC function, Energy saving, Multiple Frequency Pulse Output .
- ▲ Two set of analogical output interface. which could be set as 11 individual analogical signals.
- ▲ Frequency control ranges from 0.1 Hz to 400Hz with resolution of 0.01Hz.
- ▲ Protection of overload can be switched by constant and variable torque load.
- ▲ External terminals can be set as sink or source type input interface.
- ▲ Auto torque boost, slip compensation.
- ▲ Cumulative time and intelligent fault status recording.
- ▲ Communication function:RS-485 installed inside (MODBUS protocol).
- ▲ Sensorless Vector control with auto tuning system.

Inverter model number

TDS - V8 - L 0P7 E

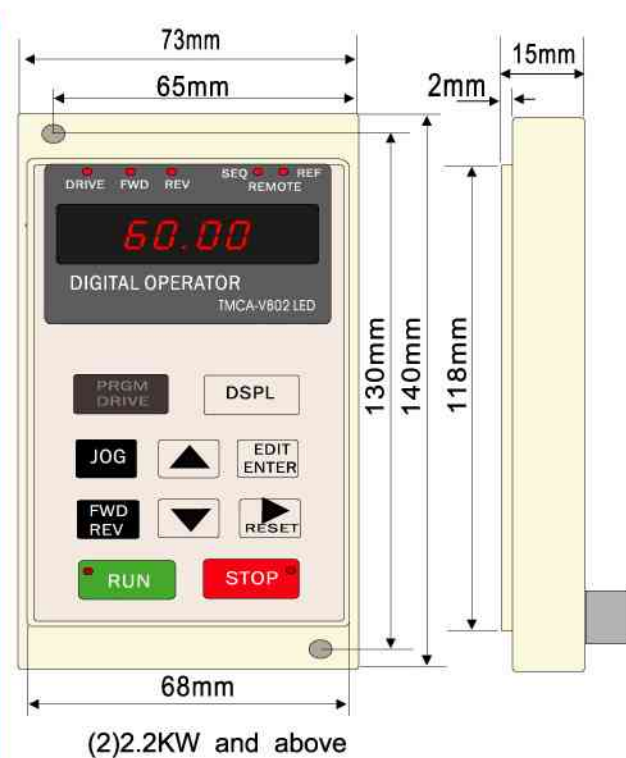
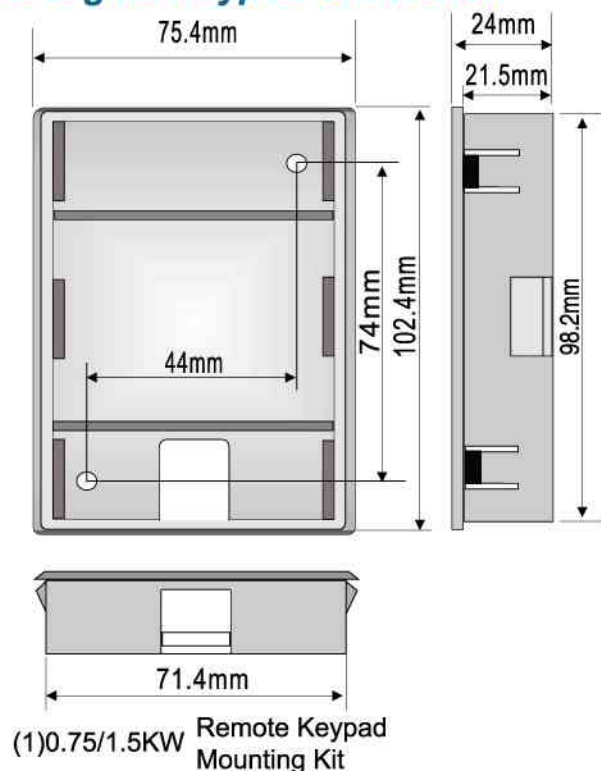
TDS-V8
TekDrive Inverter series

Rated Voltage
L:220V, 60Hz(200V, 50Hz)
H:440V, 60Hz(400V, 50Hz)

Operator Types
E:LED operator
C:LCD operator

Max. Applicable Motor Output(KW)
0P7:0.75KW
1P5:1.5KW
2P2:2.2KW
3P7:3.7KW
5P5:5.5KW

Digital Keypad Dimension



TDS-V8 Specification

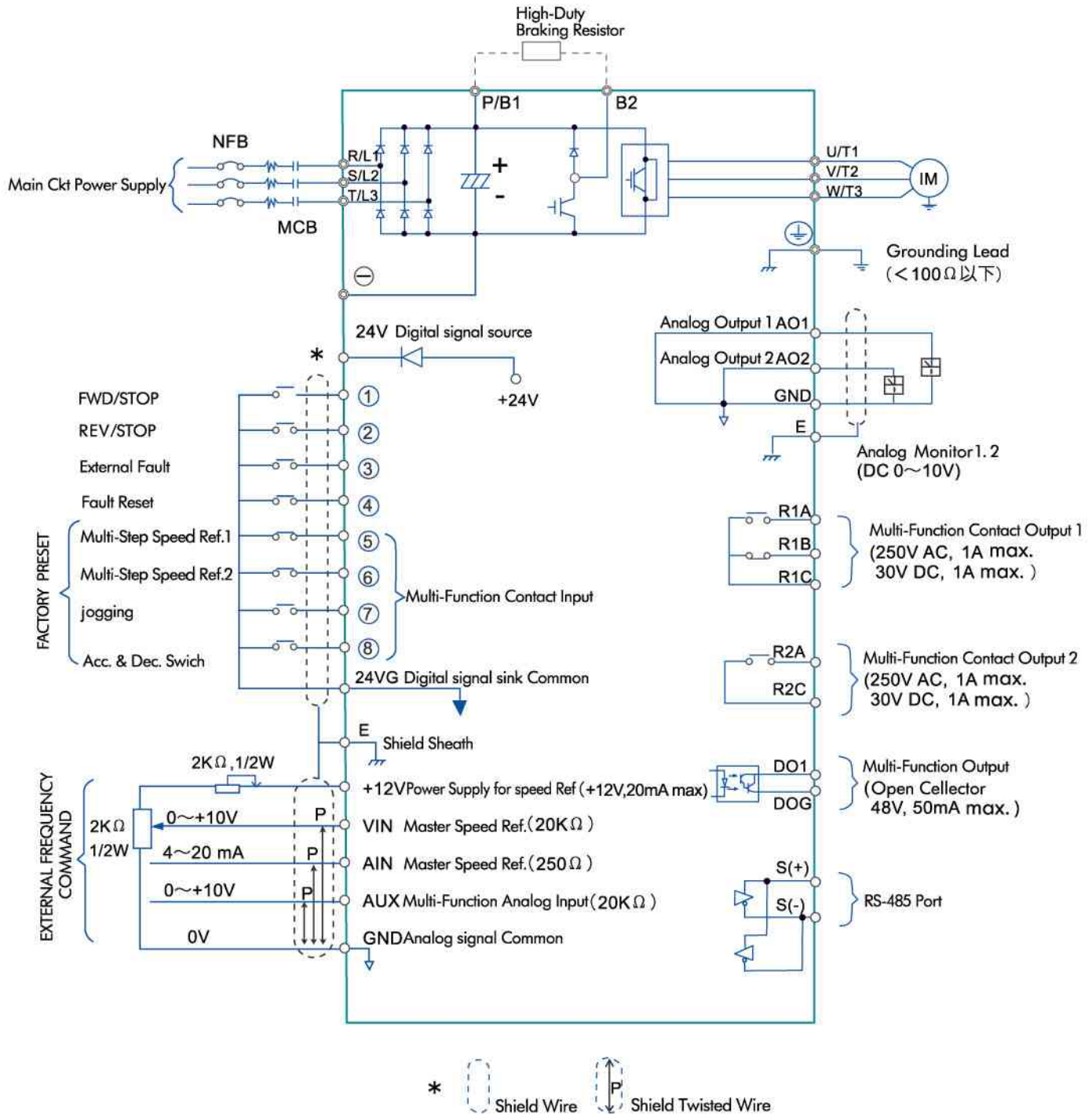
Input Voltage class		220V Class 3-Phase														440V Class 3-Phase														
Model		0P7 1P5 2P2 3P7 5P5 7P5 011 015 018 022 030 037 045														0P7 1P5 2P2 3P7 5P5 7P5 011 015 018 022 030 037 045 055 075														
Max Applicable Motor Hp (CT)* kw		1 2 3 5 7.5 10 15 20 25 30 40 50 60 0.75 1.5 2.2 3.7 5.5 7.5 11 15 18.5 22 30 37 45														1 2 3 5 7.5 10 15 20 25 30 40 50 60 75 100 0.75 1.5 2.2 3.7 5.5 7.5 11 15 18.5 22 30 37 45 55 75														
Output Power	Rated Output Capacity(kVA)	2.0 2.7 4 7.5 10.1 13.7 20.6 27.4 34 41 54 68 78														2.1 2.7 4 7.5 10.1 13.7 20.6 27.4 34 41 54 68 82 110 138														
	Rated Output Current(A)*	4.8 6.4 9.6 17.5 24 32 48 64 80 96 130 160 183														2.6 4.0 4.8 8 12 16 24 32 40 48 64 80 96 128 165														
	Max. Output Voltage(V)	3-Phase 200V ~ 230VAC(Proportional to input voltage)														3-Phase 380V ~ 460VAC(Proportional to input voltage)														
	Max. Output Frequency(Hz)	Through parameter setting (Max. 400Hz)																												
Power Source	Rated Voltage Frequency	3-Phase 200V~230V, 50/60Hz														3-Phase 380V~460V, 50/60Hz														
	Allowable Voltage Fluctuation	-15%° ~ +10%																												
	Allowable Frequency Fluctuation	±5%																												
Control Characteristics	Operation Mode	LED operator or LCD operator																												
	Control Mode	Sine PWM																												
	Frequency Control Ranges	0.1Hz~400Hz																												
	Frequency Accuracy	Digital Command:±0.01%(-10 ~ +40℃) , Analog Command:±1% (25℃~ ±10℃)																												
	Frequency Command Resolution	Digital Command:0.01Hz , Analog Command:0.06Hz/60Hz																												
	Frequency Output Resolution	0.01Hz																												
	Overload Resistibility	150% Rated Current for 1 Minute (CT), 120% Rated Current for 1 Minute (VT)																												
	Frequency Setting Signal	DC 0 ~ 10V/4 ~ 20mA																												
	Acc./Dec. Time	0.0~6000.0 Sec. (Accel/Decel Time Can be Set Independent)																												
	Voltage-Frequency Characteristics	V/F Curve Can be Set Through Parameter Setting (16 Types)																												
	Regeneration Torque	100%, 2%ED, 5 Seconds																												
	Basic Control Function	Auto torque Boost, Slip Compensation, Restart After Momentary Power Loss, Energy Saving, PID Control, Simple PLC function, Sensorless Vector Control																												
	Extra Function	Up/Down Operation, Cumulative Power on & Operation Hour Memory, 4 Different Sets of Fault Status Record (Including Latest one), RS-485 (MODBUS Protocol), Multiple-Pulse Output Port, 2 Analog Output Ports etc.																												
	Protection Function	Stall Prevention	Current Level Can be Selected During Acceleration and Constant Speed Running. During Deceleration,Stall Prevention Can be Enabled or Disabled.																											
Instantaneous overcurrent (OC)		Stopped if above 200% Rated Current																												
Inverter Overload Protection (OL2)		Stopped if above 150% Rated Current for 1 Minute																												
Motor OverloadProtection (OL1)		Electronic Overload Curve Protection																												
Overvoltage(OV)		Stop if VDC ≥ 410V(220 Class) or VDC ≥ 820V (440 Class)																												
Undervoltage(UV)		Stop if VDC ≤ 200V(220 Class) or VDC ≤ 400V (440 Class)																												
Momentary Power Loss Ride-Though time		≥ 15ms, stop otherwise																												
Overheat Protection(OH)		Protection by Thermistor																												
Grounding Protection(GF)		Protection by DC Current Sensor																												
Charge Indication(LED)		Light when the DC Bus Voltage Above 50 V																												
Mechanical Construction	Enclosed, Wall-Mounted Type (NEMA-1) IP20														IP00														IP00	
Environment	Cooling	Self				Forced										Self				Forced										
	Application site	Indoor (No Corrosive Gas and Dust Present)																												
	Ambient Temperature	-10 ~ +40℃(Not Frozen)																												
	Storage Temperature	-20 ~ +60℃																												
	Ambient Humidity	Below 90% RH (Non-Condensing)																												
	Altitude Vibration	Below 1000m, 5.9m/S² (0.6G), (JISC0911 Standard)																												
Communication Function	RS-485 Built-in (MODBUS)																													
EMI	Meet EN50081-2 (1994) with Specified EMI Filter																													
EMC Com[at]ability	Meet Pr EN 50082-2																													

*The factory setting is constant torque (CT) load. When set as variable torque (VT) load, it should be used by enlarged one class.

TDS-V8 Inverter Standard Connection Diagram

(◎ indicates the main circuit terminals and the sign, ○ indicates control circuit terminals)

■ 2.2KW and Above

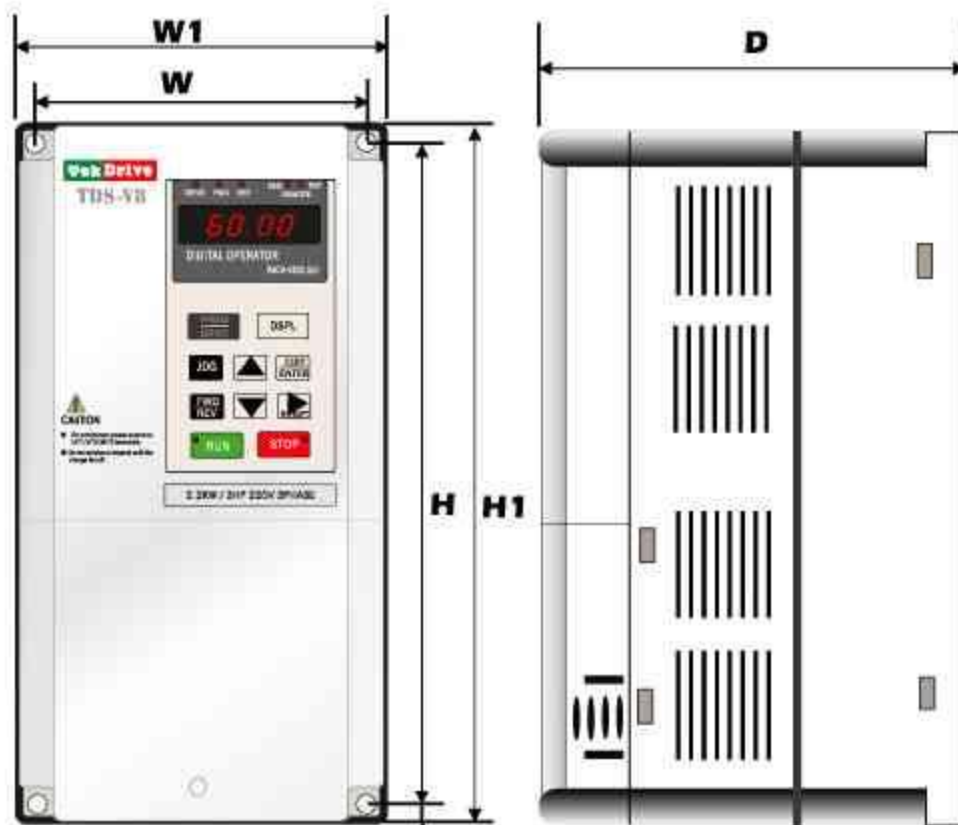


1	2	3	4	5	6	7	8	AO1	GND	DO1	S(+)	R1A	R1B	R1C	R2A	R2C
E	24V	24VG	+12V	AIN	VIN	AUX	AO2	GND	DOG	E	S(-)					

Control Circuit Terminals Arrangement

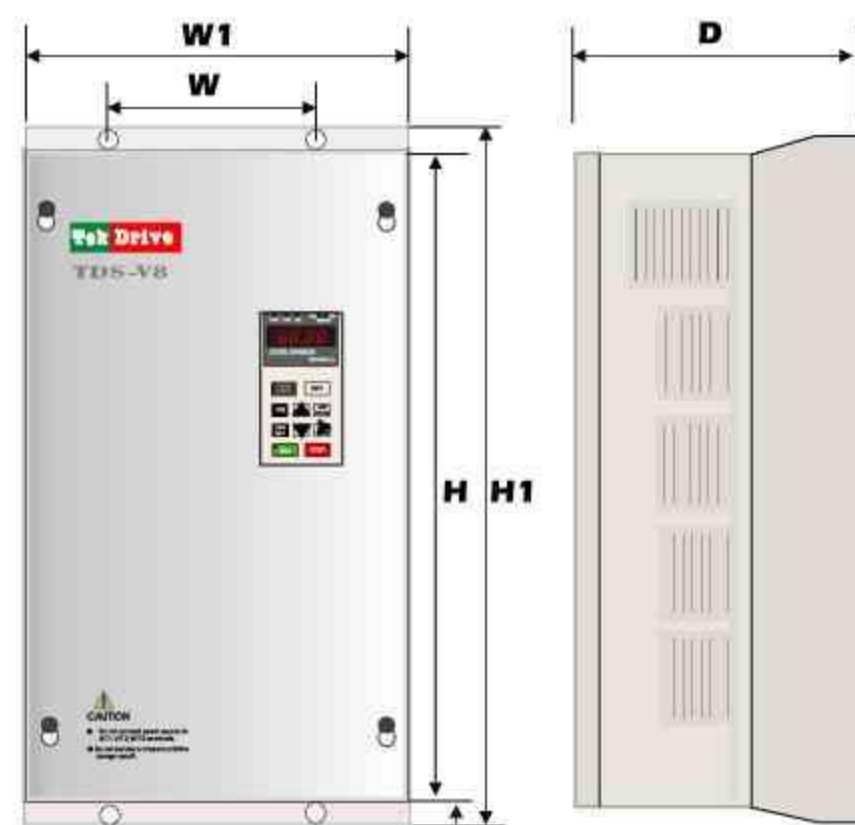
Mounting Dimensions

(A) 220/440V 7.5 KW and Below



Fig(A)

(B) 220/440V 11 KW and Above



Fig(B)

Voltage	Application Motor	Mounting Dimension (mm)				External Dimension (mm)			Approx mass	Fig
	Output(HP)/KW	W	H	H2	d	W1	H1	D	(kg)	
220V	1HP / 0.75KW 2HP / 1.5KW	108	173	5.5	5	118	184	160	2	Fig(A)
	3HP / 2.2KW 5HP / 3.7KW	124	214	5.5	6	135	225	153	2.4	
	7.5HP / 5.5KW 10HP / 7.5KW	174	281	8	8	191	297	197	5.5	
	15HP / 11KW 20HP / 15KW	140	394	8	8	244	410	202	13.1	Fig(B)
	25HP / 18.5KW 30HP / 22KW 40HP / 30KW	170	479	12.5	10	287	504	273	24.5	
	* 50HP / 37KW * 60HP / 45KW	250	709	12.5	12	376	734	280	46	
440V	1HP / 0.75KW 2HP / 1.5KW	108	173	5.5	5	118	184	160	2	Fig(A)
	3HP / 2.2KW 5HP / 3.7KW	124	214	5.5	6	135	225	153	2.4	
	7.5HP / 5.5KW 10HP / 7.5KW	174	281	8	8	191	297	197	5.5	
	15HP / 11KW 20HP / 15KW	140	394	8	8	244	410	202	13.1	Fig(B)
	25HP / 18.5KW 30HP / 22KW 40HP / 30KW	170	479	12.5	10	287	504	273	24.5	
	* 50HP / 37KW * 60HP / 45KW	170	479	12.5	10	287	504	273	24.5	
	* 75HP / 55 KW *100HP / 75KW	250	709	12.5	12	376	734	280	46	

* Tek-Drive reserves the rights of changing the spec.

 TDS-F8 Specification

Input Voltage class		220V Single phase / 3 phase		
Model		TDS-F8-L		
		0P4	0P7	1P5
Max Applicable Motor HP		1/2	1	2
(CT)* KW		0.4	0.75	1.5
Output Power	Rated Output Capacity(kVA)	1.4	2	3
	Rated Output Current(A)*	3.2	4.8	7.1
	Max. Output Voltage(V)	3-Phase 200V ~ 230V		
	Max. Output Frequency(Hz)	Through parameter setting (Max. 400Hz)		
Power Source	Rated Voltage Frequency	Single phase 200V ~ 230V, 50/60Hz		
	Allowable Voltage Fluctuation	-15% ~ +10%		
	Allowable Frequency Fluctuation	±5%		
Control Characteristics	Operation Mode	LED operator		
	Control Mode	Sine PWM		
	Frequency Control Ranges	0.1Hz~400Hz		
	Frequency Accuracy	Digital Command:±0.01%(-10 ~ +40℃) Analog Command:±1% (25℃~ ±10℃)		
	Frequency Command Resolution	Digital Command:0.01Hz Analog Command:0.06Hz/60Hz		
	Frequency Output Resolution	0.01Hz		
	Frequency Setting Signal	D C 0 ~ +10 V / 4 ~ 20 mA		
	Acc./Dec. Time	0.0 ~ 999.9 Sec.(Accel/Decel Time can be set Individually)		
	Voltage-Frequency Characteristics	V/F Curve Can be Set Through Parameter Setting		
	Basic Control Function	Auto torque Boost, Slip Compensation, Restart After Momentary Power Loss, Energy Saving, PID Control, Simple PLC function		
	Extra Function	Up/Down Operation · Cumulative Power on & Operation Hour Memory, 4 Different Sets of Fault Status Record (Including Latest one), RS-485 (MODBUS Protocol), Multiple-Pulse Output Ports, 1 Analog Output Port.		
Protection Characteristics	Stall Prevention	Current Level Can Be Selected During Acceleration and Constant Speed Running. During Deceleration,Stall Prevention Can Be Enabled or Disabled.		
	Instantaneous overcurrent (OC)	Stopped if above 200% Rated Current		
	Inverter Overload Protection (OL2)	Stopped if above 150% Rated Current for 1 Minute		
	Motor OverloadProtection (OL1)	Electronic Overload Curve Protection		
	Overvoltage(OV)	Stop if VDC ≥ 410V		
	Undervoltage(UV)	Stop if VDC ≤ 200V		
	Momentary Power	≥ 15ms, stop otherwise		
	Overheat Protection(OH)	Protection by Thermistor		
Mechanical Construction		Enclosed, Wall-Mounted Type (NEMA-1)		
Cooling		Self	forced	
Weight(kg)		1.2		
Environmental	Application site	Indoor (No Corrosive Gas and Dust Present)		
	Ambient Temperature	-10 ~ +40℃(Not Frozen)		
	Storage Temperature	-20 ~ +60℃		
	Ambient Humidity	Below 90% RH (Non-Condensing)		
	Altitude Vibration	Below 1000m, 5.9m/S² (0.6G), (JISC0911 Standard)		
Communication Function		RS-485 Built-in (MODBUS)		
EMI		Meet EN50081-2 (1994) with Specified EMI Filter		
EMC Compatibility		Meet Pr EN 50082-2		

 Braking Resistor reference list

Inverter		Additional Braking Resistor	Approx. Braking Torque (10%ED)%
Input Voltage	Max.Applicable Motor output(KW)	Resistance Value(1 set)	
220V	0.5 (0.4)	260W 200Ω	125
	1 (0.75)	260W 200Ω	125
	2 (1.5)	260W 70Ω	125

Description of Inverter model numbers

TDS-F8-L0P7 E3

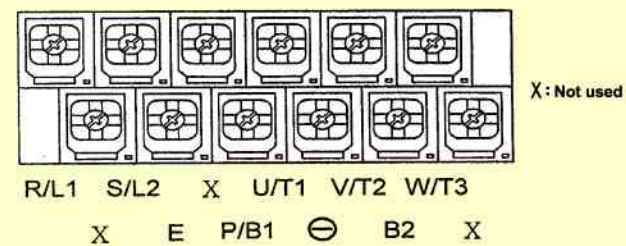
TDS-F8
TekDrive Inverter
Series

Inverter Output Capacity(KW)
0P4: 0.4 KW
0P7: 0.75KW
1P5: 1.5 KW

blank:
single phase
3:3 phase

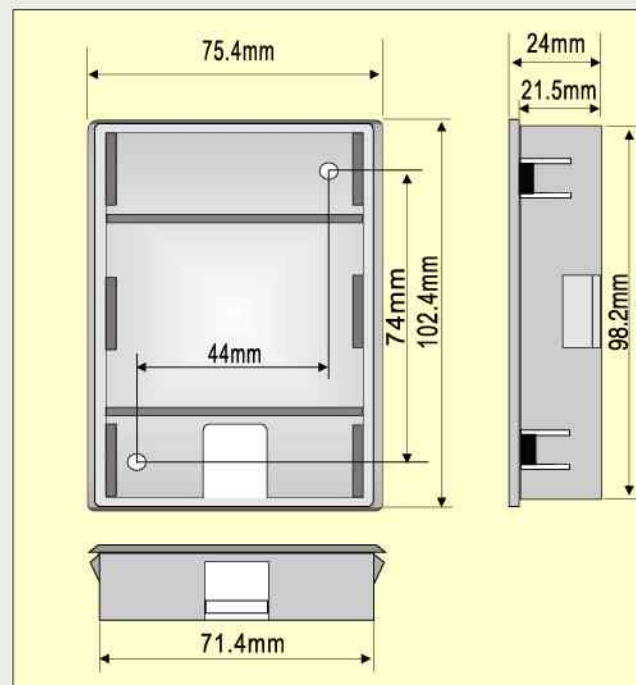


 The main circuit terminals and the sign

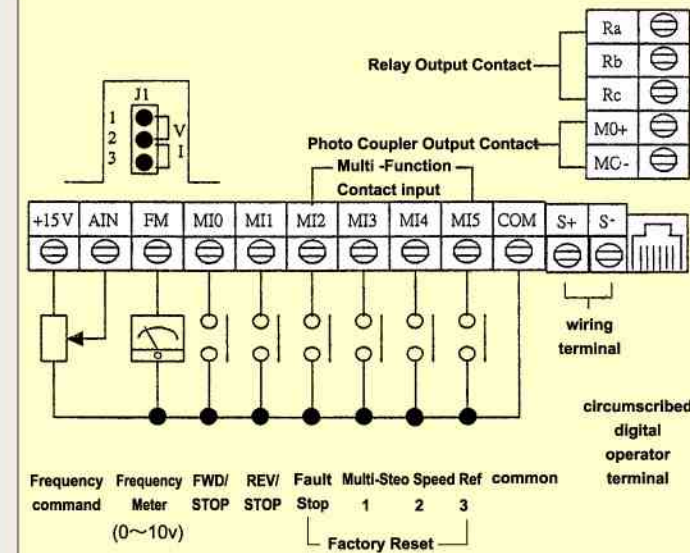


 Description of main circuit terminals

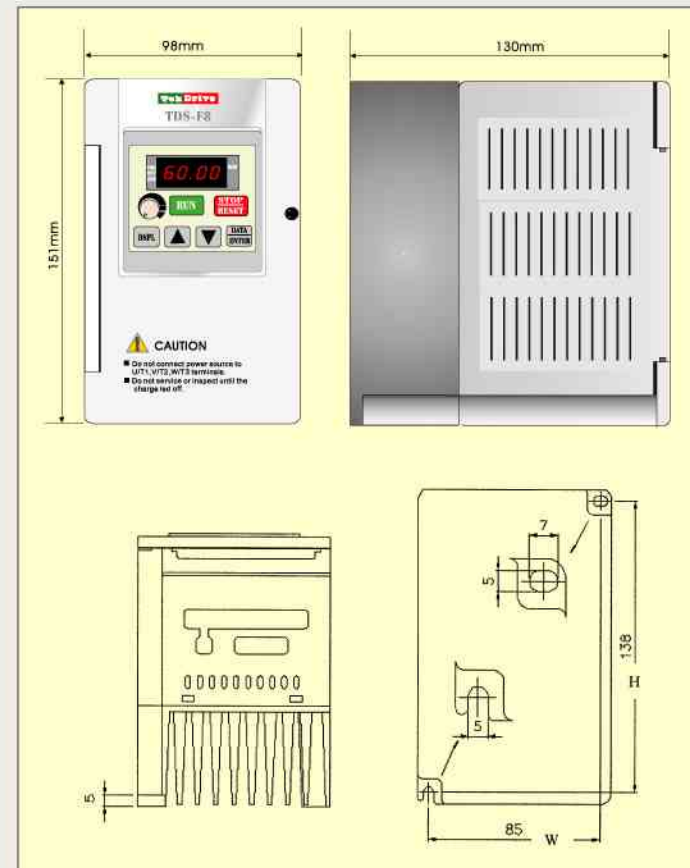
Terminal sign	Description
R/L1 S/L2	Main Circuit single-phase Input Voltage
$\ominus$ P/B1 B2	P/B1 , B2: Circumscribed braking Resistor P/B1 , $\ominus$: DC Input
U/T1 V/T2 W/T3	Inverter Output circumscribed Motor Terminal
E	Ground Terminal(Ground lead)

 Remote Keypad Mounting Kit

Control Circuit terminals



F8 External Dimension

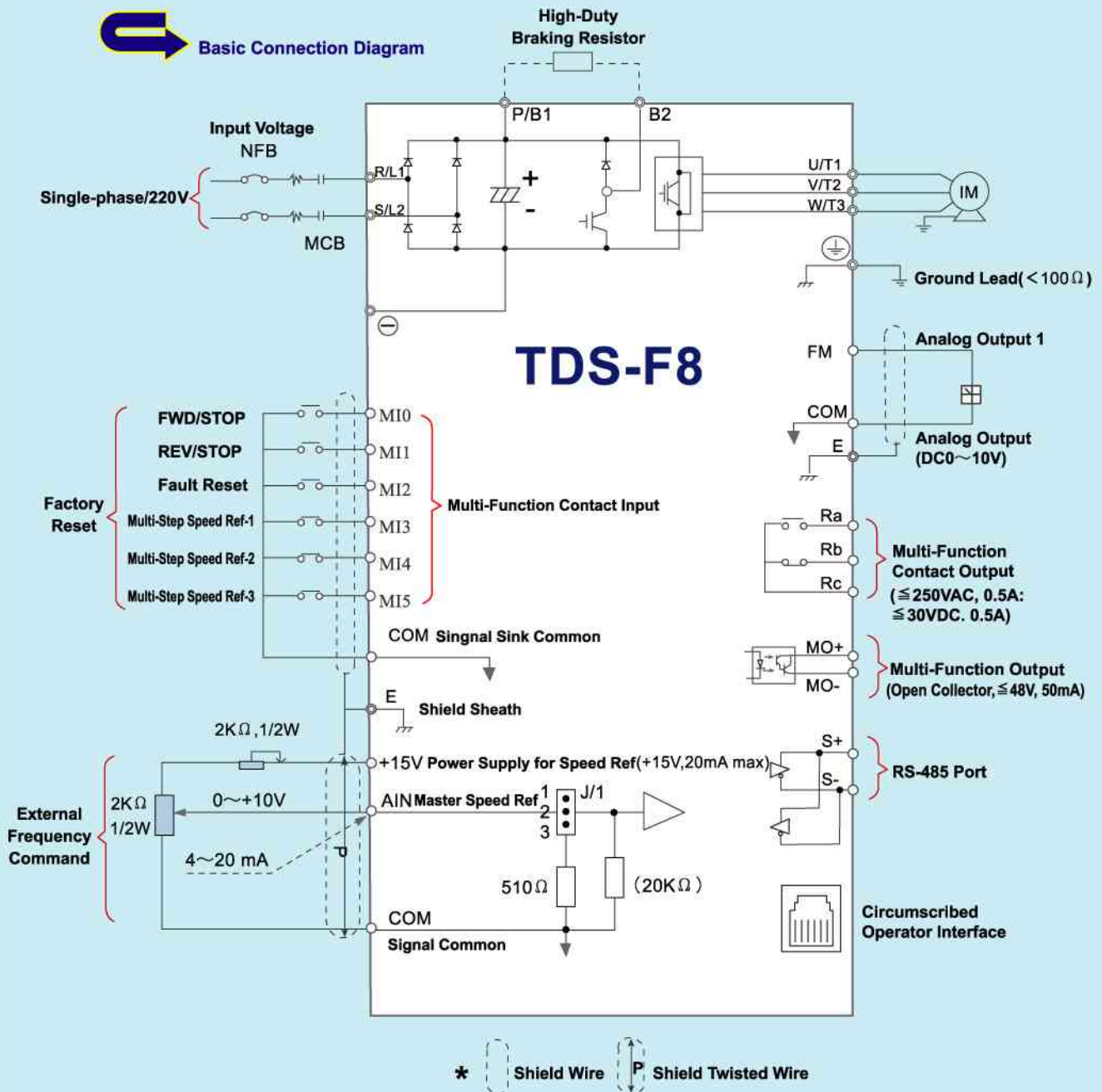


 Dimension

Voltage	Applicable Motor Output(HP/KW)	Mounting(mm)			External(mm)			Approx. Weight(kg)
		W	H	D	W1	H1	D	
220V	0.5HP / 0.4KW	85	138	130	98	151	130	1.2
	1HP / 0.75KW							
	2HP / 1.5KW							



Basic Connection Diagram



Inverter Standard Connection Diagram(◎ indicates the main circuit terminals and the sign, ○ indicates control circuit terminals)

Agent

