

DLC1 Series Inverter User Manual

-----DLC1-0D20S2G



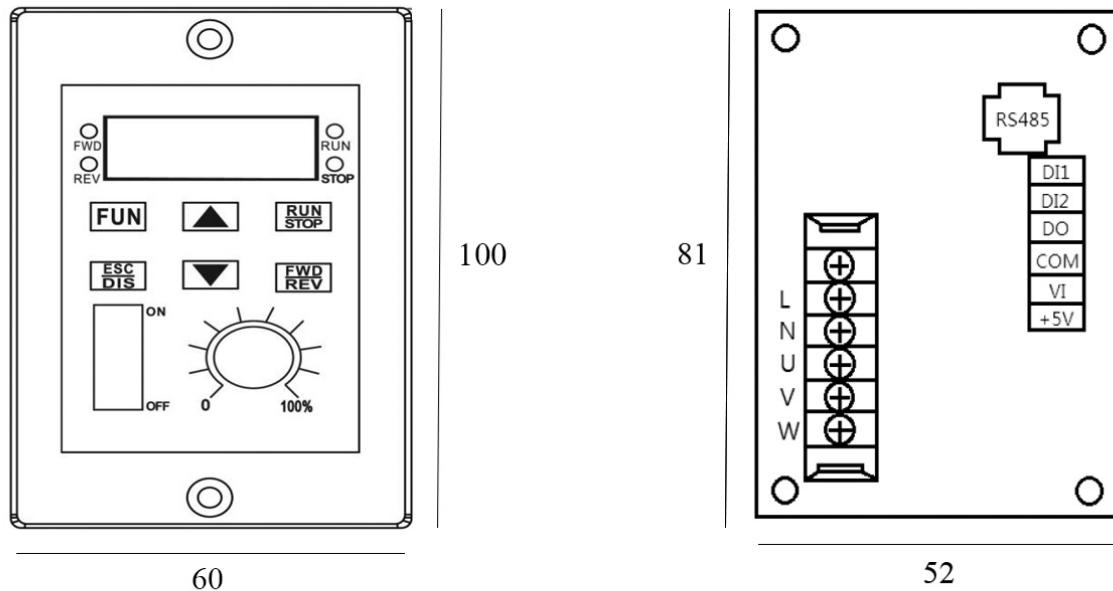
1 Summary

1.1 Technical specifications

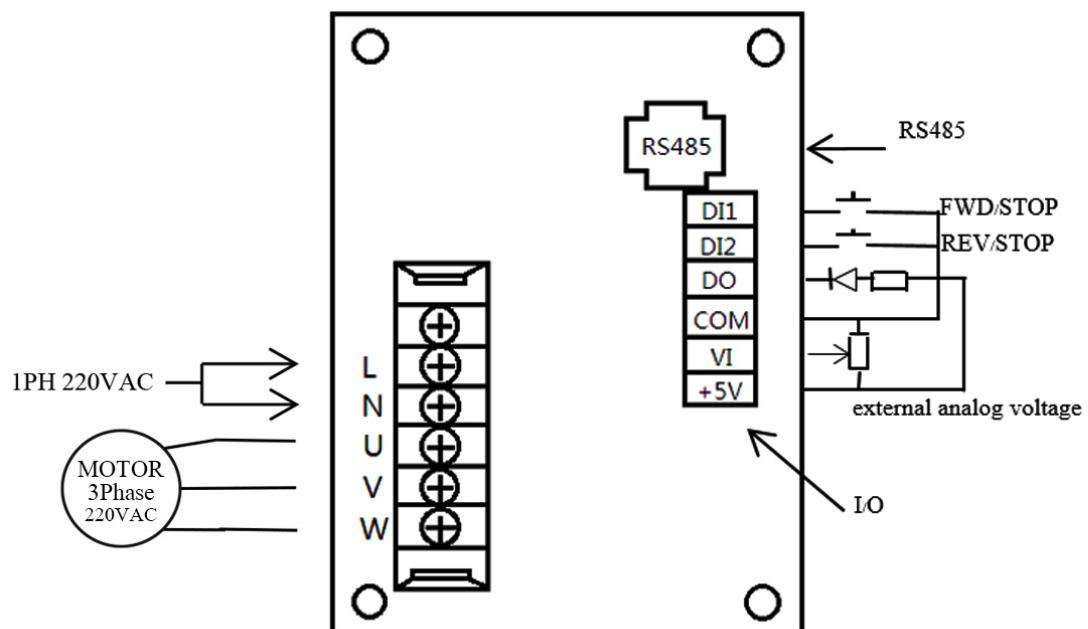
Category	Name	Specifications	Remarks
Control	Maximum frequency	V/F control 0~100Hz	
	Carrier frequency	1kHz~10kHz	
	Resolution	digital setting 0.01Hz analog setting maximum frequency×0.025%	
	control mode	V/F control	
	Adjustment range	0~100(FVC)	
	Stable resolution	±0.02%(FVC)	
	overload capacity	150% rated current 60s 180% rated current 3s	
	Acceleration/deceleration curves	Linear mode Time range 0.0~6500.0s	
	Multi-speed	Maximum 4 speeds	

	control		
Protectors	overload protection		
	Overheat protection		
	current protection		
Ambient environment	Power supply	1PH AC220V -15~+10	
	Temperature	23°C~-10°C~50°C	
	Humidity	0%~90%H	

1.2 Product outline and dimensions

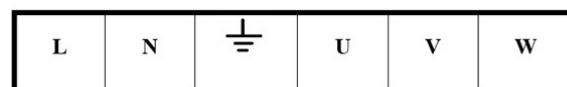


1.3 Standard wiring diagram



1.4 Main circuit wirings

Terminal name	Functions
L□N	Single phase power input
U□V□W	Three phase output
$\frac{1}{\equiv}$	GND



□ 1-4 □□□ terminal □□□

1.5 Control circuit wirings

1.5.1 Control circuit

DI1	DI2	DO	COM	VI	+5V
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1.5.2 Control signals

Type	Terminal	Name	Function	Specifications
I/ O	Digital input	DI1	X1 Default setting□FWD	4 speeds
		DI2	X2 Default setting□REV	
	Analog input	5V	Analog 5V	VR:5-10K
		COM	Analog COM 0V	
	Analog output	DO1	Output Default setting□ inverter running	
Power	+5V	5VDC+	Use with DI, DO	
	COM	5VDC-		

2 Panel operations

2.1 Panel

Key	Functions
FWD	On: in FWD
RUN	On: inverter running
REV	On: in REV
STOP	On: inverter at stop
Display area	
FUN	Function/confirm key:
ESC/DIS	
▲▼	
RUN/STOP	
FWD/REV	

P4	Max Running frequency	0~ 100Hz	65Hz
P5	Min Running frequency	0~ 100Hz	5HZ
P6	Frequency rise speed	1 ~ 500HZ/S	50HZ/S
P7	Frequency reduce speed	1 ~ 500HZ/S	50HZ/S
P8	Brake time	0-2. 5S	0. 3S
P9	Brake coefficient	0~60%	20%
P10	3Hz VF value	0~50%	4%
P11	50Hz VF value	0~100%	98%
P12	RS485 protocol, ASCII,RTU	0,7E1; ASCII 1,701; ASCII 2,8N2; ASCII 3, 8E1; ASCII 4, 801; ASCII 5,8N2; RTU 6,8E1; RTU 7,801; RTU	2
P13	RS485 bit rate	0, 4800; 1, 9600; 2, 19200; 3, 38400	1
P14	Station number	1~255	1
P15	DI function selection (TBC)	0,DI1:FWD/STOP, DI2:REV/STOP; 1,DI1: RUN/STOP, DI2REV/FWD; 2,DI1:RUN/STOP,DI2: multi-speed	0

		3, JOG: DI1:FWD/STOP, DI2:REV/STOP; 4,JOG: DI1:RUN/STOP, DI2:REV/FWD;	
P16	D0 function selection	0, inverter running 1, setting reached 2, fault 3, multi-speed input	0
P17	Multi-speed 2 setting	P4~P5	30HZ
P18	Frequency reached frequency	P4~P5	50HZ
P19	overload protection selection	1~100%	50%
P20	Overheat protection selection	1°C~80°C	60°C
P21	RPM display proportion	1~ 300	1
P22	Reserved		
P23	Reserved		
P24	Carrier frequency setting	1~10	6
P25	Frequency adjustment length	1~100	5
P26	Multi-speed 1 setting	P4~P5	40HZ
P27	Reserved		
P28	Multi-speed 3 setting	P4~P5	20HZ
P29	Reserved		
P30	Current protection cushion time	0. 1~60	2

P31	Motor pole number selection	1: 2 poles 2: 4 poles	2
P32	Torque compensation setting	0~100	0
P33	Acc/Dec time unit	0:□ 1 :□	0
P34	current coefficient	0~900	580
P35	current display selection	0: percentage 1 :actual value	0
P36	current protection selection	0: auto-tuning value 1 :actual setting value	0
P37	overload protection setting	0~10	5A
P38	RPM selection	0: pole number 1 : setting value	0
P39	Motor rated RPM	1~5000	1400
P40	10Hz auto-tuning value	actual current value after auto-tuning	A
P41	20Hz auto-tuning value	actual current value after auto-tuning	A
P42	30Hz auto-tuning value	actual current value after auto-tuning	A
P43	40Hz auto-tuning value	actual current value after auto-	A

		tuning	
P44	50Hz auto-tuning value	actual current value after auto-tuning	A

3.2 Multi-speed

Multi-speed input frequency table			
Multi-speed	DI1 value	DI2 value	Default frequency value
Multi-speed 0□main frequency□	1	1	50
Multi-speed 1	1	0	40
Multi-speed 2	0	1	30
Multi-speed 3	0	0	20

4 MODBUS

Parameter address of the protocol:

Definition	Parameter address	Remarks	
Internal setting Parameter	00nnH	nn means Parameter number. E.g.: P10 is 0064H	
Command	2000H	Bit0~1	00B: no function
			01B:STOP

			10B: START
			11B: no function
		Bit2~3	Reserved
			00B: no function
		Bit4~5	01B: FWD
			10B: REV
			11B: change direction
		Bit6~15	Reserved
	2001H		Frequency command

4 Other remarks:

- P21 To show approximate RPM:
 - 2 pole Motor 2800÷50Hz÷gear ratio
 - 4 pole Motor 1450÷50Hz÷gear ratio
- Auto-tuning: please set P10 □ P11 then let the inverter connect to the load and execute auto-tuning. Press ESC/DIS, then press RUN/STOP, then press RUN/STOP again. Please select motor overload percentage according to the load characteristics.
 - Failure code : EC: overload ET: overheat E1: IGBT protection LV □ under-voltage OV □ Over-voltage
 - Parameter reset: turn off the inverter, press and hold FUN & ESC/DIS, then turn on the power again.