

BLDC Motor

모터뱅크

모델명 : BL4281



제품설명

BL4281 는 BLDC Motor 이며 홀센서가 내장된 3 상 8 극 42mm 크기로 많이 사용되는 모터입니다. 고정밀, 장수명, 고출력으로 의료기기나 검사장비 같은 3D 제어에 많이 사용되고 DC24V로 77W의 출력을 낼수 있는 모터입니다

BL4281 상세구성

- 1) 3상 8극 42mm BLDC 모터 델타권선 기본형 모터.
- 2) 크기는 42각 정격출력 77W 4000RPM의 고성능 모터.
- 3) 다양한 감속기구성과 엔코더 및 브레이크를 추가지원되는 Nema 17규격.

SPEC:

네마 17(42mm) 고출력 BLDC 모터

Nema 17(42mm) BLDC Motor 24V 4,000rpm 1.85Kgf.cm 77.5W

ROTATION: CW SEE FROM LEAD END	
MANUFACTURER MODEL	BL4281
NUMBER OF POLES	8
PHASE TO PHASERESISTANCE	0.55 OHMS
NOMINAL VOLTAGE	24 VDC
NO LOAD SPEED	5800±10% RPM
NO LOAD CURRENT	0.6 Amps Max.
RATED TORQUE	0.185 N-m
RATED SPEED	4000±10% RPM
OUTPUT POWER	77.5 W
BACK EMF CONSTANT	4.1 V/kRPM
TORQUE CONSTANT	0.04 N-m/A
INSULATION CLASS	B

■ 결선도

ELECTRICAL CONNECTION TABLE		
+5V	RED 빨강	UL1007 26 AWG
HALL U	YEL 노랑	
HALL V	GRE 회색	
HALL W	BLU 파랑	
GND	BLK 검정	
PHASE U	YEL 노랑	UL1007 20 AWG
PHASE V	GRE 회색	
PHASE W	BLU 파랑	

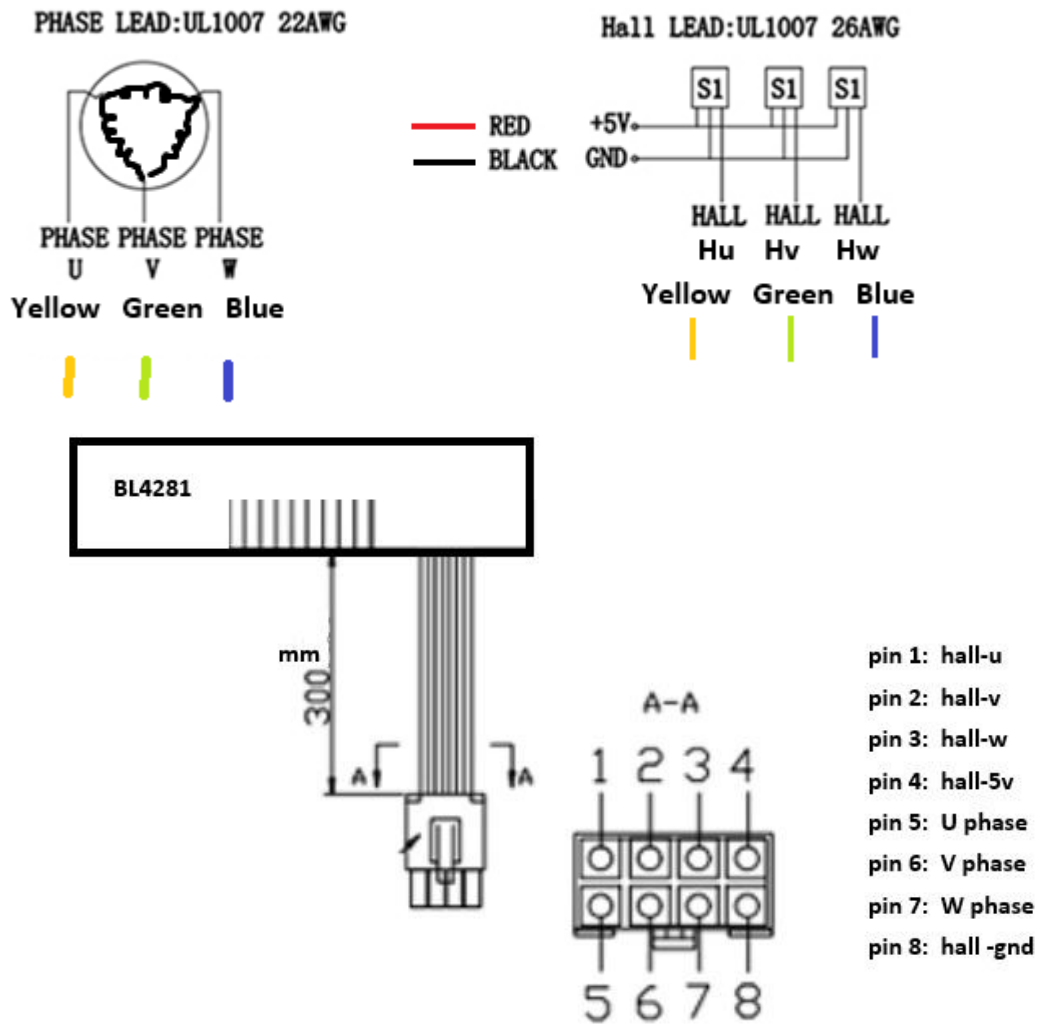
Connection diagram:

Hall sensor cable

Wiring cable

Note: hall sensor power supply voltage +5 to +20VDC

단자구성:



선구분 :

UVW (AWG 22:홀 신호선보다 더 두껍습니다)
 U : Yellow color
 V : Green color
 W : Blue color

홀신호선(AWG 26)

+5V : Red color
 GND : Black color
 Hall u : Yellow color
 Hall v : Green color
 Hall w : Blue color

모터세부스펙:

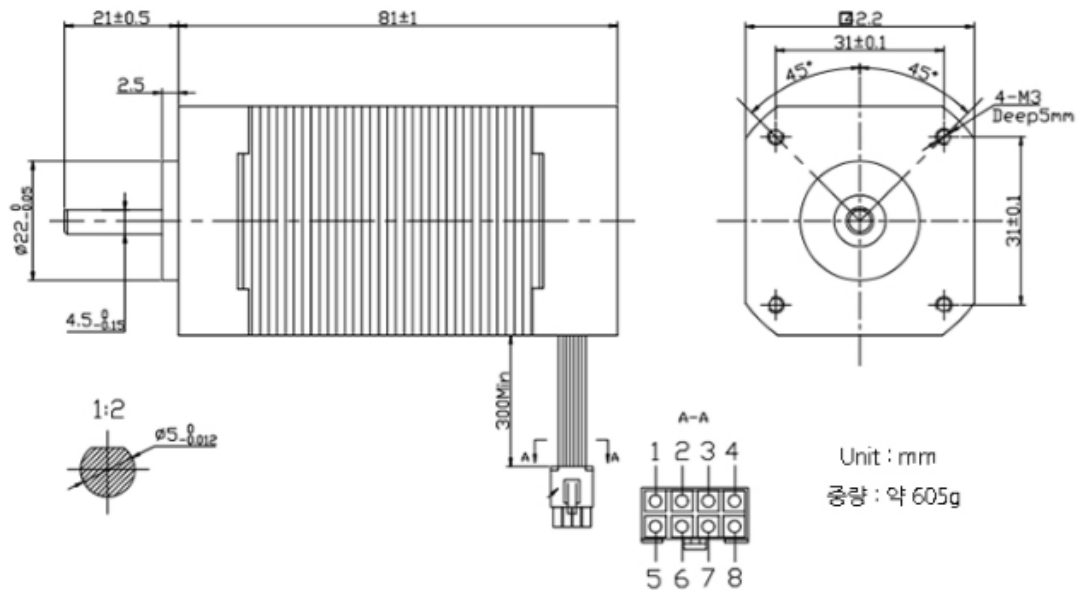
General Specification:	
Item	Specification
Winding type	Delta
Hall effect angle	120 degree electrical angle
Shaft run out	0.025mm
Radial play	0.02mm@450g
End play	0.08mm@450g
Max.radial force	28N @20mm form the flange
Max.axial force	10N
Insulation class	Class B
Dielectric strength	500VDC for one minute
Insulation resistance	100M Ω Min.,500VDC

제품의 각시리즈별(BL4241/BL4261/BL4281/BL42100) 스펙비교



Electrical Specification:					
		Model			
Specification	Unit	BL4241	BL4261	BL4281	BL42100
Number Of Phase	Phase	3			
Number Of Poles	Poles	8			
Rated Voltage	VDC	24			
Rated Speed	Rpm	4000			
Rated Torque	N.m	0.0625	0.125	0.185	0.25
Rated Current	Amps	1.8	3.3	4.8	6.3
Rated Power	W	26	52.5	77.5	105
Peak Torque	N.m	0.19	0.38	0.56	0.75
Peak Current	Amps	5.4	10.6	15.5	20
Back E.M.F	V/Krpm	4.1	4.2	4.3	4.3
Torque Constant	N.m/A	0.039	0.04	0.041	0.041
Rotor Inertia	g.cm ²	24	48	72	96
Body Length	mm	41	61	81	100
Weight	Kg	0.3	0.45	0.65	0.8
Sensor	Honeywell				
Insulation Class	B				
Degree of Protection	IP30				
Storage Temperature	-25 – +70°C				
Operating Temperature	-15 – +50°C				
Working Humidity	≤85% RH				
Working Environment	No direct sunlight, non-corrosive gas, flammable gas, oil mist, no dust				
Altitude	≤1000m				

제품치수(Dimension Drawing) :



결선도:

모터드라이버 : BDD-240 과 BL4281

