

BLDC Motor + Encoder

모터뱅크

모델명 : BL42100E1K



제품설명

BL42100E1K 는
BLDC Motor 이며 홀센서가 내장된 3 상 8 극
42mm 크기로 엔코더가 추가되어 탈조를
방지하는 크로즈루프제어가 가능한 모
터입니다.

BL42100E1K 상세구성

- 1) 3상 8극 42mm BLDC 모터 델타권선 모터에 엔코더추가형
- 2) 크기는 42각 정격출력 105W 4000RPM의 고성능 모터.
- 3) 다양한 감속기구성과 브레이크추가가 지원되는 Nema 17규격.

SPEC:

네마 17(42mm) 고출력 BLDC 모터

Nema 17(42mm) BLDC Motor 24V 4,000rpm 2.5Kgf.cm 105W

ROTATION: CW SEE FROM LEAD END	
MANUFACTURER MODEL	BL4290
NUMBER OF POLES	8
PHASE TO PHASERESISTANCE	0.36 OHMS
NOMINAL VOLTAGE	24 VDC
NO LOAD SPEED	5800±10% RPM
NO LOAD CURRENT	0.75 Amps Max.
RATED TORQUE	0.25 N-m
RATED SPEED	4000±10% RPM
OUTPUT POWER	105 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	UL1007 20 AWG
PHASE U	YEL 노랑	
PHASE V	GRE 회색	
PHASE W	BLU 파랑	

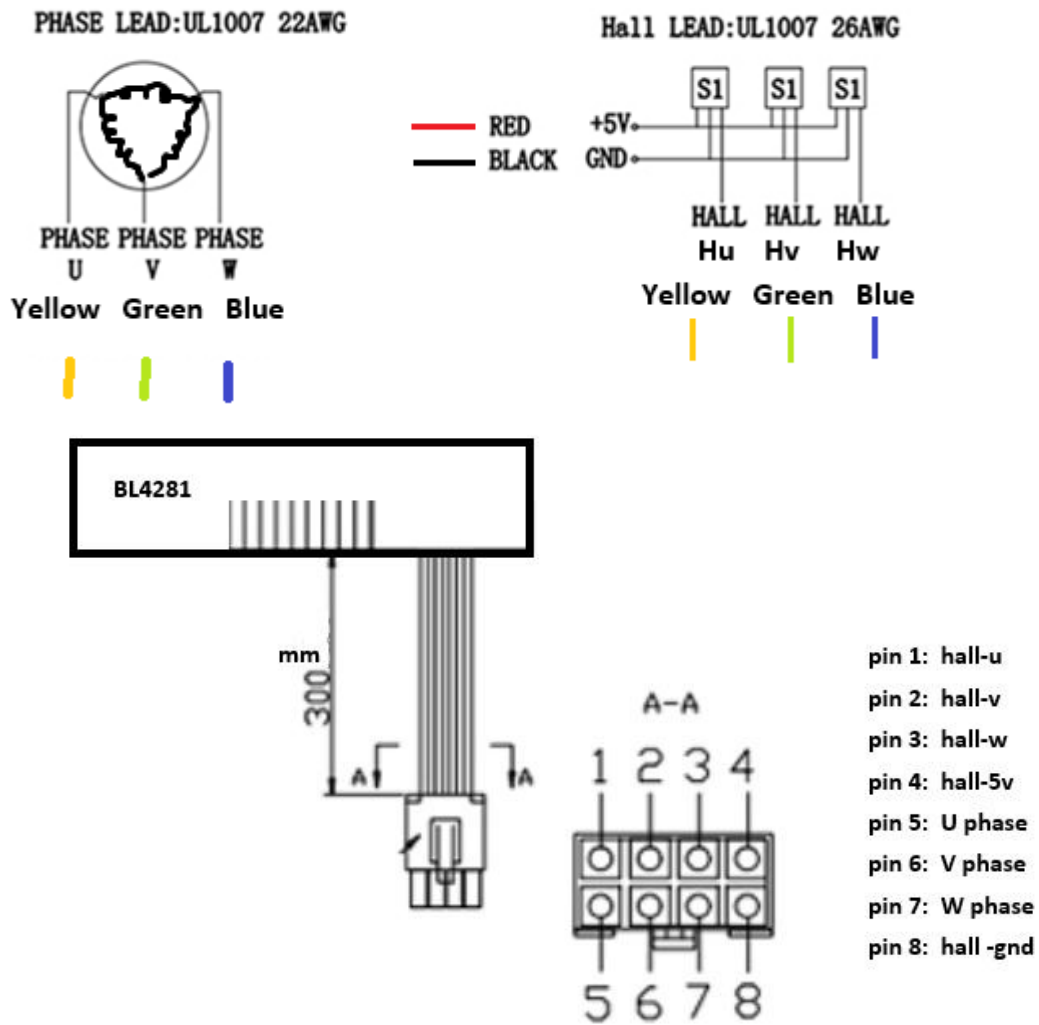
Connection diagram:

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

엔코더구성:

엔코더결선 분해능 1000P/R	레드	블랙	옐로우	그린	블루	화이트
	+5V	GND	EA+	EA-	EB+	EB-

Encoder Wiring Diagram:

Vcc	Encoder Voltage(+5V)	RED
GND	Encoder Grand(0V)	BLACK
EA+	Encoder A+ phase input	YELLOW
EA-	Encoder A- phase input	GREEN
EB+	Encoder B+ phase input	BLUE
EB-	Encoder B- phase input	WHITE



인크리멘탈 증감비교형 1000CPR 엔코더



BLC-400R4E 와 연동시켜 클로즈루프제어 구성

모터세부스펙:

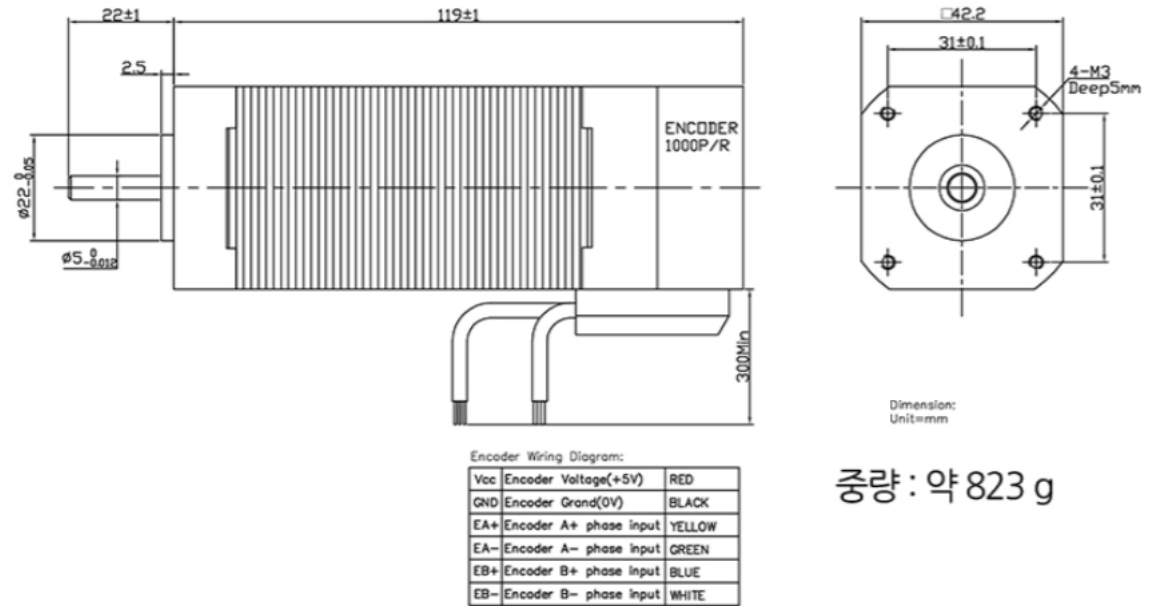
General Specification:	
Item	Specification
Winding type	Delta
Hall effect angle	120 degree electrical angle
Shaft run out	0.025mm
Radial play	0.02mm@450g
End play	0.08mm@450g
Max.radial force	28N @20mm form the flange
Max.axial force	10N
Insulation class	Class B
Dielectric strength	500VDC for one minute
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 : BLC-400R4E 과 BL42100E1K



