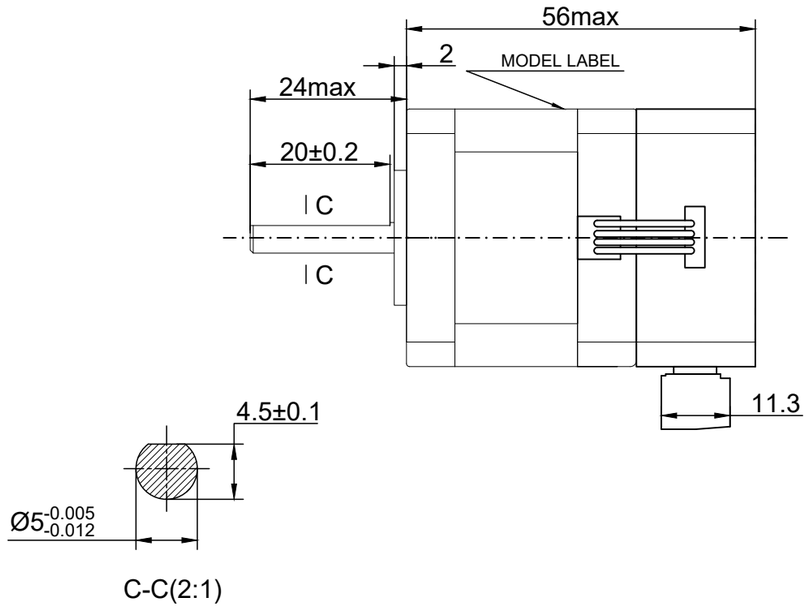
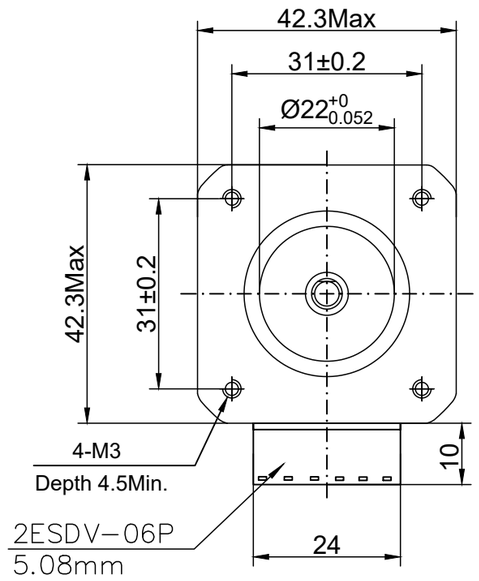
DIMENSIONS UNIT=mm

BLACK BRACKET



C-C(2:1)

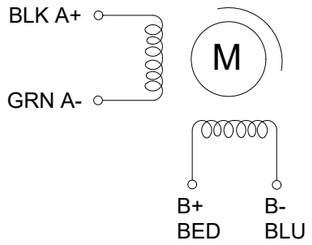


ELECTRICAL PARAMETER

NUMBER OF PHASE	2
BASIC STEP ANGLE	1.8°±5%
RATED CURRENT(PHASE)	1.5A
RESISTANCE(PHASE) @25℃	2.0Ω±10%
INDUCTANCE(PHASE) @1kHz 1Vrms	3.8mH±20%
HOLDING TORQUE	0.41 N.m±15% [3.89lb-in]
ROTOR INERTIA	APPROX 60g.cm2
WEIGHT	APPROX 0.32kg
DIELECTRIC STRENGTH	500V A.C 1 MINUTE
INSULATION RESISTANCE	100MΩ MIN.
INSULATION CLASS(UL)	B (130℃) [266°F]
TEMPERATURE RISE	80K MAX
OPERATION AMBIENT TEMPERATURE	-20℃～+50℃ [-4°F～122°F]
OPERATION AMBIENT HUMIDITY	15%RH～95%RH

CONNECTOR NO.	1	2	3	4
LEAD COLOR	BLK	GRN	BLU	RED

MOTOR WIRING DIAGRAM



2 PHASE SEQUENCE(FULL STEP)
VIEW FROM MOUTING SIDE（CW/CCW）

CW	STEP	A	B	A-	B-	
↓	1	+	+	-	-	↑
	2	-	+	+	-	
	3	-	-	+	+	
	4	+	-	-	+	
	5	+	+	-	-	CCW
	6	-	+	+	-	

						MODEL
						42BL4002-24Ypro
TOLERANCE	±0.3/±3°	REV.	DATE	REVISIONS	BY	
DRAWN		SCALE	1:1	STEPPER MOTOR SPECIFICATION		FIRST ANGLE PROJECTION
DESIGNED				YEJMKJ		
CHECKED						SHEET 1/1

Electrical Specifications

Specification	IDC1-42			
	Min	Typ	Max	Unit
Input Power Voltage	12	24	30	VDC
Control Signal Input Current	7	10	16	mA
Stepping Pulse Frequency	0	-	90	KHz
Insulation Resistance	50			MΩ

Environmental Requirements

Cooling Method		Natural cooling Forced Air Cooling
Operating Environment	Conditions	Keep away from other heat-generating equipment. Avoid dusty, oily, corrosive, highly humid, or high-vibration environments. Strictly prohibit use in atmospheres containing flammable gases or conductive dust particles.
	Temperature	0——50℃
	Humidity	40—90%RH
	Vibration	10~55Hz/0.15mm
Storage Temperature		-20℃~65℃

Interface Description

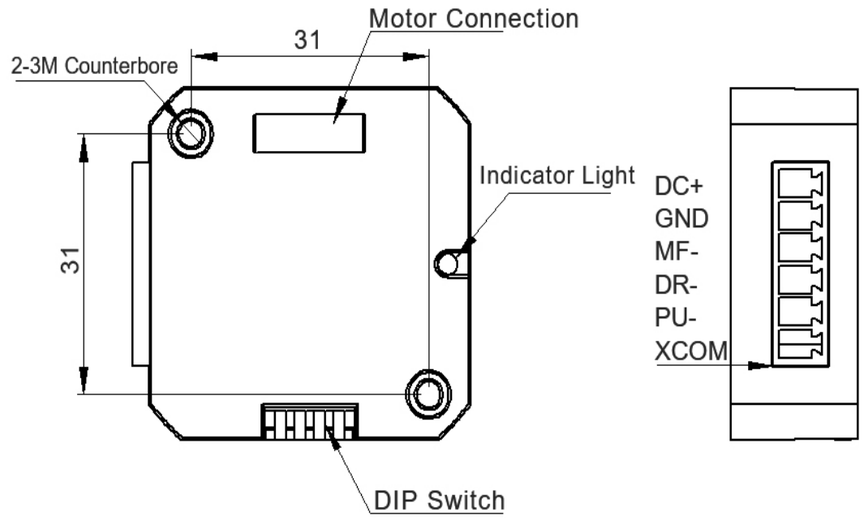
Function	Terminal Name		Specification
Control Signal Interface	PU-		Pulse control signal negative terminal: The rising edge is active, and the motor executes one microstep each time the pulse transitions from low to high level. For reliable response to the pulse signal, the pulse width should be greater than 2.5μs.
	DR-		Direction control signal negative terminal: This high/low level signal is used to ensure reliable direction change, the direction signal must be established at least 50μs prior to the pulse signal.
	MF-		Enable control signal negative terminal: This is a high/low level signal. It is used to enable or disable the operation of the motor. Leave this terminal floating when the enable function is not required.
	XCOM		Input signal common interface: Connect to +5V power supply.
Power Supply Interface	VDC	DC+	Power interface: Power input DC12V~30V
		GND	

Product Characteristics

- Motor and driver integrated design, compact size for easy installation.
- New-generation 32-bit ARM technology ensures smooth operation, strong compatibility, and high cost performance.
- Optically isolated differential signal input for superior anti-interference capability.
- Built-in microstepping technology significantly enhances low-speed smoothness, with a microstep resolution range of 200-3600.
- Pulse response frequency up to 90KHz.
- Precision current control technology greatly reduces motor heating, ensuring low vibration and low noise.
- Features over-voltage, under-voltage,alarm protection with wide-range DC12V-30V DC input and selectable 1.0A or 1.5A default current.

Applications

Suitable for all kinds of small and medium-sized automation equipment and instruments, such as: medical equipment, testing equipment, marking machines, plotters and so on.



DIP Switch Settings

pul/rev	200	400	800	1600	3200	1000	2000	3600
SW2	on	off	on	off	on	off	on	off
SW3	on	on	off	off	on	on	off	off
SW4	on	on	on	on	off	off	off	off

SW1: Current setting（OFF=1.0A，ON=1.5A）
SW2-SW4: Microstepping resolution setting

Indicator light and alarm indication

Name	Function	Description
Green LED	Power and alarm indicator	When the power is normal, the green light remains on. When an abnormality(overvoltage or undervoltage) occurs in the drive, the green light flashes to alarm.

STEPPER DRIVER		
MODEL	IDC1-42	YEJMKJ