

Material box fork integrated machine solution

(based on logistics scenarios)

It is primarily used to control the movement of lever in logistics equipment.

For example, in a fork mechanism, it can drive the lever to rotate and swing to achieve the storage and retrieval of material boxes.

In new telescopic fork device, the lever is driven by a servo to rotate to complete the operation of pushing external cargo.

iBLG-30-01660-BMAA-LA-000-G209



Smart warehousing

In the goods-to-person picking system of the high-bay warehouse, the fork mechanism used for cargo transportation equipment such as RGV box shuttles, AGV box robots and miniload stackers enables efficient storage and retrieval of material boxes.

Logistics sorting

On the logistics sorting line, it controls the action of the lever to accurately sort the goods to different sorting channels or workstations, or is used to block the material box on the roller conveyor line.

■ Feature and advantage

1. Using high-precision 14-bit magnetic encoder, single-turn resolution up to 16384

Compared with the common 4096 resolution products on the market, the accuracy is improved to 4 times, which can achieve more accurate and smoother positioning and control

2. Single-turn absolute encoder can remember single-turn position and the position will not be lost even if power is off

The position information is automatically saved after power failure, and the current position can be obtained immediately after power is restored without homing or calibration, achieving true absolute positioning

3. It has strong environmental adaptability and can maintain stable operation under extreme temperature and humidity conditions

With wide operating temperature range (-20°C ~ +55°C) and storage temperature range (-40°C ~ +70°C), and withstanding relative humidity up to 90%, its rugged design ensures excellent performance and reliability in extremely harsh environments

4. Extremely high stability, repeatable positioning without error

After 50,000 reciprocating motions in a single power-on cycle, the repeatability can still be maintained within $\pm 2^\circ$

5. Excellent mechanical structure design and ultra-long service life

The service life under rated load is up to 500,000 cycles, with lower replacement frequency and maintenance costs, providing long-lasting and stable power support

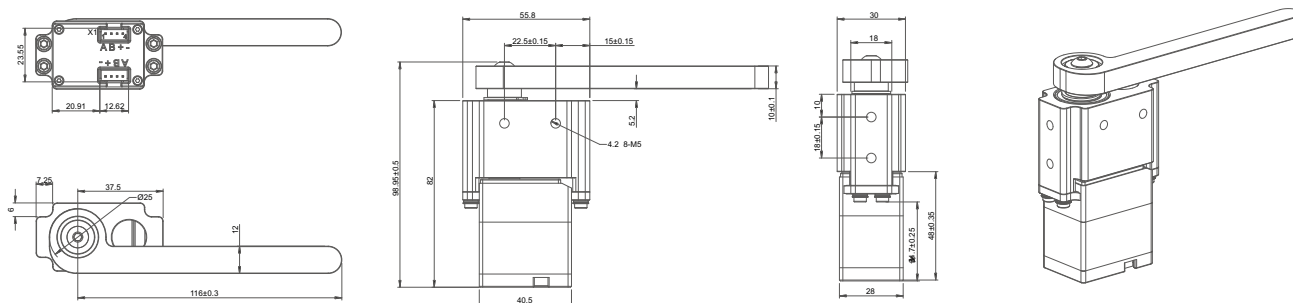
6. Good security, high reliability, and integrated multiple security protection mechanisms

Supports multiple historical faults and status storage for easy reproduction/analysis, supports overcurrent protection, overheating protection, IIT protection, overvoltage and undervoltage protection, greatly improving equipment reliability and durability

Parameter specifications

Parameter item	iBLG-30-01660-BMAA-LA-000-G209
Power Supply (VDC)	12V-28V
Rated Voltage(VDC)	24V
Rated Power (W)	8.4
Rated Current(Arms)	0.35
Rated Torque(N.m)	0.16
Rated Speed(rpm)	60
Max Current(Arms)	1.5ARMS@24V
Max Torque(N.m)	0.6N.m@24V
Max Speed(rpm)	98RPM@24V
Weight(kg)	0.312
Insulation Class	F
Protection Degree	IP20
Duty	S1
Working Temperature(°C)	-20°C~+55°C
Encoder Type	AM-S14BIT
Rotating Direction	CCW(0->16384)
Angle deviation(°)	≤2°
Back Lash(°)	≤3°
Case Material	Aluminum alloy
Gear Set Material	Modulated hardened steel
Motor Type	Brushless DC motor
Communication Interface	MODBUS
Current Protection	Overcurrent, I2T, overvoltage, undervoltage, drive overheating

Mechanical dimension diagram



Terminal definition_X1

X1

PIN	Corresponding screen printing	Signal	XHB2.54-4PIN 
1	A	RS485A	
2	B	RS485B	
3	+	VDC	
4	-	GND	

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