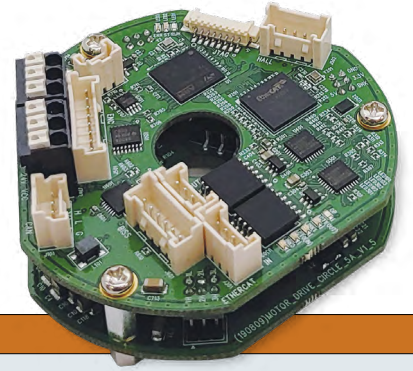# ROBOT JOINT SERVO DRIVE

WEC-D048/05-FS002D-EC (Diameter : Outer 70mm, Inner 15mm)

Ratings	05
Motor Output Continuous Output Current A rms	5
Motor Output Peak Output Current A rms	10

Basic Specifications

Feature		Specification
Motors	DC / BLDC / PMSM / VCM	Rotary servo motors, Linear servo motors
Current (Torque) Control	Control Periodic	20KHz
	Control Loop	PI + Feed-forward
Velocity & Position Control	Control Periodic	2KHz
	Control Loop	Cascade P/PI + Feed-forward
	Filters	First order low pass filter, Four notch filters, First order adaptive windowing filters,
Reference Command	Current / Velocity / Position	CANopen + EtherCAT(CoE)
Auto Tuning	Method	Automatic self-configuration and optimization of motor phasing, wires, current loop, velocity control loop.
Brake	Method	Control stops : Several Dynamic brake and Active disable options
GUI	User Interface	WELSS(WelconServoStudio), Setting, Drive, Motor, Feedback, I/O, Motion,
Protective Functions		Under- and over-voltage, Over-current, Over-load(with I^2T), Drive over-temperature, Feedback sensor signal lost
Compliance Standard		CE, KC
Environment		• Ambient temperature : Operation 0-45℃, Storage 0-70℃ • Humidity : 10-90% • Vibration : 1.0g

Communication

Feature	Specification
CAN	CANopen – CiA 301 application layer and CiA 402 device profile for drives and motion control Baud rate 0.125M 1M bit/s
EtherCAT	CiA 301 application layer and CiA 402 device profile for drives and motion control Communication cycle time: up to 500 µs(CSV, CSP mode), up to 250us(CST mode)

I/O*

Feature		Specification
Analog Input	Quantity	1
	Voltage Range	Analog ±10 VDC differential
	Input Resolution	12bit

Motor Feedback*

Feature		Specification
General	Supply Voltage	5VDC
Incremental Encoder	Signal	A-quad-B with or without index, shared digital hall sensor, RS422, Differential
	A-quad-B Max Input Frequency	10MHz (before quadrature)
Digital Hall Sensor	Signal	Differential-ended
	Type	Separated and shared hall sensor
Serial Encoder	Type	SSI, Biss C
	Bite rate	0.5Mbps, 1Mbps, 2Mbps, 2.5Mbps, 5Mbps

www.welconsystems.com

WELCON SERVO DRIVE
Made In Korea