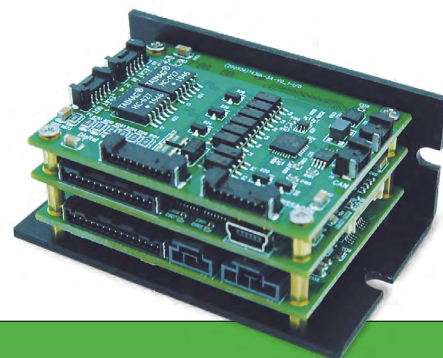


MINI SERVO DRIVE

WEM-D048/03-FSxxxx-EC (Board size : 55×40×25mm)



Ratings	01	03
Motor Output Continuous Output Current A rms	1	3
Motor Output Peak Output Current A rms	3	6

Basic Specifications		
Feature	Specification	
Motors	DC / BLDC / PMSM / VCM	Rotary servo motors, Linear servo motors
Current (Torque) Control	Control Periodic	24KHz
	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	USB + CANopen + EtherCAT (CoE, FoE)
Auto Tuning	Method	Automatic self-configuration and optimization of motor phasing, wires, current loop, velocity control loop.
GUI	User Interface	WELSS (WelconServoStudio), Setting, Drive, Motor, Feedback, I/O, Motion,
Protective Functions	Under- and over-voltage, Over-current, Over-load (with I ² T), Drive over-temperature, Feedback sensor signal lost	
Compliance Standard	CE, KC	
Environment	• Ambient temperature : Operation 0-45 °C, Storage 0-70 °C • 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 500µs (CSV, CSP mode), up to 250µs (CST mode)	
USB	• Baud rate 3000000bit/s • Maximum cable length 3 m	

I/O*		
Feature	Specification	
Analog Input	Quantity	1
	Voltage Range	Analog ±10 VDC differential
	Input Resolution	14 bit
Digital Inputs	Quantity	6 (with STO)
	Signal	Configurable. Opto-isolated.
	Voltage	24V
Digital Outputs	Quantity	2
	Signal	Configurable. Opto-isolated. Open collector.
	Voltage	24V
	Max. Output Current	50 mA

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
Analog Hall Sensor*	Signal	0 ~ 5V, Single-ended
	Sampling Frequency	24KHz
Sin/Cos Encoder*	Signal	-0.7~ +0.7V at 2.5V
	Sampling Frequency	24KHz
Serial Encoder*	Type	SSI, Biss C
	Bite rate	0.5Mbps, 1Mbps, 2Mbps, 2.5Mbps, 5Mbps

*Optional (Refer to product code)