

# MINI SERVO DRIVE

WEM-D048/03-FS00FD-EC

(Size : 72×44×29.5mm)



W:90g

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

## Basic Specifications

Feature	Specification	
<b>Motors</b>	DC / BLDC / PMSM / VCM	Rotary servo motors, Linear servo motors
<b>Current (Torque) Control</b>	Control Periodic	24KHz
	Control Loop	PI + Feed-forward
<b>Velocity &amp; Position Control</b>	Control Periodic	4KHz
	Control Loop	Cascade P/PI + Feed-forward
	Filters	First order low pass filter, Four notch filters, First order adaptive windowing filters
<b>Reference Command</b>	Current / Velocity / Position	USB, CAN(CANopen), EtherCAT(CoE, FoE)
<b>Auto Tuning</b>	Method	Automatic self-configuration and optimization of motor phasing, wires, current loop, velocity control loop
<b>GUI</b>	User Interface	WELSS(WelconServoStudio), Setting, Drive, Motor, Feedback, I/O, Motion
<b>Input Voltage</b>	12~48VDC(H/W Limit 10~60V)	
<b>Protective Functions</b>	Under- and over-voltage, Over-current, Over-load (with I <sup>2</sup> T), Drive over-temperature	
<b>Environment</b>	<ul style="list-style-type: none"> <li>Ambient temperature : Operation 0~50°C, Storage 0~70°C</li> <li>Humidity : 10~90%</li> <li>Vibration : 1.0g</li> </ul>	
<b>Compliance Standard</b>	CE, KC	

## Communication

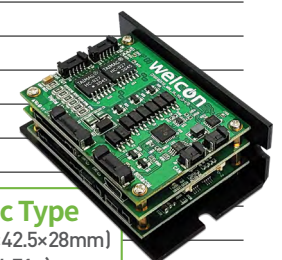
Feature	Specification	
<b>USB</b>	<ul style="list-style-type: none"> <li>Baud rate : up to 3Mbps</li> <li>Maximum cable length : 3m</li> </ul>	
<b>CAN</b>	Bit rate : 125kbps~1Mbps	
<b>EtherCAT</b>	100Mbps, Communication cycle time : up to 250μs	
<b>RS-485</b>	Not Supported	

## I/O

Feature	Specification	
<b>Analog Input</b>	Quantity	1
	Voltage Range	Analog ±10 VDC differential
	Input Resolution	14bit
<b>Digital Inputs</b>	Quantity	6
	Signal	Configurable. Opto-isolated.
	Voltage	24V
<b>Digital Outputs</b>	Quantity	2
	Signal	Configurable. Opto-isolated.
	Voltage	24V
	Max. Output Current	40mA
<b>Brake</b>	Use one of digital outputs (40mA)	

## Motor Feedback

Feature	Specification	
<b>General</b>	Supply Voltage	5VDC
<b>Incremental Encoder</b>	Signal	A-quad-B with or without index, shared digital hall sensor, RS422, Differential
	A-quad-B Max Input Frequency	10MHz (before quadrature)
<b>Digital Hall Sensor</b>	Signal	Differential
	Type	Separated and shared hall sensor
<b>Analog Hall Sensor</b>	Signal	0~5V, Single-ended
	Sampling Frequency	24KHz
<b>Sin/Cos Encoder</b>	Signal	-0.7~ +0.7V at 2.5V, Differential
	Sampling Frequency	24KHz
<b>Serial Encoder</b>	Type	SSI, BiSS-C, Tamagawa, Panasonic
	Bite rate	0.5Mbps, 1Mbps, 2Mbps, 2.5Mbps, 5Mbps



Basic Type

(Size : 67×42.5×28mm)

(W:71g)