# STANDARD SERVO DRIVE 20A

## WER-D048/20-FS04F7-E, -C, -R  （Size : 115×86×35mm）



W : 413g

| Ratings | 20 |
|---|---|
| Continuous Output Current A(rms) | 20 |
| Peak Output Current A(rms) | 40 |

| 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 | 4KHz |
| | 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, CAN(CANopen), EtherCAT(CoE, FoE), RS-485 |
| 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 |
| Input Voltage | 12~48VDC (H/W Limit 10~60V) | |
| Protective Functions | Under- and over-voltage, Over-current, Over-load (with $I^2T$), Drive over-temperature | |
| Environment | • Ambient temperature : Operation 0~50℃, Storage 0~70℃   • Humidity : 10~90%   • Vibration : 1.0g | |
| Compliance Standard | CE, KC | |

| Communication❋ | |
|---|---|
| **Feature** | **Specification** |
| USB | • Baud rate : up to 3Mbps   • Maximum cable length : 3m |
| CAN* | Bit rate : 125kbps ~1Mbps |
| EtherCAT* | 100Mbps, Communication cycle time : up to 250μs |
| RS-485* | Baud rate : 9200bps ~ 3Mbps |

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

| Motor Feedback❋ | | |
|---|---|---|
| **Feature** | **Specification** | |
| General | Supply Voltage | 5VDC |
| Incremental Encoder | Signal | CH1 : A-quad-B with or without index, RS422, Differential CH2 : A-quad-B with or without index, Single-ended |
| | A-quad-B Max Input Frequency | 10MHz (before quadrature) |
| Digital Hall Sensor | Signal | Single-ended |
| | Type | Separated hall sensor |
| Analog Hall Sensor* | Signal | 0~5V, Single-ended |
| | Sampling Frequency | 24KHz |
| Sin/Cos Encoder* | Signal | -0.7~+0.7V at 2.5V, Differential |
| | Sampling Frequency | 24KHz |
| Serial Encoder | Type | SSI, BiSS-C, Tamagawa, Panasonic, EnDat2.2 |
| | Bite rate | 0.5Mbps, 1Mbps, 2Mbps, 2.5Mbps, 5Mbps |

*Optional