Mind
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Innovation.

MAVERICK

New Drive Solution single axis

www.esa-automation.com

MAVERICK
High-Performance Servodrive

The MAVERICK servo drive series is the result of meticulous engineering aimed at combining high power density, precise control, and refined design.

With the updated MAVERICK S version, ESA expands its range with a solution capable of delivering up to 30 A continuously, making it ideal for single-axis and multi-axis machinery. It is designed for applications in sectors such as labeling, robotics, packaging (forming, filling, sealing), and, more generally, for all industrial solutions requiring high performance, fast dynamic response, and integration flexibility.

Integrated Ethernet connectivity supports major industrial protocols, including EtherCAT, EtherNet/IP, and Profinet I/O, ensuring extensive network flexibility.

In its standard version, MAVERICK integrates the STO SIL 2 safety function and offers the same intuitive graphical interface as the ECO line, but with increased power and the ability to synchronize motors across different field buses.

Available Versions

MAVERICK S EtherCAT
Featuring EtherCAT communication and STO SIL 2 safety function.

MAVERICK S CANopen
Designed to replace previous solutions and ensure continuity for users still utilizing CANopen communication and analog control, also equipped with STO SIL 2 safety function.

High-Performance Features
MAVERICK delivers up to three times the nominal continuous current for 5 seconds during operational peaks, providing power precisely when needed without requiring oversized drives.

More Power, More Applications
Reduces or eliminates the need to combine multiple drives to achieve high performance at 30 A.

Offers configurable options such as safety levels, I/O, feedback, and field bus, allowing customization of the drive to specific requirements while excluding unnecessary functions.

Control Method
AC synchronous brushless rotary and linear motor: FOC control with feedback.
Asynchronous rotary motor: FOC control with feedback.
DC synchronous brushless rotary and linear motor: Trapezoidal modulation with feedback.

Connections
Analog:
1 ±10 V differential input for speed and torque (16-bit resolution)

Digital:
5 PNP digital inputs (3 configurable)
2 STO safety inputs
2 PNP digital outputs
1 24Vdc brake output

Communication
Modbus RTU (standard)
CANopen CiA402 (standard with CANopen module)
EtherCAT CoE (DS402) (standard with EtherCAT module)
Profinet RT (CC-A, CC-B) - IRT (AC4 class) (standard with NETX module)
EtherNet/IP (CIP Protocol) (standard with NETX module)

Feedback
Available on-board (standard):
Incremental encoder 5 V Line Drive, with or without Hall sensors
Absolute encoder 32-bit BiSS C, powered at 5 V
Resolver

Optional:
Absolute encoder Hyperface DSL*

Drive Interface
Manageable via DriveWatcher on USB-C port
Two-digit display with buttons for drive status visualization and parameter management

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Upper connections

X1: DC BUS
X2: Power supply
X5: 24V power supply and motor brake
X6: USB for programming and debugging

Front connections

X7: Enable and I/O
X8: STO
X9: Communication Bus
X10: Communication Bus
X11: Motor Encoder Signals
ER: EtherCAT Error LED

Front connections

X3: Motor power output
X4: Braking resistor

Size	UM	1	2	3
Power Supply Network	VAC	230-400-480VAC 3Ph		
Supply Voltage Min/Max	VAC	230..480VAC ±15% - 50/60Hz		
DC Supply Min/Max (DC-BUS)	VDC	320..760 VDC		
Logic Power Supply	VDC	24VDC ± 20%		
Rated Current	Arms	5	15	30
Peak Current for 5 seconds	Arms	15	45	90
Rated Output Power	kW	2	6	12
Output Frequency	Hz	0..300	0..300	0..300
Switching Frequency	kHz	8	8	8
Internal Braking Resistor	W	NO	NO	NO
Output for Optional External Braking Resistor		SI	SI	SI
Suggested Optional External Braking Resistor		RF62R 1300W	RF39R 1300W	RF18R 2000W
Built-in EMC Filter		NO	NO	NO
Dynamic Forced Ventilation		SI	SI	SI
Dimensions		T1	T2	T3
Approximate Weight	kg	2,4	4	7,3
Safety Functions		STO - Safe Torque Off: IEC61800-5-2:2007 - SIL2 Cat.0: EN61508:2001 (EN954-1:1996)		
Operating Temperature		rom 0°C to +40°C, max 0 ÷ 55°C; derate from 40°C to 55°C		
Operating Relative Humidity		From 5% to 85% non-condensing		

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