MCD Epos P compact drive

MCD EPOS P, compact drive with integrated programmable positioning controller

Maxon motor AG specializes in the development, manufacturing and sales of high quality drive components and systems under the trade mark maxon motor. All key components are manufactured in-house with custom design machinery. Our most important key technologies are three winding processes, motor manufacture and gearhead production as well as electronics, magnetic encoder components and the application of high-tech ceramics.

Maxon's compact drives feature controllers, sensors and motors in a modern aluminum casing. The use of existing maxon products with an adapted design results in robust, space-saving drive solutions with high power density. The decentralised concept of these intelligent drives minimizes the use of centralized controllers.

The combination of the brushless DC motor (maxon EC motor), digital MR encoder and the fully digital EPOS P positioning controller results in a highly dynamic, maintenance-free positioning drive with excellent functionality and high efficiency. The MCD EPOS P is equipped with a processor and memory for standalone operation. Up to 127 further CANopen devices can be controlled by the device. Planetary gearheads can be selected from the maxon gear pro-gramme as an option for greater torque.

The MCD EPOS P is fitted with several opto-coupled inputs and outputs. Sensor signals and events can be evaluated directly in the drive. Cable lengths are shorter, thus reducing susceptibility to interference. Drive programming complies with the IEC 61131-3 standard using the powerful "EPOS Studio" tool. The integration of the motion control library reduces program complexity and development costs.

Software features

- Windows based integrated development environment tool
- IEC 61131-3 programming languages (ST, FBD, IL, LD, SFC)
- IEC 61131-3 standard library
- Motion control function block library
- Maxon utility function block library
- CANopen function block library
- User function block library capability
- Network variables and data exchange
- Online-debugging with break points and watch variables
- Axes configuration and parameterization
- Online help

Characteristics

- 32-bit host processor, 60 MHz
- 512 KiB memory, with 256 KiB free user program memory
- Typical 2,5 ms / 5 000 instructions (IL)
- 512 Byte non-volatile memory
- Digital signal processor for motion control

Product features

- CANopen profile position-, profile velocity- and homing mode
- Position-, velocity-, curent-, and step direction mode
- Position regulation with velocity- and acceleration feed-forward
- Sinusoidal and trapezoidal motion profiles
- Smart multi-purpose digital I/Os configurable as: positive and negative limit switch, home switch, position marker, enable and ready output
- General purpose digital I/Os
- Communication via CAN and/or EIA-232 (RS-232)
- Gateway EIA-232 (RS-232) to CAN for service
- Built-in data recorder, auto tuning of controller parameters
- Windows-based graphical user interface for configuration and auto-tuning free of charge
- IEC 1131 libraries for different PLC free of charge

Product family

- MCD EPOS P 60 W 12 V to 50 V, nominal torque 54 mNm

Applications

- Automation
- Electronic production
- Packing equipment
- Materials handling

Contact

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Features

NMT	NMT slave NMT master
Error control	Node guarding Life guarding Heartbeat producer

Boot-up	Yes
Node ID range	From 1 to 127
Node ID	Software switch LSS-services Proprietary
CANopen bit-rates	20 kbit/s 50 kbit/s 125 kbit/s 250 kbit/s 500 kbit/s 800 kbit/s 1 000 kbit/s
Type of bit-rate adjustment	Software switch LSS-service (defined in CiA 305) Proprietary
RPDOs	32
TPDOs	32
PDO modes	Event-triggered Synchronous (cyclic)
PDO linking	Yes
PDO mapping	Variable
SDO server	1
SDO client	32
Emergency producer	Yes
Emergency consumer	32 message(s)
Sync producer	Yes
Sync counter	No
Time stamp	No
Additional functions	LSS slave
CANopen version	CiA 301 V 4.1
Frameworks	CiA 302 CiA 305
Device profiles	CiA 402: CANopen drives and motion control device profile CiA 405: CANopen interface and device profile for IEC 61131-3 programmable devices
Certified	No
Availability	In stock