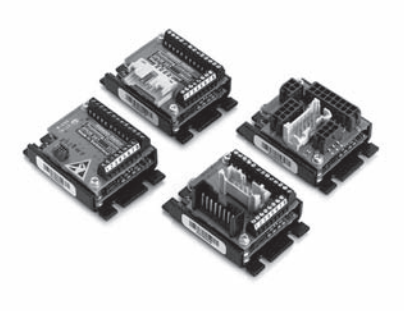


# EPOS Positioning Control Units Summary

Online commanded



## EPOS 24/1

- Several device variations allows the operation of various maxon DC and EC micromotors of up to 20 watts
- Point to point control (1 axis)
- Combination of several drives via CAN Bus
- CANopen
- 6 digital inputs (TTL level)
- 2 digital outputs
- 2 analogue inputs (10-bit ADC)
- Miniaturised module design

Details page 302/303

Slave version (online commanded) using CAN Master (EPOS2 P, PC, PLC, SoftPLC, etc.) or PC via RS232 interface.

- Typical applications:
- Small apparatus/appliances
  - System automation tasks
  - Drive technology

**Order Number**  
**EPOS 24/1**                      **280937, 317270**  
**302267, 302287**

Online commanded



## EPOS2 Module 36/2

- DC and EC motors up to 72 W
- Point to point control unit (1 axis)
- Interpolated position mode (PVT)
- Combination of several drives via CAN Bus
- CANopen
- 6 digital inputs (TTL level)
- 3 digital outputs
- 2 analogue inputs (11-bit ADC)
- Miniaturized open electronics board (OEM)

Details page 302/303

Slave version (online commanding) using CAN Master (EPOS2 P, PC, PLC, SoftPLC,  $\mu$ -Processor, etc.) or PC via USB <sup>1)</sup> or RS232 interface <sup>1)</sup>requires external transceiver

- Typical applications:
- Small apparatus/appliances
  - System automation tasks
  - OEM customer

**Order Number**  
**EPOS2 Module 36/2**    **360665**

Online commanded



## EPOS2 24/5

- DC and EC motors up to 120 W
- Point to point control unit (1 axis)
- Interpolated position mode (PVT)
- Combination of several drives via CAN Bus
- CANopen
- 6 digital inputs (TTL and PLC level)
- 4 digital outputs
- 2 analogue inputs (12-bit ADC)
- Compact module design

Details page 302/303

Slave version (online commanding) using CAN Master (EPOS2 P, PC, PLC, SoftPLC, etc.) or PC via USB or RS232 interface

- Typical applications:
- Tool building
  - Production equipment
  - System automation tasks

**Order Number**  
**EPOS2 24/5**                      **367676**

Online commanded



## EPOS2 50/5

- DC and EC motors up to 250 W
- Point to point control unit (1 axis)
- Interpolated position mode (PVT)
- Combination of several drives via CAN Bus
- CANopen
- 11 digital inputs (optically isolated)
- 5 digital outputs and 1 analogue output
- 2 analogue inputs (12-bit ADC, differential)
- Compact module design

Details page 302/303

Slave version (online commanding) using CAN Master (EPOS2 P, PC, PLC, SoftPLC, etc.) or PC via USB or RS232 interface

- Typical applications:
- Tool building
  - Production equipment
  - System automation tasks

**Order Number**  
**EPOS2 50/5**                      **347717**

Online commanded



**NEW**

## EPOS2 70/10

- DC and EC motors up to 700 W
- Point to point control unit (1 axis)
- Interpolated Position Mode (PVT)
- Combination of several drives via CAN Bus
- CANopen
- 7 digital inputs (optically isolated)
- 3 digital inputs (differential)
- 3 digital outputs (optically isolated)
- 1 digital output (differential)
- 1 digital output
- 2 analogue inputs (12-bit ADC, differential)
- robust design

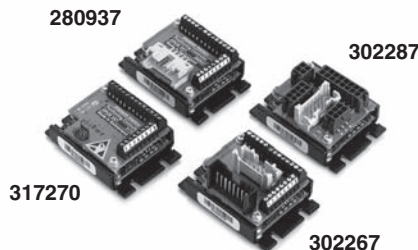
Details page 302/303

Slave version (online commanding) using CAN Master (EPOS2 P, PC, PLC, SoftPLC, etc.) or PC via USB or RS232 interface

- Typical applications:
- Production equipment
  - System automation tasks
  - Plant construction

**Order Number**  
**EPOS2 70/10**                      **375711**

# EPOS Positioning control unit Data



## EPOS 24/1

Matched with DC brush motors with encoder or brushless EC motors with Hall sensors and encoder up to 20 watts.

## EPOS2 Module 36/2

The EPOS2 is an OEM positioning controller plug-in module for brushed DC motors with encoder or brushless EC motors with Hall sensors and encoder up to 72 watts.

Controller versions	Slave version	Slave version
<b>Electrical Data</b>		
Operating voltage $V_{CC}$	9 - 24 VDC	11 - 36 VDC (optional 0 - 36 VDC)
Logic supply voltage $V_C$ (optional)		11 - 36 VDC (optional 5.0 VDC)
Max. output voltage	$0.98 \times V_{CC}$	$0.9 \times V_{CC}$
Max. output current $I_{max}$ (<1 s)	2 A	4 A
Continuous output current $I_{cont}$	1 A	2 A
Sample rate of PI - current controller	10 kHz	10 kHz
Sample rate of PI - speed controller	1 kHz	1 kHz
Sample rate of PID - positioning control	1 kHz	1 kHz
Max. speed (1 pole pair)	25 000 rpm	25 000 rpm (sinusoidal); 100 000 rpm (block)
Built-in motor choke per phase	150 $\mu$ H / 1 A (DC / EC motors) 300 $\mu$ H / 0.7 A (EC 10 flat)	10 $\mu$ H / 2 A
<b>Input</b>		
Hall sensor signals	H1, H2, H3	H1, H2, H3
Encoder signals	A, A\, B, B\, I, I\ (max. 1 MHz)	A, A\, B, B\, I, I\ (max. 5 MHz)
Digital inputs	6 digital inputs	6 digital inputs
Analogue inputs	2 analogue inputs 10-bit resolution, 0 ... +5 V	2 analogue inputs 11-bit resolution, 0 ... +5 V
CAN-ID (CAN node identification)	configurable with DIP switch 1 ... 4	set by external wiring
<b>Output</b>		
Digital outputs	2 digital outputs	3 digital outputs
Encoder voltage output	+5 VDC, max 100 mA	+5 VDC, max 100 mA
Hall sensor voltage output	+5 VDC, max. 30 mA	+5 VDC, max. 30 mA
Auxiliary voltage output	+5 VDC, max. 10 mA	
<b>Interface</b>		
RS232	RxD; TxD (max. 115 200 bit/s)	RxD; TxD (max. 115 200 bit/s)
CAN	high; low (max. 1 Mbit/s)	high; low (max. 1 Mbit/s)
USB 2.0		<sup>7)</sup> external USB transceiver required
<b>Indicator</b>		
LED green = READY, red = ERROR	green LED, red LED	green LED, red LED
<b>Ambient temperature / Humidity range</b>		
Operation	-10 ... +45°C	-10 ... +45°C
Storage	-40 ... +85°C	-40 ... +85°C
No condensation	20 ... 80 %	20 ... 80 %
<b>Mechanical data</b>		
Weight	Approx. 45 g	Approx. 10 g
Dimensions (L x W x H)	55 x 40 x 25 mm	54.5 x 28.2 x 9 mm
Mounting threads	Flange for M3-screws	PCB edge connector with locking mechanism
<b>Order Number</b>		
	<b>280937</b> EPOS 24/1 for DC motors <b>317270</b> EPOS 24/1 for EC 10 flat <b>302267</b> EPOS 24/1 for EC 16 / EC 22 motors <b>302287</b> EPOS 24/1 for DC / EC motors	<b>360665</b> EPOS2 Module 36/2
<b>Accessories</b>		
	<b>309687</b> DSR 50/5 Shunt regulator	<b>363407</b> EPOS2 Module Starter-Kit
	Order accessories separately, see page 310	Order accessories separately, see page 310