

HIGHLIGHTS

- Up to 75% more power
- Field-oriented control
- Multi-protocol connectivity
- Integrated encoder
- IP30 and IP65 optional

PD2-E/EB

Smart servos with integrated controllers

The PD2 smart servos combine a NEMA 17 motor, a motor controller and a high-resolution absolute encoder in a single unit. Available in both stepper and BLDC versions, they offer up to 75% more rated torque and power compared to the previous generation. Their compact design reduces system complexity and simplifies machine integration.



PD2-E (IP65)



PD2-EB (IP30)

Powerful and precise

The stepper versions offer holding torques of up to 80 Ncm, while the BLDC variants achieve rated torques of up to 44 Ncm, a rated power of up to 138 W, and rated speeds of up to 3,000 rpm. Real-time position capture via touch probe and IP30 or IP65 protection complete the feature set.

Ready for integration

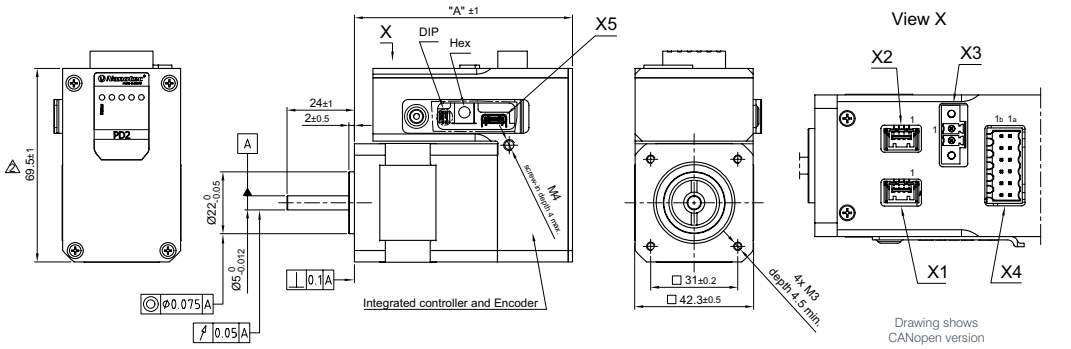
The integrated NanoJ programming environment allows standalone operation, while CANopen, EtherCAT and Modbus RTU faciliate integration into existing automation systems. Field-oriented control (FOC), peak current capability, and digital I/Os with push-pull functionality support a wide range of motion requirements.

Broad application range

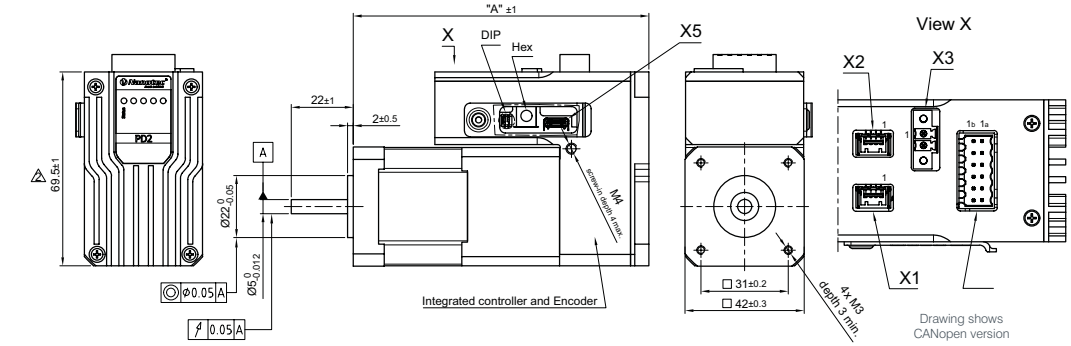
The PD2 smart servos are designed for a variety of automation applications, including packaging, intralogistics systems, textile and printing machinery, assembly automation and general machine building.

CANopen EtherCAT Modbus

PD2-E



PD2-EB



	PD2-E	PD2-EB
Motor type	stepper motor	brushless DC motor
Size	42 mm	42 mm
Length	74.7 – 99.5 mm	98 – 145 mm
Rated power	–	53 – 138 W
Holding torque	28 – 80 Ncm	–
Rated torque	–	17 – 44 Ncm
Rated speed	–	3,000 rpm
Operating voltage	12 – 57.6 V	12 – 57.6 V
Digital inputs	4 (5/24 V switchable)	4 (5/24 V switchable)
Analog input	2 (0 – 24 V, 12-bit)	2 (0 – 24 V, 12-bit)
Digital outputs	2 (5/24 V push-pull switchable, 100 mA)	2 (5/24 V push-pull switchable, 100 mA)
Encoder	single-turn (16 Bit) multi-turn (single 17 Bit/multi 16 Bit)	single-turn (16 Bit) multi-turn (single 17 Bit/multi 16 Bit)
Fieldbuses	CANopen, EtherCAT, Modbus RTU	CANopen, EtherCAT, Modbus RTU
Service interface	USB-C	USB-C

Nanotec Electronic GmbH
Kapellenstrasse 6 | 85622 Feldkirchen | Germany
+49 89 900 686-0 | info@nanotec.de
www.nanotec.com

© 2026 Nanotec Electronic GmbH. All rights reserved. 11.2026 (AA)