

New Kollmorgen stepper drive optimises precise control in a compact footprint

29 June 2023

Kollmorgen has released a new stepper drive, providing smooth motion control at both full and micro-stepping positions at up to 25,600 steps per revolution. The P80630-SDN stepper drive controls 2-phase hybrid stepper motors and features a high power density, offering up to 7.8A peak in a package just 26mm wide. Designed for low speed, high precision point-to-point motion control for fixed loads, the P80630-SDN is suitable for applications including labellers, indexers, CNC machines, packaging machines, and pumps. The new stepper drive is distributed and supported in the UK by INMOCO and is the first drive to be released in Kollmorgen's new P8000 stepper drive series.

The new P80630-SDN stepper drive gives a performance update to Kollmorgen's existing 6410 and P70530 stepper drives. The new drive has an input voltage range of 24-75VDC and provides step and direction control up to 5.5 Arms (Amps root-mean-square) current per phase and 7.8A peak. With step resolution ranging from full-step to 1/128 micro-stepping, the P80630-SDN achieves 200 to 25,600 steps per revolution, providing precise open loop control without requiring the cost or footprint of an encoder. The stepper drive supports conventional single-ended or differential step and direction interfaces (user-provided pulse train required) or CW/CCW command inputs.

The P80630-SDN also increases the power-to-weight ratio compared to its predecessors, with 10% greater output current in a 60% smaller package that is up to 34mm shorter in height compared to the Kollmorgen 6410. Without connectors, the stepper drive measures 26mm wide, 75.5mm deep, and 108mm high, and weighs just 200g.

Precise performance at all speeds is provided out-of-the-box without the need for electronic damping control switches. With no programming required, easy set-up is achieved via Dip-switch selectable settings, including motor phase current, idle current reduction (settable from 50% to 90%), and step resolution. Dedicated enable input and fault output provide control of the drive's power stage and error monitoring. Step, direction, and enable comprise the drives three digital inputs, with fault as the single output. Meanwhile, wiring installation is achieved via screw terminals and the drive meets CE, RoHS and REACH approvals.

INMOCO can supply the new stepper drive with matched Kollmorgen hybrid stepper motors, and the P80630-SDN integrates with Kollmorgen and third-party step-and-direction motion controllers. The upcoming release of further P8000 series stepper motors will also feature fieldbus protocol integration, as well as expanded features.

INMOCO's engineers are experienced in working with OEM design teams to achieve the right specification for their motion control application, and can advise on, and supply, a variety of complimentary devices and components. The INMOCO team also interfaces directly with Kollmorgen's engineers to ensure provision of the latest guidance and support.

Image Captions:



Image 1: Without connectors, the new P80630-SDN stepper drive measures 26mm wide, 75.5mm deep, and 108mm high, and weighs just 200g.

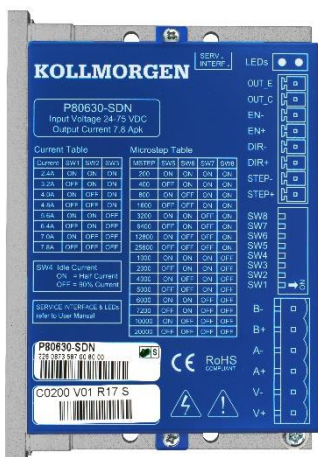


Image 2: The new P80630-SDN stepper drive is distributed and supported in the UK by INMOCO and is the first drive to be released in Kollmorgen’s new P8000 stepper drive series.

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About INMOCO

Established in 1987, INMOCO now offers an extensive range of motion control equipment including: compact servo amplifiers, position controllers, stepper motors, PLC controllers, linear motors, sensors, electric actuators and gearheads. INMOCO's product portfolio is supported by extensive applications and technical expertise, in addition to customer-specified electro-mechanical development and sub-assembly services; including calibrating and testing in a class 10,000 clean room facility.

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