



KOLLMORGEN

SqDC4

Low-Voltage 4-Axis Brushed DC Motor SynqNet® Drive

 **DANAHER**
MOTION

Helping you build a better machine, faster.

DESCRIPTION

The SqDC4 is a low-voltage 4-Axis brushed DC motor SynqNet® Drive. This product saves space on your machine, and lowers the system cost by utilizing shared components. The SqDC4 operates on a common 42VDC for power Bus, and a separate 24VDC logic power supply. Separation of Bus and Logic power allows bus power control to be incorporated into the machine safety chain, while not losing application information or real-time monitoring data during E-stop events. Each axis is capable of individually sourcing 3A RMS continuous and 5A RMS peak to the motor. The SqDC4 is designed as an open loop voltage closed loop position drive with instantaneous peak current limiting, and servo control executed by the centralized SynqNet® motion controller. Compensation of the drive for use with a specific motor is achieved by programming a set of parameters that reflect the physical characteristics of the electro-mechanical system. Extensive I/O support is provided, including dedicated Home, Over-travel limits, brake control signals, and general-purpose opto-isolated. In addition to status information being accessible via SynqNet®, 2 LEDs provide drive status display.

SynqNet®

SynqNet® (<http://www.synqnet.org>) is an all-digital motion control interface for connections between controllers and drives, I/O devices, and other custom nodes. SynqNet® motion network is based on the industry standard IEEE802.3 physical layer for robust electrical isolation and cable/connector availability with an open data layer implemented by Motion Engineering Inc. The 100BASE-T media system is based on specifications published in the ANSI TP-PMD physical media standard. The 100BASE-T system operates over two pairs of wires, one pair for receive-data signals and the other pair for transmit-data signals.

Applications

- Painting machine, Plasma-cutting machine, Packaging machine, Textile

FEATURES

Feedback

- Differential and Single Ended Incremental encoder and index pulse (A/B/I)
- SSI Absolute Encoder

Servo Control

- Digital voltage loop, running at 10 kHz
- 4 quadrant instantaneous current limiting programmable between 0-5Amps

Machine I/O (individual for each axis)

- Home digital input opto-isolated
- Two over-travel limits digital inputs opto-isolated
- Enable digital output opto-isolated

Controller I/O

- 4 general purpose digital inputs opto-isolated
- 4 general purpose digital outputs opto-isolated

Real-Time data monitoring

- Bus voltage
- Drive temperature

Robust Design

- Self-protecting power modules
- Protection against short circuit, over-voltage, under-voltage, drive over-temperature, over-current Short circuit Phase to Chassis and feedback loss

Rating

| DC Input [VDC] | Output Continuous Current Per Phase (RMS/Phase) @ 45°C | Output Peak Current Per Phase (RMS/Phase) | |
|----------------|--|---|---------------------------|
| 42 | 1.5 | 5 | |
| 42 | 3 | 5 | with additional heat sink |

24VDC @ 0.5 Amp logic input supply to separate from main supply

Mechanical Dimensions

255 mm (length) X 55mm (height) X 120 mm (depth)

Ordering Information

SqDC 4

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