

AKD[®] 2G Servo Drives

The Next Generation of Servo Drives Offering Industry Leading Performance with a Compact Footprint



KOLLMORGEN[®]

Because Motion Matters[™]

Powerful, Yet Simple. Integrated Safe Motion Increases Ease-of-Use!

The newest member of the AKD family is our most powerful yet:

The new AKD2G servo drive introduces the Kollmorgen Servo-on-a-Chip:
A powerful compute engine that can control 2 axes simultaneously and up to 28 I/O. While we were at it, we streamlined the design by optimizing the AKD2G for single-cable motors.

Flexible

- One and two axis variants available
- Modular design allows the user to specify only the features needed
- Supports a variety of feedback devices—SFD & HIPERFACE® DSL standard;
 - optional feedbacks include EnDat2.2, BiSS 1.0, Analog Sine/Cos encoder, incremental encoder, resolver and more
- Multiple bus choices for system optimization, including EtherCAT®, and CANopen®
- SIL-qualified over-voltage, current, and temperature detection provided for added dependability
- Dual-channel STO for each axis
- Industry-leading power density for greater flexibility in mounting
 - Fits into a 10" deep control panel

Easy to Use

- Plug-and-play compatibility with Kollmorgen controls and motors
- WorkBench GUI, acclaimed for customer experience and usability
- Hybrid Motor-Power connector is optimized for single-cable motors:
 - No adaptors, no D-sub, no splitters
- Cage-clamp spring terminal connectors on I/O allow for fast and easy installation
- Optically-isolated I/O reduces noise, and eliminates need for additional hardware

Fast

- Accommodates changing load conditions immediately:
 - Current loop updates in 1.28 μ s, nearly 50x the speed of our nearest competitors
 - Velocity and position loops lead the market at 62.5 μ s and 125 μ s, respectively
- Servo on a Chip™ includes dual-core ARM™ A9, 800 MHz μ P, 1.5 M gates
- AI-based auto-tuning with a click of a button gets you started quickly
- Wizard-based tuning uses advanced Bode Plot tool to help you efficiently manual-tune when desired
- Fast data acquisition with TCP/IP Ethernet service channel



Dual-Axis AKD2G Servo Drive



AKD[®] 2G Means Unparalleled Connectivity

Base Model:

The base model of Kollmorgen's AKD2G includes all of the performance described on page 2, and is optimized to interface to a single-connector motor with Kollmorgen's Smart Feedback or HIPERFACE[®] DSL. It also offers 16 I/O, 160x128-pixel graphical display, removable SD card, and your choice of motionbusses.

Extended I/O Variant

The extended I/O variant offers everything on the base model, plus I/O expansion.

This I/O expansion includes the 15-pin D-sub for legacy feedbacks or dual-loop operation; it also includes an additional 12 I/O for a total of 28 I/O. The options fit in the same package as the base model.



Dual-Axis AKD2G 480 Vac Dual-Axis AKD2G 240 Vac
(shown with optional feedback and I/O expansion)

Modes of Operation

- Analog (torque or velocity)
- Step-and-direction
- Programmable indexing
- Motionbus control



General Specifications

120/240 Vac	Continuous Current	Peak Current	Typical Shaft Power	Internal Regen		Height	Width	Depth	Depth w/ cable bend radius
	(Arms)	(Arms)	(kW)	(W)	(Ω)	mm (in)	mm (in)	mm (in)	mm (in)
AKD2G-6V03S	3	9	1	100	15	233 (9.15)	75 (2.95)	180 (7.09)	225 (8.86)
AKD2G-6V06S	6	18	2						
AKD2G-6V12S	12	30	4						
AKD2G-6V03D	3 & 3	9 & 9	1 & 1						
AKD2G-6V06D	6 & 6	18 & 18	2 & 2						

240/480 Vac	Continuous Current	Peak Current	Typical Shaft Power	Internal Regen		Height	Width	Depth	Depth w/ cable bend radius
	(Arms)	(Arms)	(kW)	(W)	(Ω)	mm (in)	mm (in)	mm (in)	mm (in)
AKD2G-7V03S	3	9	2	100	33	270 (10.6)	75 (2.95)	180 (7.09)	225 (8.86)
AKD2G-7V06S	6	18	4						
AKD2G-7V12S	12	30	8						
AKD2G-7V03D	3 & 3	9 & 9	2 & 2						
AKD2G-7V06D	6 & 6	18 & 18	4 & 4						

Kollmorgen WorkBench, the Perfect Companion for AKD2G

Our simple Graphical User Interface (GUI), Kollmorgen WorkBench, is designed to expedite and streamline the user's experience with the AKD® servo drive. From easy application wizards and reduced math, to a sleek six-channel scope; the user interface is extremely easy to use. Kollmorgen WorkBench supports intuitive access to the exclusive Performance Servo Tuner (PST) available inside AKD. The patented PST makes auto-tuning the AKD high-performance servo drive with world-class Kollmorgen motors very simple.

User-Friendly Environment

Logical flow, colorful icons and easy access simplify interactions with the AKD servo drive. The folder structure allows for instant identification and easy navigation.

Sleek Six-Channel "Real-Time" Software Oscilloscope

The easy-to-use AKD servo drive interface has a sleek digital oscilloscope that provides a comfortable environment for users to monitor performance.

There are multiple options to share data in the format you prefer at the click of a button.

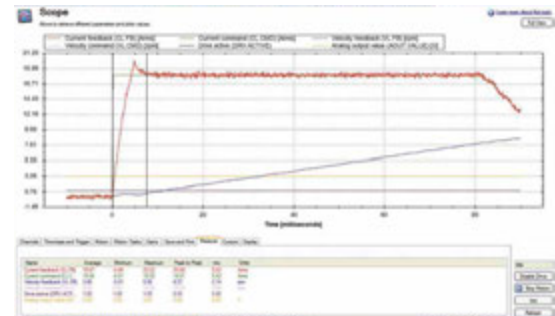
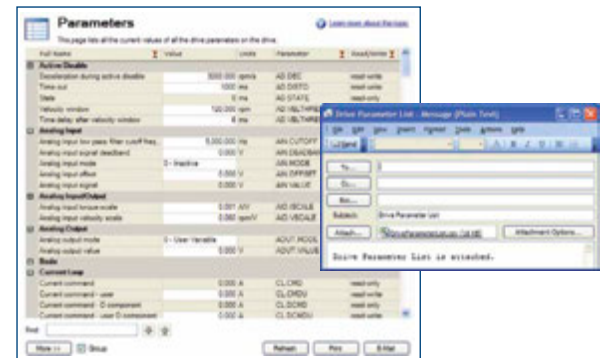
- Save as an image
- Load to an e-mail
- Print

Data-Sharing

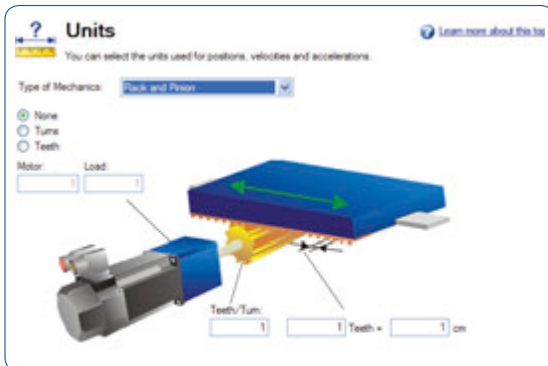
The ease-of-sharing continues in the parameters window. Kollmorgen WorkBench provides the user the easy options of printing or emailing the parameter values at the click of a button.

Application Selection Wizards

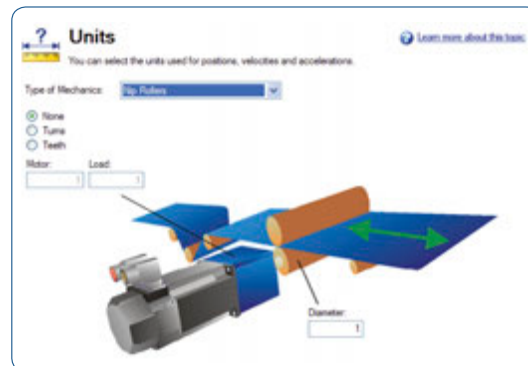
Simplifies set-up by allowing use of machine or application-based units. Nip roller and rack and pinion set-ups shown.



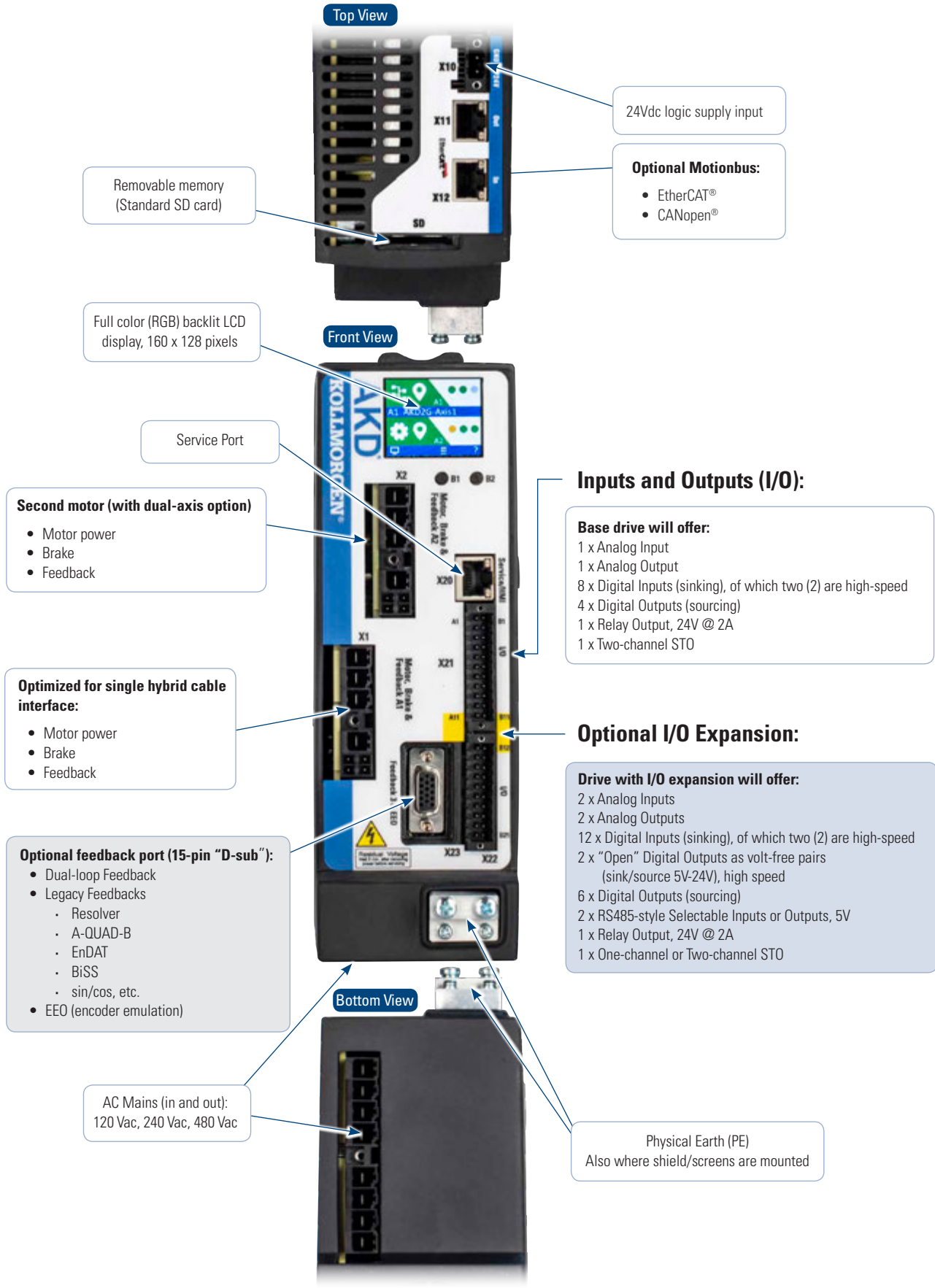
Rack and Pinion Application Selection



Nip Roller Application Selection



AKD[®] 2G Drive Connector Layout



About Kollmorgen

Since its founding in 1916, Kollmorgen's innovative solutions have brought big ideas to life, kept the world safer, and improved peoples' lives. Today, its world-class knowledge of motion systems and components, industry-leading quality, and deep expertise in linking and integrating standard and custom products continually delivers breakthrough motion solutions that are unmatched in performance, reliability, and ease-of-use. This gives machine builders around the world an irrefutable marketplace advantage and provides their customers with ultimate peace-of-mind.

For assistance with your application needs in North America, contact us at: 540-633-3545, support@kollmorgen.com or visit www.kollmorgen.com for a global contact list.



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