KOLLMORGEN®

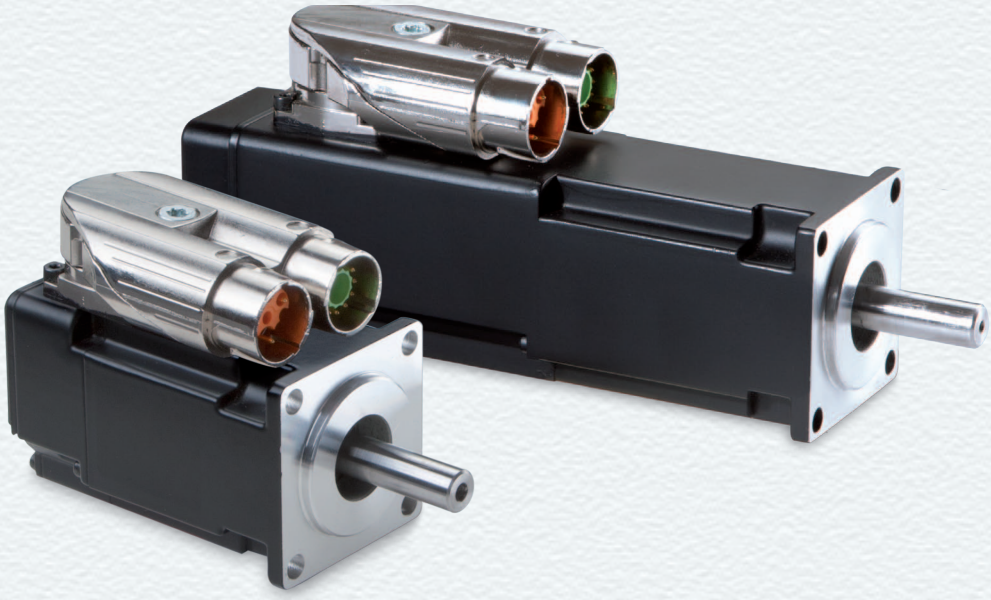
Because Motion Matters™

The most versatile synchronous servomotor in its performance class

The AKM1 with three new options for intelligent solutions

- **Absolute encoder: Saves time-consuming reference runs**
- **Standstill brake: Reliably holding position at any time**
- **ytec® - Connection technology: Simplest installation for minimal space requirement**

The smallest synchronous servomotor from Kollmorgen now even more flexible: The build series AKM1 can be supplied as from March 2012 optionally with holding brake, various feedback systems including multi-turn absolute encoders as well as ytec® plug-in connectors. Machine constructors now have at their disposal an extremely compact and integrated solution for sophisticated movement tasks like vertical axes, positioning and also lightweight and space-saving drives. High degree of efficiency, up to 8000 revs per minute and high dynamics are further compelling performance data of this compact power pack.



Extended equipment options and specifications

- Holding brake with low moment of inertia and high holding torque
- Optionally available with single-turn or multi-turn absolute encoder with HIPERFACE® interface
- Revolutions range up to 8000 rpm @ 0.41 Nm continuous torque
- Optional ytec® connections technology

Highest operational safety

- Robust construction: Flange and motor housing made from one piece
- Reliable and durable spring pressure brake
- Maintenance-free

Impressive performance data

- Highest energy efficiency as per IEC60034-30 Class IE4
- Exceptional dynamics thanks to integrated, highly permeable permament magnets and correspondingly low moments of inertia
- Excellent silent running thanks to low cogging rates of 1.5 %
- Unsurpassed performance density through design lengths up to 30 % shorter than comparable motors

Universal application

- Wide range of feedback systems (encoder, comcorder/resolver, single- and multi-turn absolute encoder)
- High-performance drives in conjunction with servo amplifiers of series AKD, S300 or S700.
- Ideal for use in handling systems, print machines, textile machines and optical systems.

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AKM1 - for improved drive technology

Multi-turn absolute encoders provide unambiguous positioning data.

The battery-free multi-turn absolute encoder with HIPERFACE® interface measures angles and revolutions and thus determines the precise position in the range up to 4096 revolutions. This eliminates time-consuming reference runs, and in operation the drive positions itself faster and more precisely. This saves time and energy and considerably increases machine efficiency.

Compact design makes for smaller and lighter machines.

The AKM1 scores extremely well with its particularly high power density. The build length of the AKM1 including holding brake is shorter than comparable models so volume and weight are lower. The AKM1 represents compact and lightweight drives, uncompromising in reliability and performance data.

Performance data		AKM11B	AKM12C	AKM13C
Overall size [NEMA / mm]			17 / 40	
Recommended servo amplifier	AKD		X00306	
	S300		S30361	
	S700		S701	
Continuous torque [Nm]		0.18	0.31	0.41
Peak torque [Nm]		0.61	1.08	1.46
Rated speed [rpm]		4000	4000	3000
Maximum speed [rpm]			8000	
Holding torque of the optional brake [Nm]			0.41	
Mass inertia of rotor [kg · cm²]		0.01456	0.02856	0.04256
Mass inertia of absolute encoder [kg · cm²]			+0.001	
Mass inertia of ComCoder [kg · cm²]			+0.0016	
Mass inertia of resolver or SFD [kg · cm²]			+0.00244	
Mass inertia of brake [kg · cm²]			+0.00333	

Dimensions in mm		AKM11	AKM12C	AKM13
Housing □	B		40	
Pitch circle Ø	W		36	
Assembly drilling Ø	C		4.3	
Adaptor* Ø	D		30	
Shaft diameter Ø	J		8	
Shaft length	K		25	
Base length (with ytec® and resolver)	Y	79	98	117
Base length (with cables and resolver)	Y	70	89	108
Brake	Z		+37	
Encoder, ComCoder, SFD	F		+9.5	

* Note: Requires the international fastening type "A". Further fitment forms are available.