



750 W synchronous brushless AC servo motors are used in robot hands, loading and unloading equipment, textile machines. It is a low inertia and high speed model, which is suitable for high dynamic applications. Available feedback systems are 17-bit, 20-bit or 23-bit absolute or incremental, optical or magnetic encoder. Products can be provided with a 24VDC holding brake option.

The EM3A series boasts a low inertia design for extremely-fast response times. These motors are highlighted with the perfect combination of compact size and high torque performance, ensuring unparalleled dynamic response and precision positioning when used together with servo drivers ED3L series. Versatile and powerful, these servo drive systems have a wide range of applications, thanks to its top-tier performance, varied power range, and compact form factor. Elevate your technical operations with the EM3A series servo motors and ED3L servo drive system.

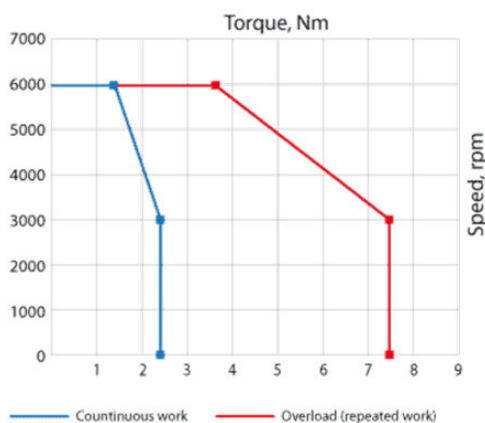
## Technical data

Output power	750 W
Rated speed	3000 rpm
Maximum speed	6000 rpm
Rated torque	2.39 Nm
Maximum torque (for motor models EM3A-08AFA and EM3A-08ATA)	7.17 Nm
Maximum torque (for motor models EM3A-08ALA)	8.37 Nm
Rated current	5.1 A
Maximum current (for motor models EM3A-08AFA and EM3A-08ATA)	16.1 A
Maximum current (for motor models EM3A-08ALA)	19.5 A

## Technical data

Motor inertia (motor without brake)	0.91 kg*cm <sup>2</sup>
Motor inertia (motor with brake)	1.07 kg*cm <sup>2</sup>
Allowable radial shaft load	392 N
Allowable axial shaft load	147 N
Optional brake holding torque	≥3.2 Nm
Optional brake voltage	24 VDC
Weight (motor without brake)	2.6 kg
Weight (motor with brake)	3.2 kg
Flange	80 mm

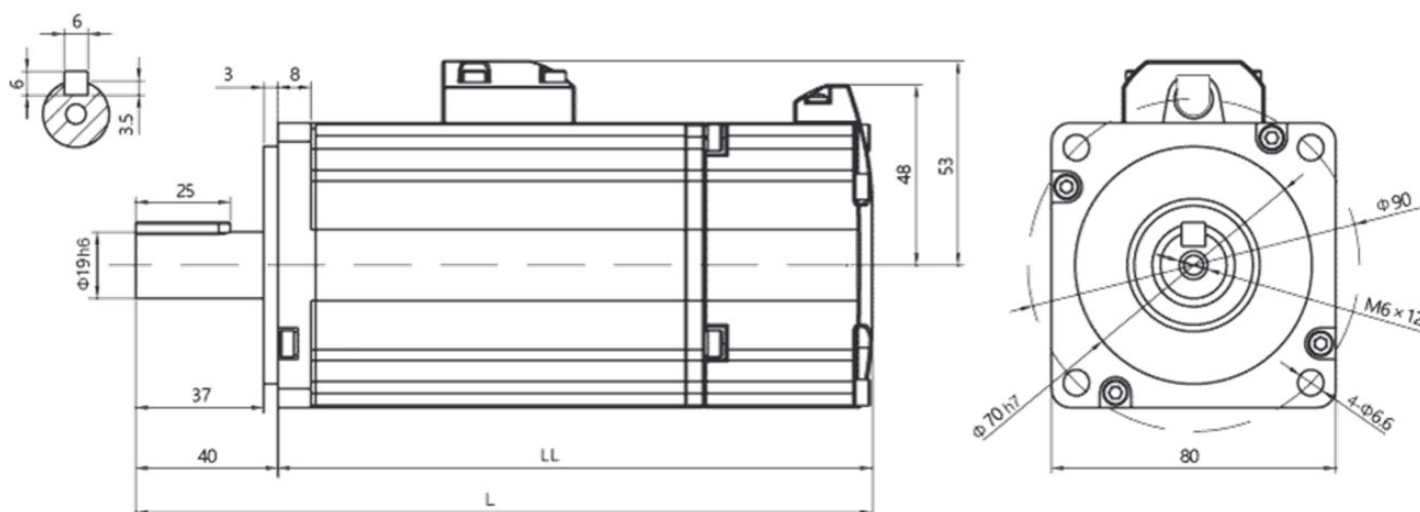
## Speed-torque curves



## Available motor models

Motor model	Encoder	Brake	Waterproof connector	Servo drive	Input drive supply voltage	Note
EM3A-08ALA221	absolute optic encoder, resolution 23-bit (8 388 608 ppr)	-	-	ED3L-08AMA ED3L-08AEA ED3L-08APA	Single phase AC 200V...240V	Not recommended for new projects
EM3A-08ALA241		✓	-			
EM3A-08ALA222		-	✓			
EM3A-08ALA242		✓	✓			
EM3A-08ATA221	absolute magnetic encoder, resolution 17-bit (131 072 ppr)	-	-			
EM3A-08ATA241		✓	-			
EM3A-08ATA222		-	✓			
EM3A-08ATA242		✓	✓			
EM3A-08AFA221	Incremental optic encoder, resolution 20-bit (1 048 576 ppr)	-	-			
EM3A-08AFA241		✓	-			
EM3A-08AFA222		-	✓			
EM3A-08AFA242		✓	✓			

## Dimensions of AC servo motor EM3A-08



Note: The values in parentheses represent the values of motors with brakes

Motor model	L, mm	LL, mm
EM3A-08ALA22x	151	111
EM3A-08ALA24x	184	144
EM3A-08ATA22x EM3A-08AFA22x	168	218
EM3A-08ATA24x EM3A-08AFA24x	201	161

