

Orientalmotor

Servo Motor **AZX Series**

Battery-Free Absolute Encoder Equipped Motor
Standard Type / **PS** Geared Type 400 W, 600 W

STO (Safe Torque Off)



TÜV SÜD Product Service GmbH





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Servo Motor AZX Series



Standard Type 400W

PS Geared Type 600W

EtherCAT

EtherNet/IP

PROFINET

Servo motor with battery-free absolute encoder

The **AZX** series is equipped with the same battery-free mechanical absolute encoder (ABZO sensor) as the **AZ** series. This is a servomotor specialised for positioning and continuous operation.

■ No external sensors required

As it is an absolute system, there is no need for origin sensors or limit sensors.

Advantages

- High-speed home return + improved home return accuracy
- Cost reduction
- Reduced wiring
- Not affected by external sensor malfunctions

■ Battery-free

Mechanical sensors do not require batteries.

Location information is managed mechanically by the ABZO sensor.

Advantages

- No need to replace the battery
- No need for space to install the battery (free installation of the driver)
- Safe for overseas transport



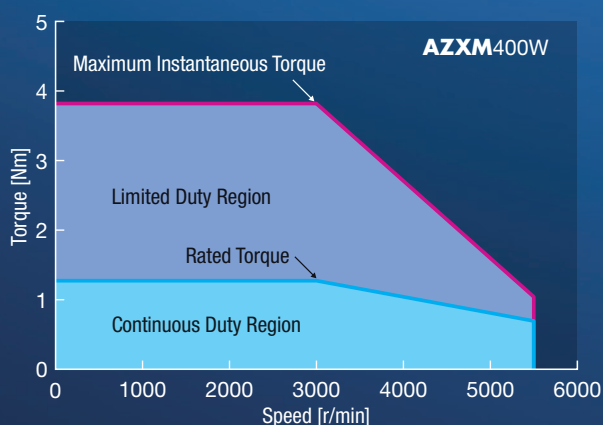
Battery-free absolute encoder (ABZO sensor)

- Mechanical sensor retains position information even when not energised.
- Multi-turn absolute sensor Absolute position can be detected from the reference origin to ± 900 rotations (1800 rotations) on the motor shaft.

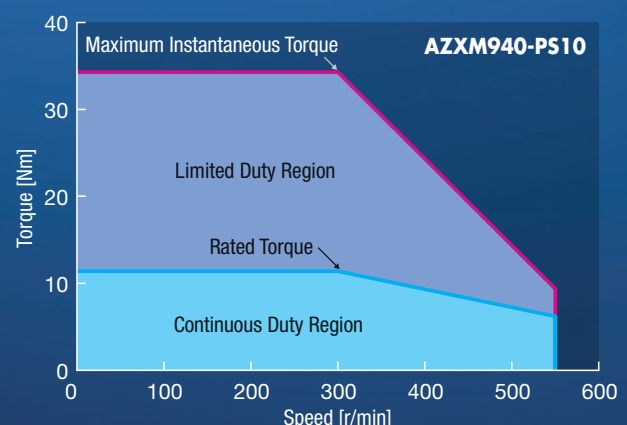
High torque at high speeds

The **AZX** series delivers high torque at high speeds. It is suitable for positioning applications that require moving a big load, with high speed over a long stroke (e.g. driving a ball screw).

Standard Type 400W



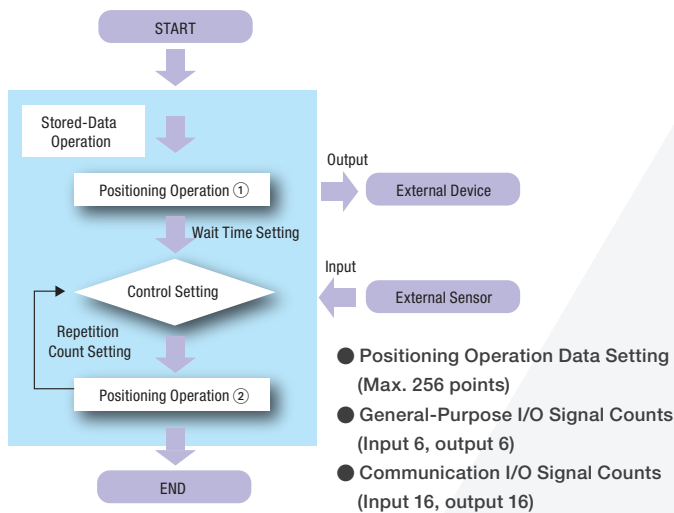
PS Geared Type, 400 W, Reduction 10:1



Sequence Function Simplifies Programming*

AZX Series positioning operations come with a variety of sequence functions, such as a timer setting between operations and linked operation, conditional branching, and loop counting. These can be set using the support software **MEXE02**, which helps simplify the host system's sequence program.

*Only Profinet- and EtherNet/IP-compatible drivers.



Network Compatible Drivers

These drivers are EtherCAT, EtherNet/IP and PROFINET compatible. The host control device and driver are connected with one communication cable, reducing wiring.



Motor Control from Network

- Execution of operations
- Setting various parameters
- Checking alarm information

Simple Wiring

- Wiring with the host control device is consolidated into a single communication cable
- Reduces wiring mistakes and labor

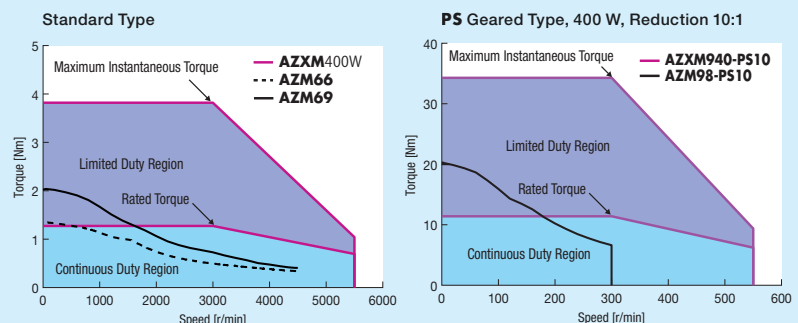
Comparison - Stepping Motor AZ Series vs. Servo Motor AZX Series

AZX for high-speed ranges and AZ Series for low-speed ranges

This is a comparison of the rotational speed-torque characteristics of the **AZX** Series and **AZ** Series. The **AZX** Series has a torque advantage in the high-speed range, and the **AZ** Series has a torque advantage in the low-speed range.

The basic operating method is the same as the AZ Series.

The **AZX** Series has the same basic operating method as the **AZ** Series. When using both the **AZX** Series and **AZ** Series in the same device, you can use them without having to change the operating method.



Wiring	Signal system wiring
Setting	Switch and parameter functions, setting method (MEXE02 used)
Control	Parameter ID when controlling over a network
Operation Functions	Built-in positioning operation function, etc. in the driver

Same Operating Method





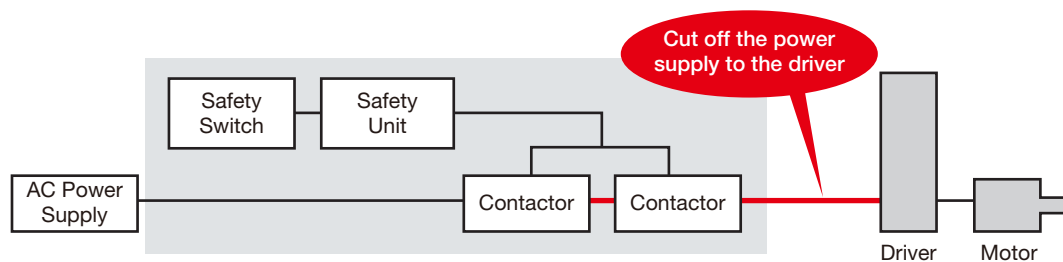
Certification Authority
TÜV SÜD Product Service GmbH

SIL 3, PL e

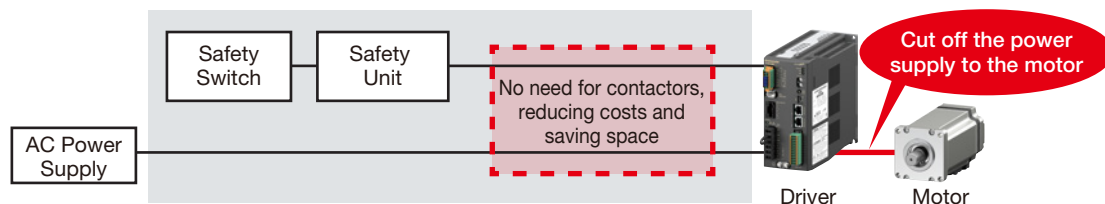
Conforming Standards	Safety Level
IEC 61800-5-2, EN 61800-5-2	SIL 3
IEC 61508-1, EN 61508-1	
IEC 61508-2, EN 61508-2	
ISO 13849-1, EN ISO 13849-1	PL e (Category 3)

Simplified safety functions with STO-equipped driver

Driver without STO



When using **AZX** driver with STO



Product Line

Motors, drivers, and connection cables must be ordered individually.

Product Line

Type	Output Power [W]	Frame Size [mm]	Gear Ratio	Rated Torque [Nm]	Maximum Instantaneous Torque [Nm]	Backlash [arcmin]	Electromagnetic Brake
Standard Type 	400	60	–	1.27	3.82	–	Available
	600	85	–	1.91	Single-Phase: 3.82 Three-Phase: 7.16	–	Available
PS Geared Type  Low Backlash High Torque	400	90	5 - 25	5.72 - 25.7	17.1 - 77.2	15	Available
	600	90,120	5 - 25	8.6 - 43.1	Single-Phase: 17.2 - 86.2 Three-Phase: 32.2 - 162	15	Available

Driver

◇ Single-/Three-Phase 200-240 VAC

Driver


Connection Cable / Flexible Connection Cable

◇ Output Power 400 & 600 W

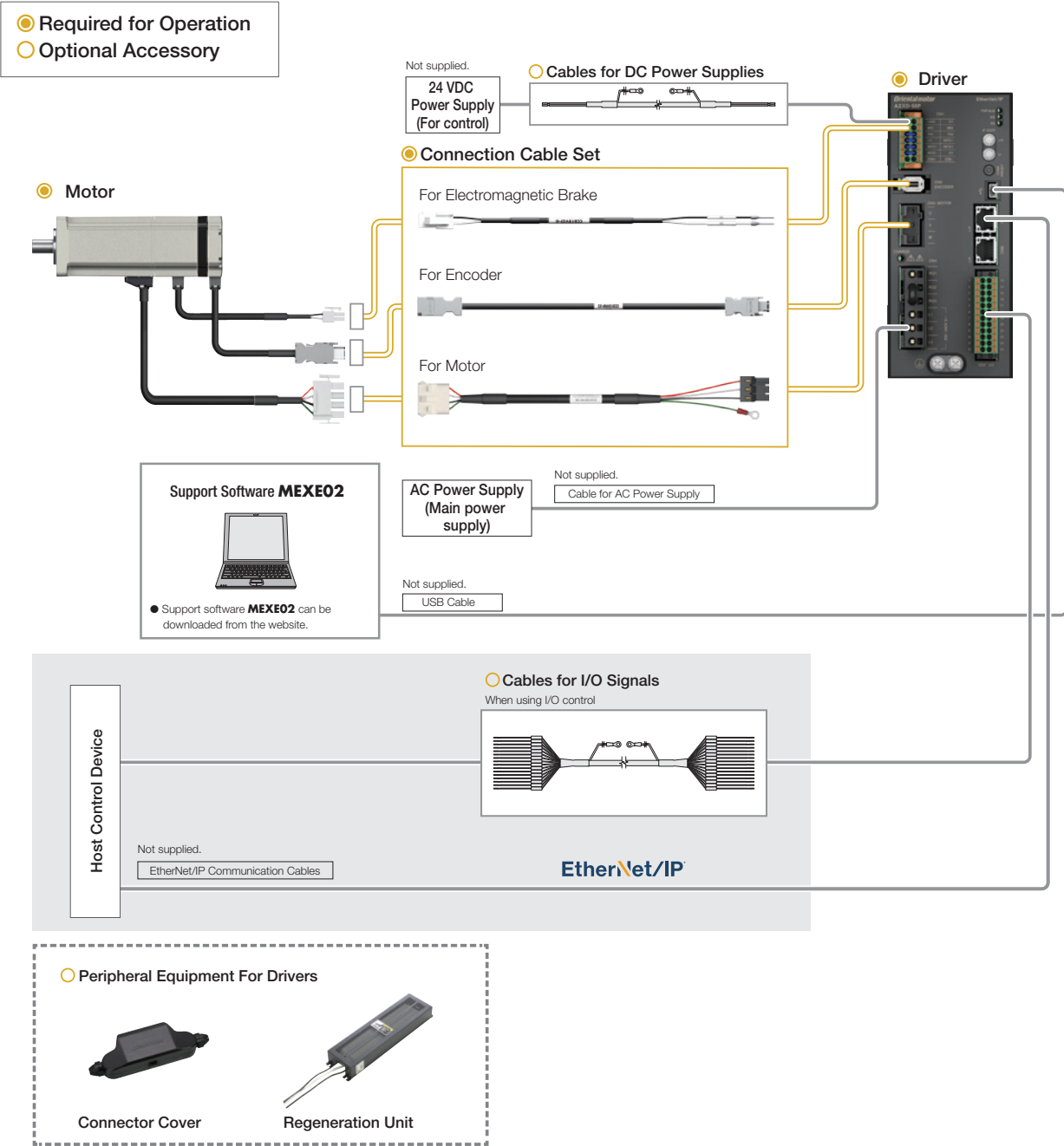
Length [m]

1 - 20

System Configuration

Combination of Standard Type Motor with Electromagnetic Brake and Network Compatible Driver

An example of a configuration using I/O control or EtherNet/IP with an EtherNet/IP compatible driver is shown below. Motors, drivers, and connection cable sets / flexible connection cable sets must be ordered individually.



Example of System Configuration

Motor	+	Driver	+	Cables		+	Peripheral Equipment
AZXM640MC		AZXD-SEP		Connection Cable Set (1 m)	Cable for I/O Signals Connector Type (1 m)		Regeneration Unit
●		●		CC010VXFB	CC06D010B-1		RGB200
○		○					○

● The system configuration shown above is an example. Other combinations are also available.

Note

● The motor cable and electromagnetic brake cable from the motor cannot be connected directly to the driver. When connecting to a driver, use a connection cable.

Orientalmotor

These products are manufactured at plants certified with the international standards **ISO 9001** (for quality assurance) and **ISO 14001** for systems of environmental management).

Specifications are subject to change without notice. This catalogue was published in June 2025.

ORIENTAL MOTOR (EUROPA) GmbH

European Headquarters

Schießstraße 44
40549 Düsseldorf, Germany
Tel: 0211 5206700 Fax: 0211 52067099

Spanish Office

Ronda de Poniente 2, Ed. 12, 2ª planta
28109 Tres Cantos (Madrid), Spain
Tel: +34 919 61 06 76

ORIENTAL MOTOR (UK) LTD.

UK Headquarters

Unit 5, Faraday Office Park,
Rankine Road, Basingstoke,
Hampshire RG24 8AH, U.K.
Tel: +44 1256 347090 Fax: +44 1256 347099

ORIENTAL MOTOR ITALIA s.r.l.

Italy Headquarters

Via XXV Aprile 5
20016 Pero (MI), Italy
Tel: +39 2 93906346 Fax: +39 2 93906348

Customer Service Center

(Support in German & English)

00800 22 55 66 22 *

Mon - Thu: 08:00 - 16:30 CET

Friday: 08:00 - 15:00 CET

*Free Call Europe

info@orientalmotor.de



WWW.ORIENTALMOTOR.EU

EN | DE | UK | IT | ES