

Synchronous Servo motors

Lenze m850

A matter of principle: the right products for every application.

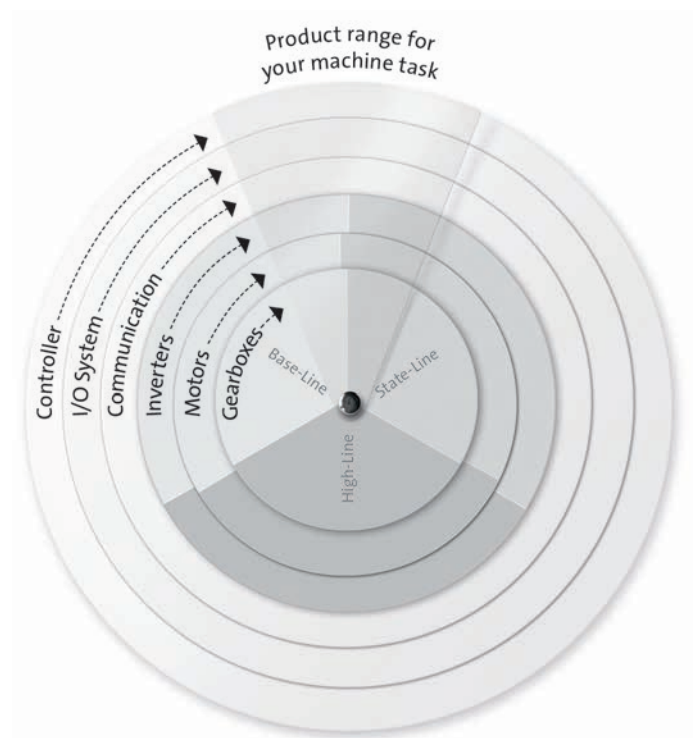
Lenze's extensive L-force product portfolio follows a very simple principle. The functions of our finely scaled products are assigned to the three lines Base-Line, State-Line or High-Line.

But what does this mean for you? It allows you to quickly recognise which products represent the best solution for your own specific requirements.

Powerful products with a major impact:

- Easy handling
- High quality and durability
- Reliable technologies in tune with the latest developments

Lenze products undergo the most stringent testing in our own laboratory. This allows us to ensure that you will receive consistently high quality and a long service life. In addition to this, five logistics centres ensure that the Lenze products you select are available for quick delivery anywhere across the globe. It's as easy as that!



Servo motors - dynamic and robust

With synchronous motors and asynchronous motors, our servo motors offer the right solution, even for highly dynamic, sensitive or compact applications. They are optimally designed for operation with our servo inverters.

Typical application fields

- Positioning
- Robotics
- Packaging technology
- Handling systems
- Environments where hygiene matters.
- And many more

Features

- Robust drive behavior
- Safe control behavior
- Optimal smooth running characteristic
- One Cable Technology (OCT)
- Easy mounting
- Low moments of inertia

The benefits for you

- Optimized for Lenze servo inverters
- Easy mounting
- Highly dynamic, sensitive or compact application areas
- Precise and robust requirements
- High operational reliability
- Solutions for heavy motor loads

Features at a glance

Robust behavior



High degree of protection and/or smooth surfaces enable operation in harsh environments.

Drives with a protection class of up to IP65 can be used there.

Safely controlled



The servo motors are perfectly matched to the i750 cabinet and i950 cabinet servo inverters.

With these servo inverters, the servo motor is safely controlled in every operating state. Both components can be easily adapted to the application using the inverter's auto-tuning function.

Optimal concentricity



Very smooth running characteristics of the servo motors lead to optimal work results.

For example, a film can be processed safely and continuously.

One Cable Technology (OCT)



The MCS and m850 servo synchronous motors are equipped with a digital absolute value encoder (HIPERFACE-DSL®) as standard.

This makes wiring easier and reduces the costs.

Easy to mount



The servo motors are equipped with commercially available connectors as standard.

The bayonet lock enables quick and secure installation. This also enables very short machine down-times when servicing is required.

Low mass inertia





The internal design of the rotors serves the dynamic and precise requirements of the machine.

The materials used ensure precise operation with a low mass moment of inertia.

Servo motors

Is your application dynamic and demanding? With synchronous motors and asynchronous motors, our servo motors offer the right solution, even for highly dynamic, sensitive or compact applications. They are optimally designed for operation with our servo inverters.

You can easily call up a lot of information online when selecting a product:

- Use the EASY Product Finder to configure your required version of the product in next to no time (simply click on the  icon).
- For further technical details such as data sheets, CAD data or EPLAN data, please contact our support team simply click on the  icon).



Product overview

	MCS synchronous servo motor	m850 synchronous servo motor	SDSGA asynchronous servo motor	MCA asynchronous servo motor	MQA asynchronous servo motor
					
Degree of protection	IP5, IP65	IP54, IP65	IP54	IP23s, IP54, IP65	IP23s

Power range

	MCS	m850	SDSGA	MCA	MQA
Standstill torque	0.8 ... 86 Nm	0.18 ... 67 Nm	0.3 ... 2.2 Nm	2.3 ... 290 Nm	76 ... 325 Nm
Rated torque	0.5 ... 72 Nm	0.12 ... 35 Nm	0.27 ... 1.9 Nm	2.0 ... 280 Nm	66.2 ... 296 Nm
Rated speed	1050 ... 6000 1/min	2520 ... 9000 1/min	2700 ... 2825 1/min	550 ... 4160 1/min	550 ... 2935 1/min
Max. torque	2.4 ... 190 Nm	0.7 ... 200 Nm	1.0 ... 8.0 Nm	10 ... 1100 Nm	250 ... 1100 Nm
Power range	0.31 ... 15.8 kW	0.11 ... 9.2 kW	0,075 ... 0.6 kW	0.8 ... 53.8 kW	10.6 ... 60.2 kW

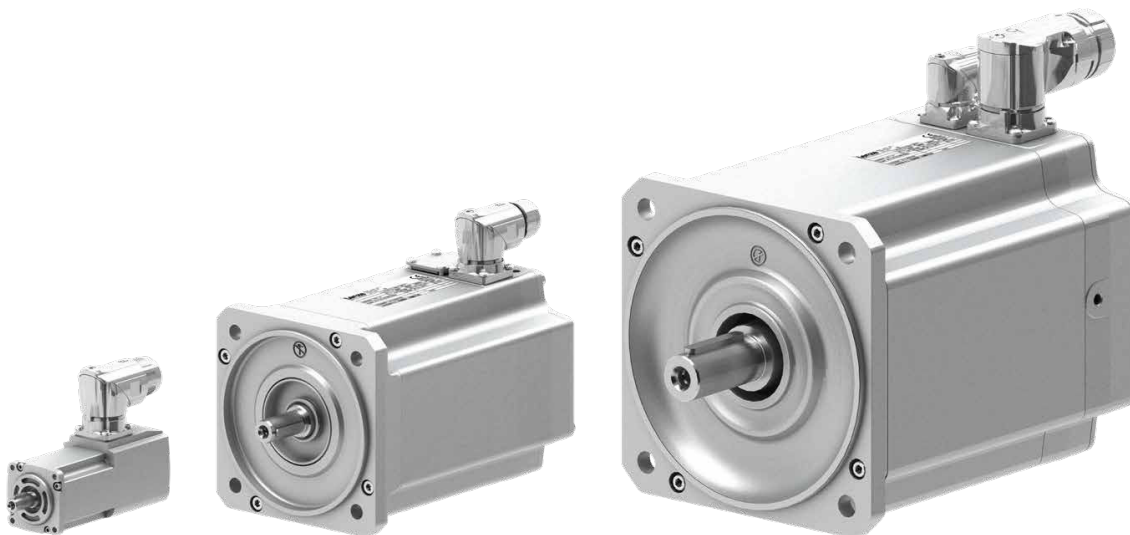
Feedback

	MCS	m850	SDSGA	MCA	MQA
Digital absolute value encoder One Cable Technology (OCT)	✓	✓	-	-	-
Resolver	✓	✓	✓	✓	✓
Resolver for functional safety	✓	✓	-	✓	✓
TTL incremental encoder	✓	-	-	✓	✓
SinCos absolute value encoder	✓	✓	✓	✓	✓
SinCos absolute value encoder for functional safety	✓	✓	-	-	-

Market approvals

	MCS	m850	SDSGA	MCA	MQA
CE	✓	✓	✓	✓	✓
UKCA	✓	✓	✓	✓	✓
UL	✓	✓	✓	✓	✓
CSA	✓	✓	✓	✓	✓
CCC	✓	✓	✓	✓	✓
RoHs	✓	✓	✓	✓	✓

Robust control with high load inertia



The compact m850 servo synchronous motors are particularly suitable for applications in which high inertias are moved and which also require robust drive behavior, e.g. in the field of positioning, robotics and packaging technology as well as for handling systems. In combination with our servo inverters, powerful drive solutions are possible in the torque range up to 200 Nm.

Highlights

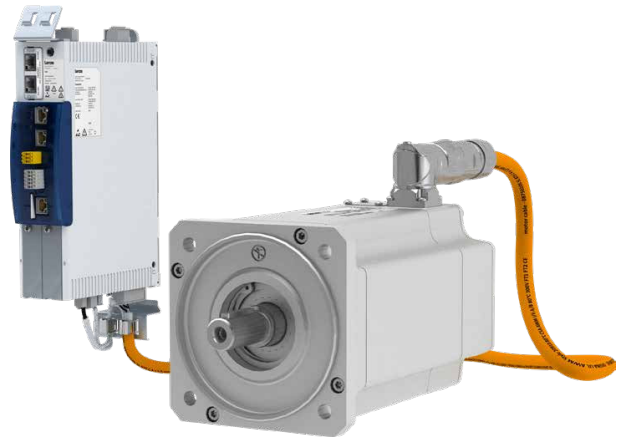
- Compact design
- Easy controllability by an advantageous ratio of the mass inertia of the load and that of the motor.
- Optimal smooth running characteristics for exact work results
- Digital absolute value encoder for One Cable Technology (OCT) or other feedback systems
- Optimized for use as geared motors with g500, g7x0, and g8x0 gearboxes
- Can be combined with the i750 cabinet and i950 cabinet servo inverters

The modular system for your application

The m850 synchronous servo motors are part of the scalable modular system of Lenze servo motors for applications in the medium dynamic range.

Optimized by the following attachments:

- Holding brakes
 - S40 ... S80 (permanent magnet brakes)
 - S120 ... S190 (spring-applied brakes)
- Feedback systems
 - Digital absolute value encoder for One Cable Technology and resolver or encoder
- Connection via connectors
- Extensive range of system cables for motor and feedback connection



Operation with One Cable Technology (OCT)

Technical data

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]
m850-S40/S9000	0.18	0.12	0.72	9000	10000	0.11	0.7	0.5
m850-S40/L9000	0.35	0.21	1.4	9000	10000	0.2	1.2	0.7
m850-S60/S6000	0.7	0.50	2.6	6000	8060	0.325	1.3	1.45
m850-S60/L6000	1.5	0.90	5.8	6000	7350	0.55	0.7	2
m850-S80/S5500	2.8	1.7	10.5	5500	6760	1.0	1.2	3.2
m850-S80/L5500	3.5	2.1	14.0	5500	6680	1.2	2.3	3.85
m850-S120/S3960	6.5	4.8	13.4	3960	6000	2.0	2.8	6.5
m850-S120/M3960	11.0	7.4	29.0	3960	6000	3.1	6.4	9.25
m850-S120/L3960	15.0	9.0	44.0	3960	6000	3.7	7.8	12.0
m850-S140/S3240	11.0	8.5	26.0	3240	6000	2.9	6.3	9.5
m850-S140/M3240	21.0	14.0	53.5	3240	6000	4.8	10.0	14.5
m850-S140/L3240	28.0	17.4	80.0	3240	6000	5.9	12.2	19.5
m850-S190/S3000	27.0	16.0	71.0	3000	4500	5.0	10.3	19.8
m850-S190/M3000	46.0	24.0	120	3000	4500	7.5	15.4	28.5
m850-S190/L2520	67.0	35.0	200	2520	4500	9.2	17.7	41.0

Operation

m850 synchronous servo motor	
Smooth running, axial runout, concentricity	Normal class
Max. vibration velocity	1.6 mm/s
Vibration severity	A
Air humidity	Rel. Humidity 85%
Temperature class	F

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