

## Servo motors



0.18 ... 325 Nm



# 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

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

### Power range

	<b>MCS</b>	<b>m850</b>	<b>SDSGA</b>	<b>MCA</b>	<b>MQA</b>
<b>Standstill torque</b>	0.8 ... 86 Nm	0.18 ... 67 Nm	0.3 ... 2.2 Nm	2.3 ... 290 Nm	76 ... 325 Nm
<b>Rated torque</b>	0.5 ... 72 Nm	0.12 ... 35 Nm	0.27 ... 1.9 Nm	2.0 ... 280 Nm	66.2 ... 296 Nm
<b>Rated speed</b>	1050 ... 6000 1/min	2520 ... 9000 1/min	2700 ... 2825 1/min	550 ... 4160 1/min	550 ... 2935 1/min
<b>Max. torque</b>	2.4 ... 190 Nm	0.7 ... 200 Nm	1.0 ... 8.0 Nm	10 ... 1100 Nm	250 ... 1100 Nm
<b>Power range</b>	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

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

### Market approvals

	<b>MCS</b>	<b>m850</b>	<b>SDSGA</b>	<b>MCA</b>	<b>MQA</b>
<b>CE</b>	✓	✓	✓	✓	✓
<b>UKCA</b>	✓	✓	✓	✓	✓
<b>UL</b>	✓	✓	✓	✓	✓
<b>CSA</b>	✓	✓	✓	✓	✓
<b>CCC</b>	✓	✓	✓	✓	✓
<b>RoHs</b>	✓	✓	✓	✓	✓

# MCS synchronous servo motors

The MCS servo synchronous motors are particularly suitable for applications that require high dynamics, precision and a small installation volume.

<b>Standstill torque</b>	0.8 ... 86 Nm
<b>Rated torque</b>	0.5 ... 72 Nm
<b>Rated speed</b>	1050 ... 6000 1/min
<b>Max. torque</b>	2.4 ... 190 Nm
<b>Power range</b>	0.31 ... 15.8 kW

## Highlights

- High overload capacity
- Large angular accelerations
- Plug connections for quick mounting and easy serviceability
- Optimized for use as geared motors with g500, g7x0, and g8x0 gearboxes
- Can be combined with the i750 cabinet and i950 cabinet servo inverters





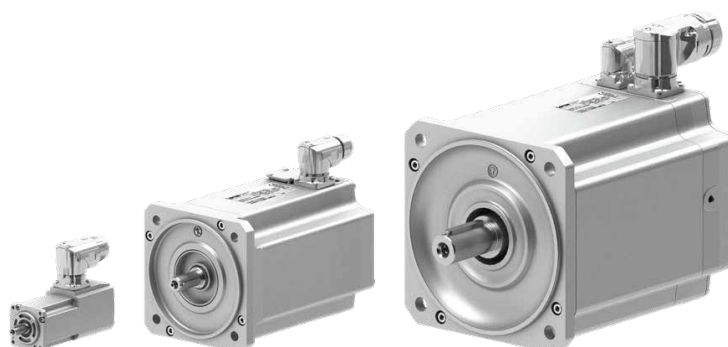
# m850 synchronous servo motors

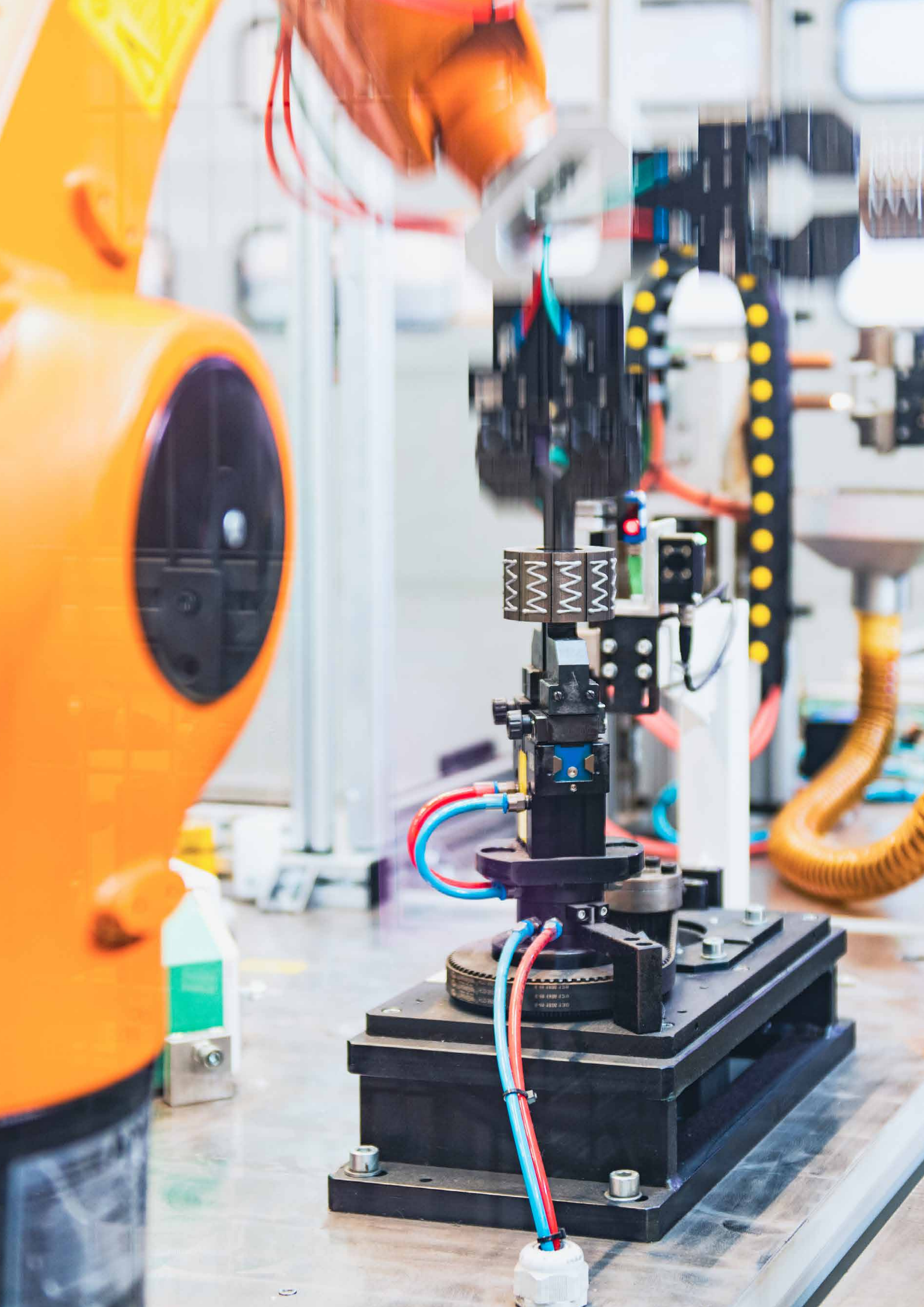
The compact m850 synchronous servo motors are particularly suitable for applications in which high inertias are moved and which also require robust drive behavior, e.g. in the field of positioning, robotics and packaging technology as well as for handling systems. In combination with our servo inverters,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

<b>Standstill torque</b>	0.18 ... 67 Nm
<b>Rated torque</b>	0.12 ... 35 Nm
<b>Rated speed</b>	2520 ... 9000 1/min
<b>Max. torque</b>	0.7 ... 200 Nm
<b>Power range</b>	0.11 ... 9.2 kW

## 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





# SDSGA asynchronous servo motors

The small SDSGA asynchronous servo motors with a smooth surface are particularly suitable for environments where hygiene matters.

<b>Standstill torque</b>	0.3 ... 2.2 Nm
<b>Rated torque</b>	0.27 ... 1.9 Nm
<b>Rated speed</b>	2700 ... 2825 1/min
<b>Max. torque</b>	1.0 ... 8.0 Nm
<b>Power range</b>	0,075 ... 0.6 kW

## Highlights

- Smooth surface
- Plug connections for quick mounting and easy serviceability
- Resolver as feedback



# MCA asynchronous servo motors

The MCA asynchronous servo motors are particularly suitable for environments that require a small installation volume and high design-related operational reliability.

<b>Standstill torque</b>	2.3 ... 290 Nm
<b>Rated torque</b>	2.0 ... 280 Nm
<b>Rated speed</b>	550 ... 4160 1/min
<b>Max. torque</b>	10 ... 1100 Nm
<b>Power range</b>	0.8 ... 53.8 kW

## Highlights

- Small volume
- Low moments of inertia and large setting ranges
- Plug connections for quick mounting and easy serviceability
- Optimized for use as geared motors with g500, g7x0, and g8x0 gearboxes
- Can be combined with the i750 cabinet and i950 cabinet servo inverters



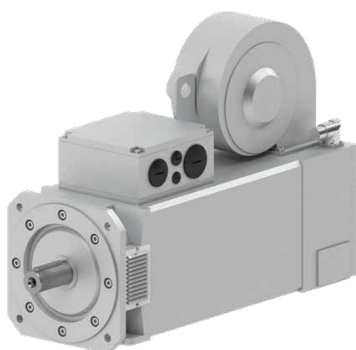
# MQA asynchronous servo motors

The MQA asynchronous servo motors with radial fan are particularly suitable for applications with heavy motor loads.

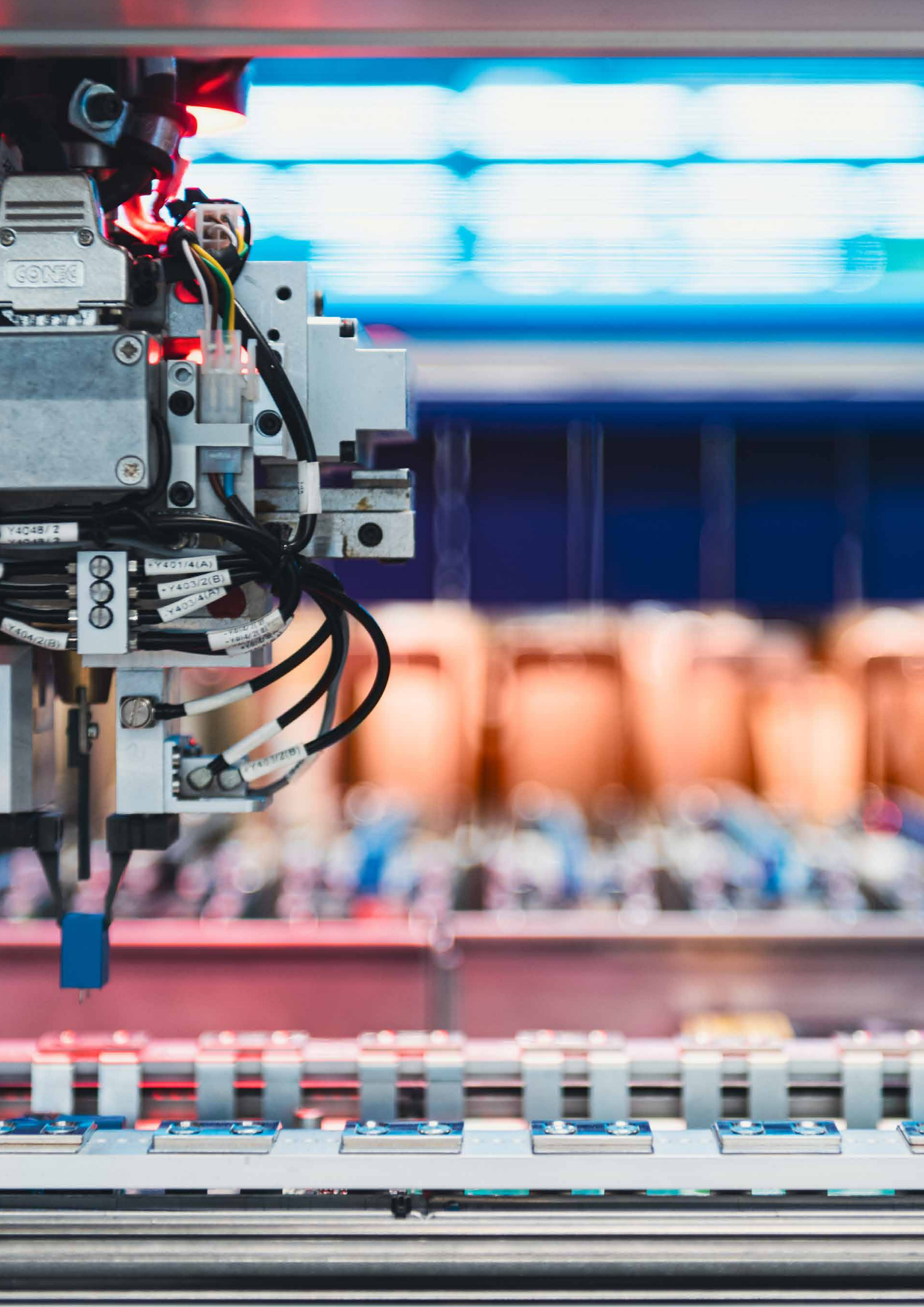
<b>Standstill torque</b>	76 ... 325 Nm
<b>Rated torque</b>	66.2 ... 296 Nm
<b>Rated speed</b>	550 ... 2935 1/min
<b>Max. torque</b>	250 ... 1100 Nm
<b>Power range</b>	10.6 ... 60.2 kW

## Highlights

- Low moments of inertia
- Plug connections for quick mounting and easy serviceability
- Can be combined with the i750 cabinet and i950 cabinet servo inverters









# MCS synchronous servo motors



MCS, self-ventilated, 3 x 230V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCS 06C60L</b>	0.8	0.5	2.4	6000	8000	0.31	4.0	2.3	108 x 155 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066381
<b>MCS 06C41L</b>	0.8	0.6	2.4	4050	8000	0.25	2.5	2.3	108 x 155 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066367
<b>MCS 06F60L</b>	1.5	0.9	4.4	6000	8000	0.57	3.8	2.7	108 x 185 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066501
<b>MCS 06F41L</b>	1.5	1.2	4.4	4050	8000	0.51	2.9	2.7	108 x 185 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066489
<b>MCS 06I60L</b>	2.0	1.2	6.2	6000	8000	0.75	4.2	3.4	108 x 215 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066434
<b>MCS 06I41L</b>	2.0	1.5	6.2	4050	8000	0.64	3.1	3.4	108 x 215 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066410

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCS 09D60L</b>	3.3	1.8	9.5	6000	7000	1.1	7.0	4.8	134.5 x 213 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066343
<b>MCS 09D41L</b>	3.3	2.3	9.5	4050	7000	1.0	4.6	4.8	134.5 x 213 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066397
<b>MCS 09F60L</b>	4.2	2.4	15	6000	7000	1.5	7.9	5.7	134.5 x 233 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066400
<b>MCS 09F38L</b>	4.2	3.1	15	3750	7000	1.2	5.0	5.7	134.5 x 233 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066536
<b>MCS 09H60L</b>	5.5	3	20	6000	7000	1.9	8.0	6.6	134.5 x 253 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066262
<b>MCS 09H41L</b>	5.5	3.8	20	4050	7000	1.6	6.8	6.6	134.5 x 253 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066230
<b>MCS 09L41L</b>	7.5	4.5	32	4050	7000	1.9	8.4	8.4	134.5 x 293 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066286

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCS 12D41L</b>	6.4	4.3	18	4050	6000	1.8	8.8	7.1	163 x 228 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066543
<b>MCS 12D20L</b>	6.4	5.5	18	1950	6000	1.1	5.2	7.1	163 x 228 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066228
<b>MCS 12H30L</b>	11.4	8.0	29	3525	6000	2.5	10.5	10.2	163 x 268 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066279
<b>MCS 12H15L</b>	11.4	10.0	29	1500	6000	1.6	7.6	10.2	163 x 268 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066413
<b>MCS 12L20L</b>	15.0	13.5	56	1950	6000	2.8	11.8	13.2	163 x 308 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066448

The motors listed are equipped with HIPERFACE DSL® absolute value encoders (One Cable Technology OCT) as feedback.

## MCS synchronous servo motors



MCS, self-ventilated, 3 x 400V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCS 06C60-	0.8	0.5	2.4	6000	8000	0.31	2.4	2.3	108 x 155 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066298
MCS 06C41-	0.8	0.6	2.4	4050	8000	0.25	1.3	2.3	108 x 155 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066220
MCS 06F60-	1.5	0.9	4.4	6000	8000	0.57	2.5	2.7	108 x 185 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066273
MCS 06F41-	1.5	1.2	4.4	4050	8000	0.51	1.5	2.7	108 x 185 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066375
MCS 06I60-	2.0	1.2	6.2	6000	8000	0.75	2.9	3.4	108 x 215 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066221
MCS 06I41-	2.0	1.5	6.2	4050	8000	0.64	1.6	3.4	108 x 215 x 62	<a href="#">i</a> <a href="#">🛒</a> 17066468

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCS 09D60-	3.3	1.8	9.5	6000	7000	1.1	3.8	4.8	134.5 x 213 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066355
MCS 09D41-	3.3	2.3	9.5	4050	7000	1.0	2.3	4.8	134.5 x 213 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066222
MCS 09F60-	4.2	2.4	15	6000	7000	1.5	4.5	5.7	134.5 x 233 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066363
MCS 09F38-	4.2	3.1	15	3750	7000	1.2	2.5	5.7	134.5 x 233 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066293
MCS 09H60-	5.5	3	20	6000	7000	1.9	6.0	6.6	134.5 x 253 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066224
MCS 09H41-	5.5	3.8	20	4050	7000	1.6	3.4	6.6	134.5 x 253 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066476
MCS 09L51-	7.5	3.6	32	5100	7000	1.9	6.9	8.4	134.5 x 293 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066349
MCS 09L41-	7.5	4.5	32	4050	7000	1.9	4.2	8.4	134.5 x 293 x 89	<a href="#">i</a> <a href="#">🛒</a> 17066268

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCS 12D41-	6.4	4.3	18	4050	6000	1.8	4.5	7.0	163 x 228 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066524
MCS 12D20-	6.4	5.5	18	1950	6000	1.1	2.6	7.0	163 x 228 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066236
MCS 12H35-	11.4	7.5	29	3525	6000	2.8	5.7	10.1	163 x 268 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066460
MCS 12H15-	11.4	10.0	29	1500	6000	1.6	3.8	10.1	163 x 268 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066481
MCS 12L41-	15.0	11.0	56	4050	6000	4.7	10.2	13.2	163 x 308 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066388
MCS 12L20-	15.0	13.5	56	1950	6000	2.8	5.9	13.2	163 x 308 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066223

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCS 14D36-	11.0	7.5	29	3600	6000	2.8	7.5	11.4	188.5 x 251 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066531
MCS 14D15-	11.0	9.2	29	1500	6000	1.45	4.5	11.4	188.5 x 251 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066321
MCS 14H32-	21.0	14.0	55	3225	6000	4.7	11.9	16.2	188.5 x 291 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066422
MCS 14H15-	21.0	16.0	55	1500	6000	2.5	6.6	16.2	188.5 x 291 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066234
MCS 14L32-	28.0	17.2	77	3225	6000	5.8	15.0	20.8	217.5 x 331 x 143	<a href="#">i</a> <a href="#">🛒</a> 16581009
MCS 14L15-	28.0	23.0	77	1500	6000	3.6	9.7	20.8	188.5 x 331 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066442
MCS 14P32-	37.0	21.0	105	3225	6000	7.1	15.6	25.6	217.5 x 371 x 143	<a href="#">i</a> <a href="#">🛒</a> 16647496
MCS 14P14-	37.0	30.0	105	1350	6000	4.2	10.8	25.6	188.5 x 371 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066226

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCS 19F30-	32.0	21.0	86	3000	4000	6.6	14.0	24.0	267 x 230 x 192	<a href="#">i</a> <a href="#">🛒</a> 16494707
MCS 19F14-	32.0	27.0	86	1425	4000	4.0	8.6	24.0	238 x 280 x 192	<a href="#">i</a> <a href="#">🛒</a> 17066427
MCS 19J30-	51.0	29.0	129	3000	4000	9.1	18.5	31.0	267 x 320 x 192	<a href="#">i</a> <a href="#">🛒</a> 16492201
MCS 19J14-	51.0	40.0	129	1425	4000	6.0	12.3	31.0	238 x 380 x 192	<a href="#">i</a> <a href="#">🛒</a> 17066493
MCS 19P30-	64.0	32.0	190	3000	4000	10.0	19.0	41.0	267 x 320 x 192	<a href="#">i</a> <a href="#">🛒</a> 16474659
MCS 19P14-	64.0	51.0	190	1425	4000	7.2	14.3	41.0	267 x 380 x 192	<a href="#">i</a> <a href="#">🛒</a> 16637492

The motors listed are equipped with HIPERFACE DSL® absolute value encoders (One Cable Technology OCT) as feedback.

# MCS synchronous servo motors



MCS, MCS, externally cooled, 3 x 400V















	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCS 12D35-</b>	7.5	6.0	17.7	3525	6000	2.2	5.6	9.1	163 x 301 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066305
<b>MCS 12D17-</b>	7.5	7.0	17.7	1650	6000	1.2	3.0	9.1	163 x 301 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066562
<b>MCS 12H34-</b>	12.8	10.5	29.0	3375	6000	3.7	7.5	12.2	163 x 341 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066337
<b>MCS 12H14-</b>	12.8	12.0	29.0	1350	6000	1.7	4.1	12.2	163 x 341 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066312
<b>MCS 12L39-</b>	19.0	14.0	56.4	3900	6000	5.7	11.7	15.3	163 x 381 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066557
<b>MCS 12L17-</b>	19.0	17.0	56.4	1650	6000	2.9	6.7	15.3	163 x 381 x 116	<a href="#">i</a> <a href="#">🛒</a> 17066507


	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCS 14D30-</b>	12.5	10.5	29.0	3000	6000	3.3	9.7	15.2	188.5 x 339 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066252
<b>MCS 14D14-</b>	12.5	12.0	29.0	1350	6000	1.7	5.4	15.2	188.5 x 339 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066258
<b>MCS 14H28-</b>	25.5	20.5	54.8	2775	6000	6.0	15.0	20.2	188.5 x 379 x 143	<a href="#">i</a> <a href="#">🛒</a> 16639896
<b>MCS 14H12-</b>	25.5	23.5	54.8	1200	6000	3.0	8.3	20.2	188.5 x 379 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066241
<b>MCS 14L30-</b>	34.5	25.5	77.1	3000	6000	8.0	20.8	24.7	217.5 x 419 x 143	<a href="#">i</a> <a href="#">🛒</a> 16647501
<b>MCS 14L14-</b>	34.5	30.5	77.1	1350	6000	4.3	11.8	24.7	188.5 x 419 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066246
<b>MCS 14P26-</b>	43.5	33.0	105.0	2625	6000	9.1	21.9	29.7	217.5 x 459 x 143	<a href="#">i</a> <a href="#">🛒</a> 16519901
<b>MCS 14P11-</b>	43.5	42.0	105.0	1050	6000	4.6	13.4	29.7	188.5 x 459 x 143	<a href="#">i</a> <a href="#">🛒</a> 17066456




	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCS 19F29-</b>	41.5	32.5	86.0	2850	4000	9.7	20.1	30.0	267 x 387 x 192	<a href="#">i</a> <a href="#">🛒</a> 16647547
<b>MCS 19F12-</b>	41.5	38.0	86.0	1200	4000	4.8	11.3	30.0	238 x 387 x 192	<a href="#">i</a> <a href="#">🛒</a> 17066549
<b>MCS 19J29-</b>	70.5	50.5	129.0	2850	4000	15.1	31.0	37.0	267 x 427 x 192	<a href="#">i</a> <a href="#">🛒</a> 16550476
<b>MCS 19J12-</b>	70.5	62.5	129.0	1200	4000	7.9	18.3	37.0	267 x 487 x 192	<a href="#">i</a> <a href="#">🛒</a> 16647530
<b>MCS 19P29-</b>	86.0	53.0	190.0	2850	4000	15.8	29.5	47.0	267 x 427 x 192	<a href="#">i</a> <a href="#">🛒</a> 16544746
<b>MCS 19P12-</b>	86.0	72.0	190.0	1200	4000	9.0	21.3	47.0	267 x 487 x 192	<a href="#">i</a> <a href="#">🛒</a> 16647517

The motors listed are equipped with One Cable Technology as feedback.

# MCS synchronous servo motors – options

Connections	Brake	Feedback	Cooling	Operation
 M23/M40 connector OCT  M23 connector Resolver  M23 connector Encoder  M17 connector External cooling  Terminal box	 24 V permanent magnet brake	 HIPERFACE DSL® absolute value encoder  Resolver  SinCos absolute value encoder  Endat absolute value encoder	 External cooling	 Degree of protection  Surface and corrosion protection  Colors



 Solid shaft with featherkey  Solid shaft without featherkey  Shaft seal
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## Connections

<b>Connector</b>	M23 connector: Power connection and One Cable Technology	Included as standard
	M40 connector: Power connection and One Cable Technology	Included as standard
	2 x M23 connector Power connection/resolver connection	
	M40/M23 connector: Power connection/resolver connection	
	2 x M23 connector Power connection/encoder connection	
	M40/M23 connector: Power connection/encoder connection	
	2 x M23 connector Power connection/Endat connection	
	M40/M23 connector: Power connection/Endat connection	
<b>Terminal box</b>	For power, feedback, and blower connection	

## Brake

<b>24 V permanent magnet brake</b>	MCS 06: P1: Braking torque 2.2 Nm
	MCS 09: P1: Braking torque 8 Nm P2: Braking torque 12 Nm
	MCS 12: P1: Braking torque 12 Nm P2: Braking torque 24 Nm
	MCS 14: P1: Braking torque 22 Nm P2: Braking torque 37 Nm
	MCS 19: P1: Braking torque 37 Nm P2: Braking torque 96 Nm

## Feedback

<b>One Cable Technology (OCT)</b>	HIPERFACE® DSL absolute value encoder AM20-8V-D	Included as standard
	HIPERFACE® DSL absolute value encoder for absolute value encoders for functional safety AM20-8V-D2	
<b>Resolver</b>	Resolver RS0	
	Resolver for functional safety RV03	
<b>Encoder</b>	HIPERFACE® SinCos absolute value encoder AM128-8V-H, multi-turn, 128 pulses	
	HIPERFACE® SinCos absolute value encoder for functional safety AM128-8V-K2, multi-turn, 128 pulses	
	HIPERFACE® SinCos absolute value encoder AM1024-8V-H, multi-turn, 1024 pulses	
	HIPERFACE® SinCos absolute value encoder for functional safety AM1024-8V-K2, multiturn, 1024 pulses	
	HIPERFACE® SinCos absolute value encoder AS1024-8V-H, single-turn, 1024 pulses	
	HIPERFACE® SinCos absolute value encoder for functional safety AS1024-8V-K2, single-turn, 1024 pulses	

<b>Endat</b>	SinCos absolute value encoder AM32-5V-E, multi-turn, 32 pulses
	SinCos absolute value encoder AM2048-5V-E, multi-turn, 2048 pulses
	SinCos absolute value encoder AS2048-5V-E, single-turn, 2048 pulses

## Cooling

<b>External cooling</b>	For MCS 12
	For MCS 14
	For MCS 19

## Operation

<b>Degree of protection</b>	IP65 for self-cooled motors	
<b>Surface and corrosion protection</b>	G: primed	Included as standard
	S: Indoor installation, 90% air humidity	
	M: Covered outdoor installation, 95% air humidity	
	L: Outdoor installation, 95% air humidity	
<b>Color</b>	primed, RAL 9005 (jet black)	Included as standard
	RAL colors	

## Machine connections

<b>Shaft</b>	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	
<b>Shaft seal</b>	Simple seal	Included as standard
	Oil-tight seal	

## MCS synchronous servo motors – accessories

## System cables

<b>OCT motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Feedback cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Blower cables</b>	See brochure "Accessories for frequency and servo inverters"







## m850 synchronous servo motors



m850, self-ventilated, 3 x 400V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>m850-S40/S9000</b>	0.18	0.12	0.72	9000	10000	0.11	0.7	0.5	88 x 119 x 40	<a href="#">i</a> <a href="#">shopping cart</a> 17119296
<b>m850-S40/L9000</b>	0.35	0.21	1.4	9000	10000	0.2	1.2	0.7	88 x 144 x 40	<a href="#">i</a> <a href="#">shopping cart</a> 17119297

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>m850-S60/S6000</b>	0.7	0.5	2.6	6000	10000	0.325	0.7	1.45	104 x 152 x 62	<a href="#">i</a> <a href="#">shopping cart</a> 17119321
<b>m850-S60/L6000</b>	1.5	0.9	5.8	6000	10000	0.55	1.2	2	104 x 185 x 62	<a href="#">i</a> <a href="#">shopping cart</a> 17119322

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>m850-S80/S5500</b>	2.8	1.7	10.5	5500	10000	1.0	2.3	3.2	124 x 195 x 82	<a href="#">i</a> <a href="#">shopping cart</a> 17119369
<b>m850-S80/L5500</b>	3.5	2.1	13.4	5500	10000	1.2	2.8	3.85	124 x 213 x 82	<a href="#">i</a> <a href="#">shopping cart</a> 17119370

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>m850-S120/S3960</b>	6.5	4.8	14.5	3960	6000	2.0	4.3	6.5	162.5 x 229 x 121	<a href="#">i</a> <a href="#">shopping cart</a> 17110788
<b>m850-S120/M3960</b>	11.0	7.4	29.0	3960	6000	3.1	6.4	9.25	162.5 x 267 x 121	<a href="#">i</a> <a href="#">shopping cart</a> 17110750
<b>m850-S120/L3960</b>	15.0	9.0	44.0	3960	6000	3.7	7.8	12.0	162.5 x 305 x 121	<a href="#">i</a> <a href="#">shopping cart</a> 17110751


	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>m850-S140/S3240</b>	11.0	8.5	26.0	3240	6000	2.9	6.3	9.5	185 x 232 x 142	<a href="#">i</a> <a href="#">shopping cart</a> 17110783
<b>m850-S140/M3240</b>	21.0	14.0	53.5	3240	6000	4.8	10.0	14.5	185 x 272 x 142	<a href="#">i</a> <a href="#">shopping cart</a> 17110786
<b>m850-S140/L3240</b>	28.0	17.4	80.0	3240	6000	5.9	12.2	19.5	206 x 312 x 142	<a href="#">i</a> <a href="#">shopping cart</a> 16510170

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>m850-S190/S3000</b>	27.0	16.0	71.0	3000	4500	5.0	10.3	19.8	232 x 264 x 190	<a href="#">i</a> <a href="#">shopping cart</a> 17110784
<b>m850-S190/M3000</b>	46.0	24.0	120	3000	4500	7.5	15.4	28.5	253 x 312 x 190	<a href="#">i</a> <a href="#">shopping cart</a> 16474784
<b>m850-S190/L2520</b>	67.0	35.0	200	2520	4500	9.2	17.7	41.0	253 x 376 x 190	<a href="#">i</a> <a href="#">shopping cart</a> 16500269

The motors listed are equipped with One Cable Technology as feedback.


# m850 synchronous servo motors – options

**Connections**




M23/M40 connector OCT    M23 connector Resolver    M23 connector Encoder

**Brake**



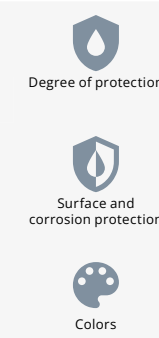
24 V permanent magnet brake    24 V spring-applied brake

**Feedback**




HIPERFACE DSL absolute value encoder    Resolver    SinCos absolute value encoder


**Operation**



Degree of protection    Surface and corrosion protection    Colors



**Shaft Options**



Solid shaft with featherkey    Solid shaft without featherkey    Shaft seal

## Connections

<b>Connector</b>	M23 connector: Power connection and One Cable Technology	Included as standard
	M40 connector: Power connection and One Cable Technology	Included as standard
	2 x M23 connector Power connection/resolver connection	
	M40/M23 connector: Power connection/resolver connection	
	M40/M23 connector: Power connection/encoder connection	

## Brake

<b>24 V permanent magnet brake</b>	m850-S40	P1: Braking torque 0.4 Nm
	m850-S60	P1: Braking torque 2.0 Nm
	m850-S80	P2: Braking torque 4.5 Nm
<b>24 V spring-applied brake</b>	m850-S120	F3: Braking torque 20 Nm
	m850-S140	F4: Braking torque 34 Nm
	m850-S190	F5: Braking torque 102 Nm

## Feedback

<b>One Cable Technology (OCT)</b>	m850-S40 ... m850-S80	HIPERFACE® DSL digital absolute value encoder AM17-8V-D	Included as standard
	850-S120 ... m850-S190	HIPERFACE® DSL digital absolute value encoder AM20-8V-D	Included as standard
	m850-S40 ... m850-S80	HIPERFACE® DSL digital absolute value encoder for functional safety AM17-8V-D2	
	m850-S120 ... m850-S190	HIPERFACE® DSL digital absolute value encoder for functional safety AM20-8V-D2	
<b>Resolver</b>	m850-S60 ... m850-S80	Resolver RS2	
	m850-S120 ... m850-S190	Resolver RS0	
	m850-S60 ... m850-S80	Resolver for functional safety RV23	
	m850-S120 ... m850-S190	Resolver for functional safety RV03	

<b>Encoder</b>	m850-S60 ... m850-S190	HIPERFACE® SinCos absolute value encoder AM128-8V-H
	m850-S60 ... m850-S190	HIPERFACE® SinCos absolute value encoder for functional safety AM128-8V-K2

#### Operation

<b>Degree of protection</b>	m850-S40 ... m850-S80	IP65/IP21 (A side)	
	m850-S120 ... m850-S190	IP65	
<b>Surface and corrosion protection</b>	m850-S120 ... m850-S190	G: primed	Included as standard
		S: Indoor installation, 90% air humidity	
		M: Covered outdoor installation, 95% air humidity	
		L: Outdoor installation, 95% air humidity	
<b>Color</b>	m850-S40 ... m850-S80	primed, RAL 9005 (jet black)	Included as standard
	m850-S120 ... m850-S190	primed	Included as standard
		RAL colors	

#### Machine connections

<b>Shaft</b>	Solid shaft with featherkey		Included as standard
	Solid shaft without featherkey		
<b>Shaft seal</b>	Simple seal		Included as standard
	m850-S120 ... m850-S190	Dust-tight seal	

## m850 synchronous servo motors – accessories

#### System cables

<b>OCT motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Feedback cables</b>	See brochure "Accessories for frequency and servo inverters"

## SDSGA asynchronous servo motors

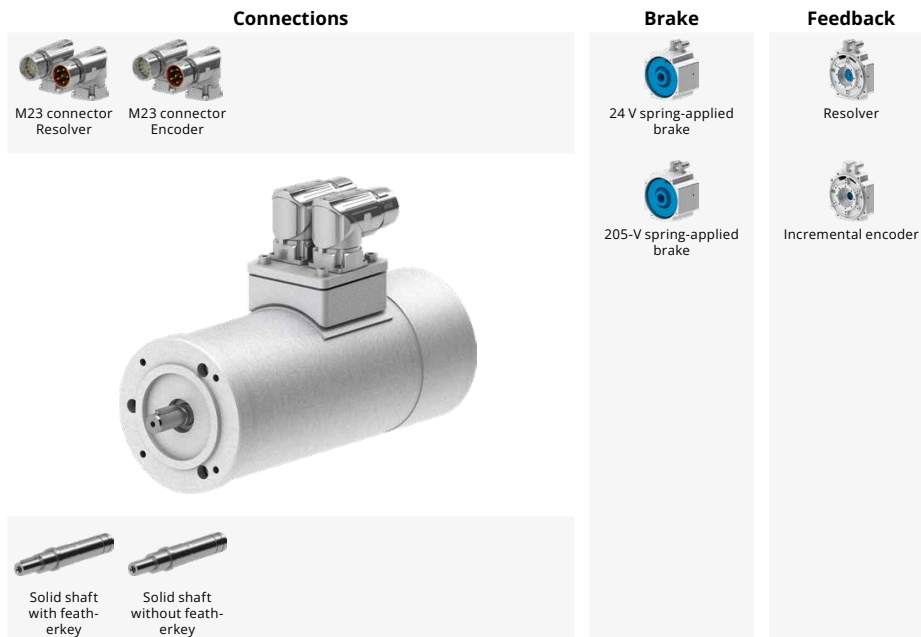


SDSGA, self-ventilated, 3 x 400V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>SDSGAxxx 047-22</b>	0.3	0.27	1.0	2700	6000	0.075	0.52	3.0	138.5 x 220 x 79	<a href="#">i</a> <a href="#">🛒</a> 16129644
<b>SDSGAxxx 056-22</b>	1.0	0.81	3.2	2790	6000	0.24	0.86	4.0	148.5 x 230 x 89	<a href="#">i</a> <a href="#">🛒</a> 16142392
<b>SDSGAxxx 063-22</b>	1.5	1.35	5.0	2800	6000	0.4	1.23	5.3	158.5 x 244 x 104	<a href="#">i</a> <a href="#">🛒</a> 16168858
<b>SDSGAxxx 063-32</b>	2.2	1.9	8.0	2825	6000	0.6	1.74	6.8	158.5 x 284 x 104	<a href="#">i</a> <a href="#">🛒</a> 16168853

The motors listed are equipped with resolvers as feedback.

# SDSGA asynchronous servo motors – options



## Connections

<b>Connector</b>	2 x M23 connector Power connection/resolver connection	Included as standard
	2 x M23 connector Power connection/encoder connection	

## Brake

<b>24 V spring-applied brake</b>	SDSGAxx-047	Braking torque 1 Nm
	SDSGAxx-056	Braking torque 1 Nm
	SDSGAxx-063	Braking torque 2 Nm

## Feedback

<b>Resolver</b>	Resolver RS0	Included as standard
<b>Incremental encoder</b>	HTL incremental encoder IG512-24V-H	
	HTL incremental encoder IG1024-24V-H	
	TTL incremental encoder IG2048-5V-T	

## Machine connections

<b>Shaft</b>	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	

# SDSGA asynchronous servo motors – accessories

## System cables

<b>Motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Feedback cables</b>	See brochure "Accessories for frequency and servo inverters"

## MCA asynchronous servo motors



MCA, self-ventilated, 3 x 400V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCA 10I40-</b>	2.3	2.0	10.0	3950	8000	0.8	2.4	6.4	141 x 292 x 102	<a href="#">i</a> <a href="#">🛒</a> 16133687
<b>MCA 13I41-</b>	4.6	4.0	32.0	4050	8000	1.7	4.4	10.4	167 x 311 x 130	<a href="#">i</a> <a href="#">🛒</a> 16125079
<b>MCA 14L41-</b>	8.0	5.4	60.0	4100	8000	2.3	7.7	15.1	180 x 352 x 142	<a href="#">i</a> <a href="#">🛒</a> 16122881
<b>MCA 14L20-</b>	8.0	6.7	60.0	2000	8000	1.4	3.85	15.1	180 x 352 x 142	<a href="#">i</a> <a href="#">🛒</a> 16125363
<b>MCA 17N41-</b>	12.8	9.5	100.0	4110	8000	4.1	12.0	22.9	200.5 x 390 x 165	<a href="#">i</a> <a href="#">🛒</a> 16116487
<b>MCA 17N23-</b>	12.8	10.8	100.0	2300	8000	2.6	6.0	22.9	200.5 x 390 x 165	<a href="#">i</a> <a href="#">🛒</a> 16144489
<b>MCA 19S42-</b>	22.5	12.0	180.0	4150	8000	5.2	14.0	44.7	247 x 461 x 192	<a href="#">i</a> <a href="#">🛒</a> 16099106
<b>MCA 19S23-</b>	22.5	16.3	180.0	2340	8000	4.0	8.2	44.7	247 x 461 x 192	<a href="#">i</a> <a href="#">🛒</a> 16142786
<b>MCA 21X42-</b>	39.0	17.0	300.0	4160	8000	7.4	19.8	60.0	269 x 550 x 214	<a href="#">i</a> <a href="#">🛒</a> 16145634
<b>MCA 21X25-</b>	39.0	24.6	300.0	2460	8000	6.4	13.5	60.0	269 x 555 x 214	<a href="#">i</a> <a href="#">🛒</a> 16125368

The motors listed are equipped with resolvers as feedback.



## MCA asynchronous servo motors




MCA, externally cooled, 3 x 400V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCA 13I34-	7.0	6.3	23.0	3410	8000	2.2	6.0	12.0	167 x 379 x 130	<a href="#">i</a> <a href="#">🛒</a> 16148685
MCA 14L35-	13.5	10.8	60.0	3455	8000	3.9	9.1	16.9	180 x 414 x 142	<a href="#">i</a> <a href="#">🛒</a> 16128996
MCA 14L16-	13.5	12.0	60.0	1635	8000	2.1	4.8	16.9	180 x 414 x 142	<a href="#">i</a> <a href="#">🛒</a> 16189981
MCA 17N35-	23.9	19.0	100.0	3480	8000	6.9	15.8	25.5	200.5 x 476 x 165	<a href="#">i</a> <a href="#">🛒</a> 16110201
MCA 17N17-	23.9	21.5	100.0	1680	8000	3.8	8.5	25.5	200.5 x 476 x 165	<a href="#">i</a> <a href="#">🛒</a> 16142785
MCA 19S35-	40.0	36.0	180.0	3510	8000	13.2	28.7	48.2	247 x 558 x 192	<a href="#">i</a> <a href="#">🛒</a> 16114953
MCA 19S17-	40.0	36.3	180.0	1700	8000	6.4	13.9	48.2	247 x 558 x 192	<a href="#">i</a> <a href="#">🛒</a> 16078398
MCA 20X29H	68.0	53.5	250.0	2930	6500	16.4	42.4	64.0	269 x 666 x 196	<a href="#">i</a> <a href="#">🛒</a> 16216494
MCA 20X14H	68.0	61.0	250.0	1420	6500	9.1	23.0	64.0	269 x 666 x 196	<a href="#">i</a> <a href="#">🛒</a> 16173021
MCA 21X35-	75.0	55.0	300.0	3520	8000	20.3	42.5	63.5	269 x 646 x 214	<a href="#">i</a> <a href="#">🛒</a> 16167420
MCA 21X17-	75.0	61.4	300.0	1710	8000	11.0	22.5	63.5	269 x 646 x 214	<a href="#">i</a> <a href="#">🛒</a> 16136438
MCA 22P29-	120.0	100.0	500.0	2935	6500	30.7	72.1	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16079377
MCA 22P17-	120.0	106.0	500.0	1670	6500	18.5	42.7	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16116469
MCA 22P14-	120.0	107.0	500.0	1425	6500	16.0	37.7	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16111070
MCA 22P08-	120.0	110.0	500.0	760	6500	8.8	22.1	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16135280
MCA 22P29H	135.0	110.0	500.0	2935	6500	33.8	77.8	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16192448
MCA 22P17H	135.0	112.0	500.0	1670	6500	19.6	44.5	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16159611
MCA 22P14H	135.0	115.0	500.0	1425	6500	17.2	40.0	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16174241
MCA 22P08H	135.0	120.0	500.0	760	6500	9.6	23.5	105.0	313 x 783 x 220	<a href="#">i</a> <a href="#">🛒</a> 16316103
MCA 26T22-	220.0	195.0	1100.0	2235	5500	45.6	113.0	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16259154
MCA 26T12-	220.0	207.0	1100.0	1200	5500	26.0	75.1	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16137185
MCA 26T10-	220.0	210.0	1100.0	1030	5500	22.7	61.5	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16136154
MCA 26T05-	220.0	216.0	1100.0	550	5500	12.4	34.9	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16137322
MCA 26T22H	290.0	230.0	1100.0	2235	5500	53.8	127.0	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16129483
MCA 26T12H	290.0	255.0	1100.0	1200	5500	32.0	83.3	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16479836
MCA 26T10H	290.0	260.0	1100.0	1030	5500	28.0	69.6	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16262542
MCA 26T05H	290.0	280.0	1100.0	550	5500	16.1	42.4	194.0	386 x 970 x 260	<a href="#">i</a> <a href="#">🛒</a> 16479835

The motors listed are equipped with resolvers as feedback.


# MCA asynchronous servo motors – options

### Connections




M23 connector Resolver    M23 connector Encoder    M17 connector External cooling    Terminal box

### Brake




24 V permanent magnet brake  
205 V permanent magnet brake  
24 V spring-applied brake  
205-V spring-applied brake

### Feedback



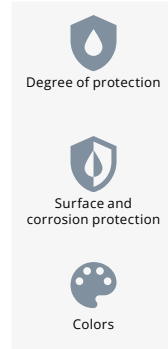
Resolver  
SinCos absolute value encoder  
Endat absolute value encoder  
Incremental encoder

### Cooling





External cooling

### Operation



Degree of protection  
Surface and corrosion protection  
Colors





Solid shaft with featherkey    Solid shaft without featherkey    Shaft seal

## Connections

<b>Connector</b>	2 x M23 connector Power connection/resolver connection	Included as standard
	M40/M23 connector: Power connection/resolver connection	Included as standard
	2 x M23 connector Power connection/encoder connection	
	M40/M23 connector: Power connection/encoder connection	
	2 x M23 connector Power connection/Endat connection	
	M40/M23 connector: Power connection/Endat connection	
<b>Terminal box</b>	M17 connector: External cooling	
	For power, feedback, and blower connection	

## Brake

<b>24 V permanent magnet brake</b>	MCA 10	P1: Braking torque 3.3 Nm
	MCA 13	P1: Braking torque 12 Nm
	MCA 14	P4: Braking torque 26 Nm
	MCA 17	P1: Braking torque 24 Nm
	MCA 19	P1: Braking torque 46 Nm
	MCA 21	P1: Braking torque 88 Nm
<b>205 V permanent magnet brake</b>	MCA 10	P5: Braking torque 3.3 Nm
	MCA 13	P5: Braking torque 12 Nm
	MCA 14	P8: Braking torque 26 Nm
	MCA 17	P5: Braking torque 24 Nm
	MCA 19	P5: Braking torque 46 Nm
	MCA 21	P5: Braking torque 88 Nm
<b>24 V spring-applied brake</b>	MCA 20	F1: Braking torque 90 Nm F2: Braking torque 150 Nm
	MCA 22	F1: Braking torque 150 Nm F2: Braking torque 300 Nm
	MCA 26	F1: Braking torque 300 Nm
<b>205-V spring-applied brake</b>	MCA 20	FG: Braking torque 90 Nm FH: Braking torque 150 Nm
	MCA 22	FG: Braking torque 150 Nm FH: Braking torque 300 Nm
	MCA 26	FG: Braking torque 300 Nm

## Feedback

<b>Resolver</b>	Resolver RS0	Included as standard
	Resolver for functional safety RV03	
<b>Encoder</b>	HIPERFACE® SinCos absolute value encoder AM1024-8V-H, multi-turn, 1024 pulses	
	HIPERFACE® SinCos absolute value encoder AS1024-8V-H, single-turn, 1024 pulses	
<b>Endat</b>	SinCos absolute value encoder AM32-5V-E, multi-turn, 32 pulses	
	SinCos absolute value encoder AM2048-5V-E, multi-turn, 2048 pulses	
	SinCos absolute value encoder AS2048-5V-E, single-turn, 2048 pulses	
<b>Incremental encoder</b>	SinCos incremental encoder IG1024-5V-V3 for functional safety, 1024 pulses	
	SinCos incremental encoder IG2048-5V-S, 2048 pulses	
	TTL incremental encoder IG2048-5V-T, 2048 pulses	
	TTL incremental encoder IG4096-5V-T, 4096 pulses	

## Cooling

<b>External cooling</b>	For MCA 13	
	For MCA 14	
	For MCA 17	
	For MCA 19	
	For MCA 20	
	For MCA 21	
	For MCA 22	
	For MCA 26	

## Operation

<b>Degree of protection</b>	IP65 for self-cooled motors	
<b>Surface and corrosion protection</b>	G: primed	Included as standard
	S: Indoor installation, 90% air humidity	
	M: Covered outdoor installation, 95% air humidity	
	L: Outdoor installation, 95% air humidity	
<b>Color</b>	primed, RAL 9005 (jet black)	Included as standard
	RAL colors	

## Machine connections

<b>Shaft</b>	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	
<b>Shaft seal</b>	Simple seal	Included as standard
	Oil-tight seal	

## MCA asynchronous servo motors – accessories

## Cooling

		<b>ID</b>
<b>Dust filter for external cooling</b>	For MCA 20	
	For MCA 22	
	For MCA 26	

## System cables

<b>Motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Feedback cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Blower cables</b>	See brochure "Accessories for frequency and servo inverters"



## MQA asynchronous servo motors



MQA, externally cooled, 3 x 400V

	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MQA 20X29H</b>	76.0	66.2	250.0	2930	6500	20.3	46.9	63.0	376 x 577 x 196	<a href="#">i</a> <a href="#">🛒</a> 16207850
<b>MQA 20X14H</b>	76.0	71.3	250.0	1420	6500	10.6	26.5	63.0	376 x 577 x 196	<a href="#">i</a> <a href="#">🛒</a> 16157287














	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCA 22P29H</b>	156.0	125.0	500.0	2935	6500	38.4	86.0	102.0	448 x 691 x 220	<a href="#">i</a> <a href="#">🛒</a> 16216315
<b>MCA 22P17H</b>	156.0	130.0	500.0	1670	6500	22.7	50.3	102.0	448 x 691 x 220	<a href="#">i</a> <a href="#">🛒</a> 16201237
<b>MCA 22P14H</b>	156.0	135.0	500.0	1425	6500	20.1	45.6	102.0	448 x 691 x 220	<a href="#">i</a> <a href="#">🛒</a> 16180928
<b>MCA 22P08H</b>	156.0	145.0	500.0	760	6500	11.5	27.6	102.0	448 x 691 x 220	<a href="#">i</a> <a href="#">🛒</a> 16583363

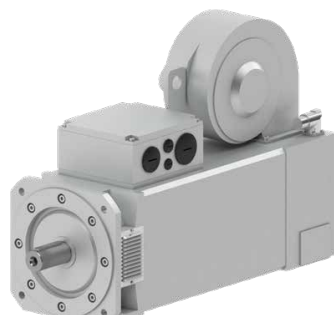
	$M_0$	$M_{rated}$	$M_{max}$	$n_{rated}$	$n_{max}$	$P_{rated}$	$I_{rated}$	$m$	H x L x T	ID
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
<b>MCA 26T22H</b>	325.0	257.0	1100.0	2235	5500	60.2	138.0	193.0	523 x 841 x 260	<a href="#">i</a> <a href="#">🛒</a> 16189397
<b>MCA 26T12H</b>	325.0	282.0	1100.0	1200	5500	35.4	88.8	193.0	523 x 841 x 260	<a href="#">i</a> <a href="#">🛒</a> 16479837
<b>MCA 26T10H</b>	325.0	288.0	1100.0	1030	5500	31.1	76.2	193.0	523 x 841 x 260	<a href="#">i</a> <a href="#">🛒</a> 16214587
<b>MCA 26T05H</b>	325.0	296.0	1100.0	550	5500	17.0	44.5	193.0	523 x 841 x 260	<a href="#">i</a> <a href="#">🛒</a> 16217016




The motors listed are equipped with resolvers as feedback.



# MQA asynchronous servo motors – options

Connections	Brake	Feedback	Cooling	Operation
 M23 connector Resolver  M23 connector Encoder  M17 connector External cooling  Terminal box	 24 V permanent magnet brake  205 V permanent magnet brake	 Resolver  SinCos absolute value encoder  Incremental encoder	 External cooling	 Degree of protection  Surface and corrosion protection  Colors



 Solid shaft with featherkey  Solid shaft without featherkey  Shaft seal
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## Connections

<b>Connector</b>	2 x M23 connector Power connection/resolver connection	Included as standard
	M40/M23 connector: Power connection/resolver connection	Included as standard
	2 x M23 connector Power connection/encoder connection	
	M40/M23 connector: Power connection/encoder connection	
	2 x M23 connector Power connection/Endat connection	
	M40/M23 connector: Power connection/Endat connection	
<b>Terminal box</b>	M17 connector: External cooling	
	For power, feedback, and blower connection	

## Brake

<b>24 V spring-applied brake</b>	MQA 20	F1: Braking torque 90 Nm F2: Braking torque 150 Nm
	MQA 22	F1: Braking torque 150 Nm F2: Braking torque 300 Nm
	MQA 26	F1: Braking torque 300 Nm
<b>205-V spring-applied brake</b>	MQA 20	FG: Braking torque 90 Nm FH: Braking torque 150 Nm
	MQA 22	FG: Braking torque 150 Nm FH: Braking torque 300 Nm
	MQA 26	FG: Braking torque 300 Nm

## Feedback

<b>Resolver</b>	Resolver RS0 Resolver for functional safety RV03	Included as standard
<b>Encoder</b>	HIPERFACE® SinCos absolute value encoder AM1024-8V-H, multi-turn, 1024 pulses HIPERFACE® SinCos absolute value encoder AS1024-8V-H, single-turn, 1024 pulses	
<b>Endat</b>	SinCos absolute value encoder AM32-5V-E, multi-turn, 32 pulses SinCos absolute value encoder AM2048-5V-E, multi-turn, 2048 pulses SinCos absolute value encoder AS2048-5V-E, single-turn, 2048 pulses	
<b>Incremental encoder</b>	SinCos incremental encoder IG1024-5V-V3 for functional safety, 1024 pulses SinCos incremental encoder IG2048-5V-S, 2048 pulses TTL incremental encoder IG2048-5V-T, 2048 pulses TTL incremental encoder IG4096-5V-T, 4096 pulses	

## Cooling

<b>External cooling</b>	For MQA 20	
	For MQA 22	
	For MQA 26	

## Operation

<b>Surface and corrosion protection</b>	G: primed	Included as standard
	S: Indoor installation, 90% air humidity	
	M: Covered outdoor installation, 95% air humidity	
	L: Outdoor installation, 95% air humidity	
<b>Color</b>	primed, RAL 9005 (jet black)	Included as standard
	RAL colors	

## Machine connections

<b>Shaft</b>	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	
<b>Shaft seal</b>	Simple seal	Included as standard
	Oil-tight seal	
	Dust-tight seal	

## MQA asynchronous servo motors – accessories

## Cooling

<b>Dust filter for external cooling</b>	For MQA 20	
	For MQA 22	
	For MQA 26	

## System cables

<b>Motor cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Feedback cables</b>	See brochure "Accessories for frequency and servo inverters"
<b>Blower cables</b>	See brochure "Accessories for frequency and servo inverters"







