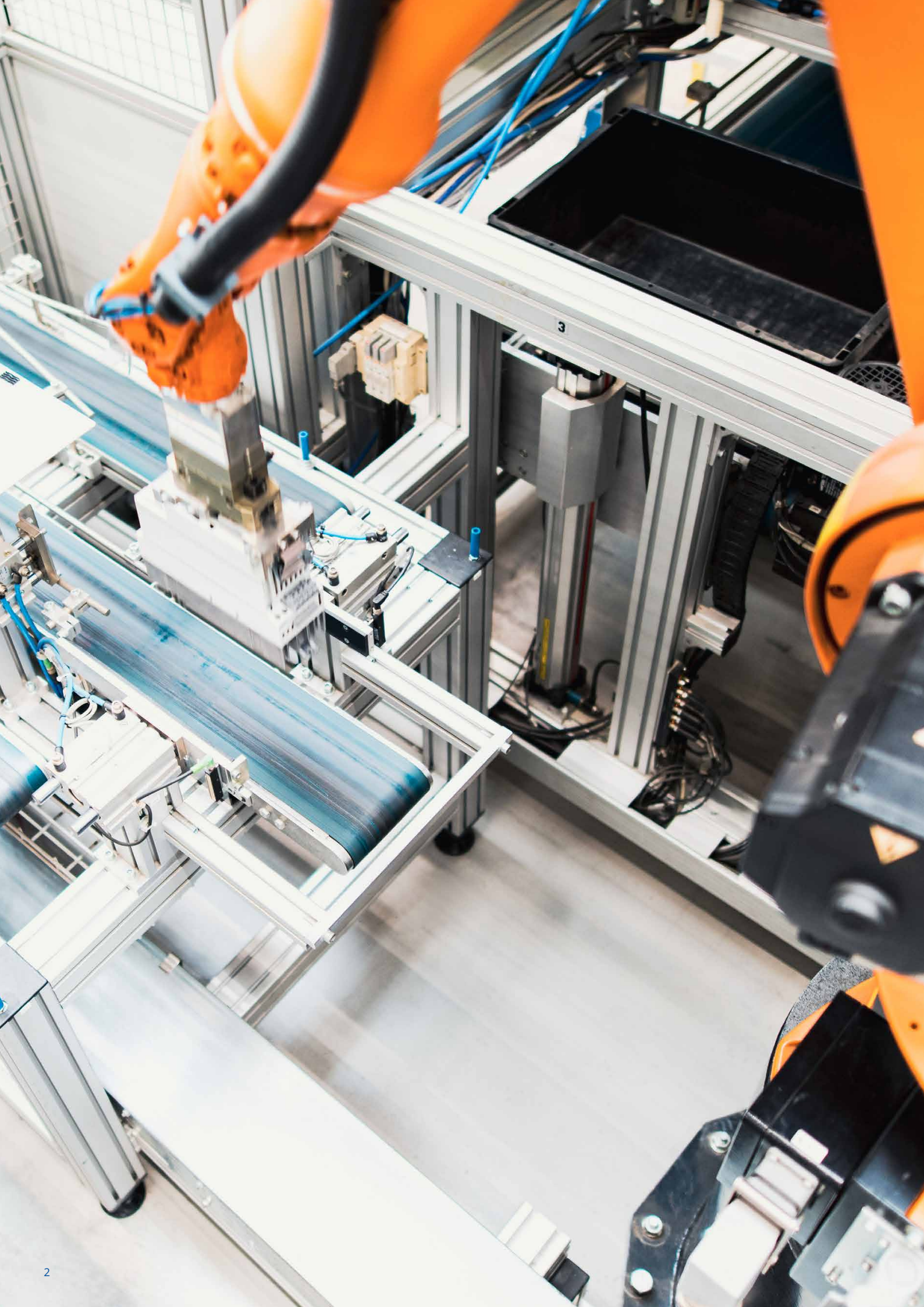


Servo motors



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 degree of protection 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 synchronous servo 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 downtimes 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 servo motor in next to no time (simply click on the  icon).
- For further technical details such as data sheets or CAD data, please contact our support team .



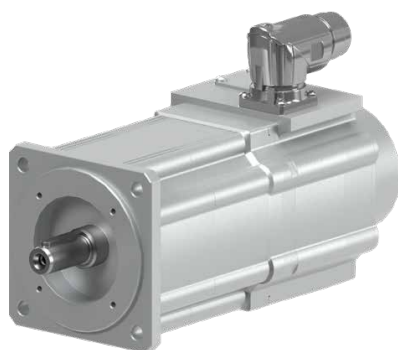
MCS synchronous servo motors

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

Standstill torque	0.8 ... 86 Nm
Rated torque	0.5 ... 72 Nm
Rated speed	1050 ... 6000 1/min
Max. torque	2.4 ... 190 Nm
Power range	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



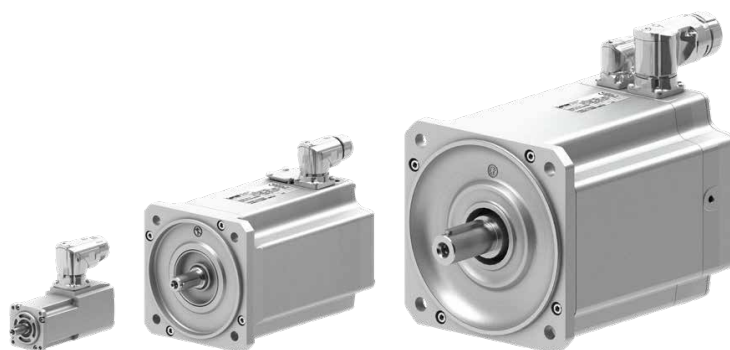
m850 synchronous servo motors

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.

Standstill torque	0.18 ... 67 Nm
Rated torque	0.12 ... 35 Nm
Rated speed	2520 ... 9000 1/min
Max. torque	0.7 ... 200 Nm
Power range	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



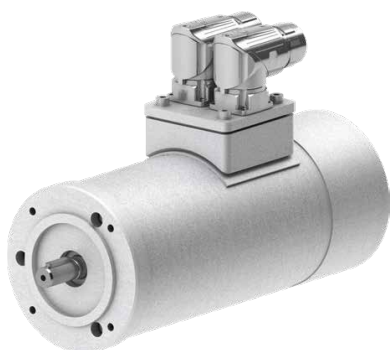
SDSGA asynchronous servo motors

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

Standstill torque	0.3 ... 2.2 Nm
Rated torque	0.27 ... 1.9 Nm
Rated speed	2700 ... 2825 1/min
Max. torque	1.0 ... 8.0 Nm
Power range	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.

Standstill torque	2.3 ... 290 Nm
Rated torque	2.0 ... 280 Nm
Rated speed	550 ... 4160 1/min
Max. torque	10 ... 1100 Nm
Power range	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



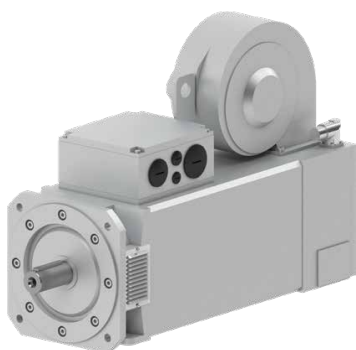
MQA asynchronous servo motors

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

Standstill torque	76 ... 325 Nm
Rated torque	66.2 ... 296 Nm
Rated speed	550 ... 2935 1/min
Max. torque	250 ... 1100 Nm
Power range	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





Technical data

	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
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Power range

	MCS synchronous servo motor	m850 synchronous servo motor	SDSGA asynchronous servo motor	MCA asynchronous servo motor	MQA asynchronous servo motor
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 synchronous servo motor	m850 synchronous servo motor	SDSGA asynchronous servo motor	MCA asynchronous servo motor	MQA asynchronous servo motor
Digital absolute value encoder One Cable Technology (OCT)	yes	yes	-	-	-
Resolver	yes	yes	yes	yes	yes
Resolver for functional safety	yes	yes	-	yes	yes
TTL incremental encoder	yes		-	yes	yes
SinCos absolute value encoder	yes	yes	yes	yes	yes
SinCos absolute value encoder for functional safety	yes	yes	-	-	-



















Market approval















	MCS synchronous servo motor	m850 synchronous servo motor	SDSGA asynchronous servo motor	MCA asynchronous servo motor	MQA asynchronous servo motor
CE	yes	yes	yes	yes	yes
UKCA	yes	yes	yes	yes	yes
UL	yes	yes	yes	yes	yes
CSA	yes	yes	yes	yes	yes
CCC	yes	yes	yes	yes	yes
RoHs	yes	yes	yes	yes	yes



















MCS synchronous servo motors















MCS, self-cooled

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[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	16618514		
MCS 06C41-	0.8	0.6	2.4	4050	8000	0.25	1.3	2.3	108 x 155 x 62	16242582		
MCS 06F60-	1.5	0.9	4.4	6000	8000	0.57	2.5	2.7	108 x 185 x 62	16305264		
MCS 06F41-	1.5	1.2	4.4	4050	8000	0.51	1.5	2.7	108 x 185 x 62	16277900		
MCS 06I60-	2.0	1.2	6.2	6000	8000	0.75	2.9	3.4	108 x 215 x 62	16245385		
MCS 06I41-	2.0	1.5	6.2	4050	8000	0.64	1.6	3.4	108 x 215 x 62	16260663		

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[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	16248390		
MCS 09D41-	3.3	2.3	9.5	4050	7000	1.0	2.3	4.8	134.5 x 213 x 89	16271462		
MCS 09F60-	4.2	2.4	15	6000	7000	1.5	4.5	5.7	134.5 x 233 x 89	16248391		
MCS 09F38-	4.2	3.1	15	3750	7000	1.2	2.5	5.7	134.5 x 233 x 89	16549921		
MCS 09H60-	5.5	3	20	6000	7000	1.9	6.0	6.6	134.5 x 253 x 89	16341097		
MCS 09H41-	5.5	3.8	20	4050	7000	1.6	3.4	6.6	134.5 x 253 x 89	16267503		
MCS 09L51-	7.5	3.6	32	5100	7000	1.9	6.9	8.4	134.5 x 293 x 89	16647545		
MCS 09L41-	7.5	4.5	32	4050	7000	1.9	4.2	8.4	134.5 x 293 x 89	16293023		

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[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	16574907		
MCS 12D20-	6.4	5.5	18	1950	6000	1.1	2.6	7.0	163 x 228 x 116	16647513		
MCS 12H35-	11.4	7.5	29	3525	6000	2.8	5.7	10.1	163 x 268 x 116	16248472		
MCS 12H15-	11.4	10.0	29	1500	6000	1.6	3.8	10.1	163 x 268 x 116	16299619		
MCS 12L41-	15.0	11.0	56	4050	6000	4.7	10.2	13.2	163 x 308 x 116	16424940		
MCS 12L20-	15.0	13.5	56	1950	6000	2.8	5.9	13.2	163 x 308 x 116	16273894		















	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[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	16647498		
MCS 14D15-	11.0	9.2	29	1500	6000	1.45	4.5	11.4	188.5 x 251 x 143	16647525		
MCS 14H32-	21.0	14.0	55	3225	6000	4.7	11.9	16.2	188.5 x 291 x 143	16647494		
MCS 14H15-	21.0	16.0	55	1500	6000	2.5	6.6	16.2	188.5 x 291 x 143	16647497		
MCS 14L32-	28.0	17.2	77	3225	6000	5.8	15.0	20.8	217.5 x 331 x 143	16581009		
MCS 14L15-	28.0	23.0	77	1500	6000	3.6	9.7	20.8	188.5 x 331 x 143	16647518		
MCS 14P32-	37.0	21.0	105	3225	6000	7.1	15.6	25.6	217.5 x 371 x 143	16647496		
MCS 14P14-	37.0	30.0	105	1350	6000	4.2	10.8	25.6	188.5 x 371 x 143	16363334		



















	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[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	16494707		
MCS 19F14-	32.0	27.0	86	1425	4000	4.0	8.6	24.0	238 x 280 x 192	16647499		
MCS 19J30-	51.0	29.0	129	3000	4000	9.1	18.5	31.0	267 x 320 x 192	16492201		
MCS 19J14-	51.0	40.0	129	1425	4000	6.0	12.3	31.0	238 x 380 x 192	16410289		
MCS 19P30-	64.0	32.0	190	3000	4000	10.0	19.0	41.0	267 x 320 x 192	16474659		
MCS 19P14-	64.0	51.0	190	1425	4000	7.2	14.3	41.0	267 x 380 x 192	16637492		















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

MCS synchronous servo motors

MCS, externally cooled

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]			
MCS 12D35-	7.5	6.0	17.7	3525	6000	2.2	5.6	9.1	163 x 301 x 116	16646803		
MCS 12D17-	7.5	7.0	17.7	1650	6000	1.2	3.0	9.1	163 x 301 x 116	16647526		
MCS 12H34-	12.8	10.5	29.0	3375	6000	3.7	7.5	12.2	163 x 341 x 116	16647542		
MCS 12H14-	12.8	12.0	29.0	1350	6000	1.7	4.1	12.2	163 x 341 x 116	16647524		
MCS 12L39-	19.0	14.0	56.4	3900	6000	5.7	11.7	15.3	163 x 381 x 116	16647520		
MCS 12L17-	19.0	17.0	56.4	1650	6000	2.9	6.7	15.3	163 x 381 x 116	16518062		

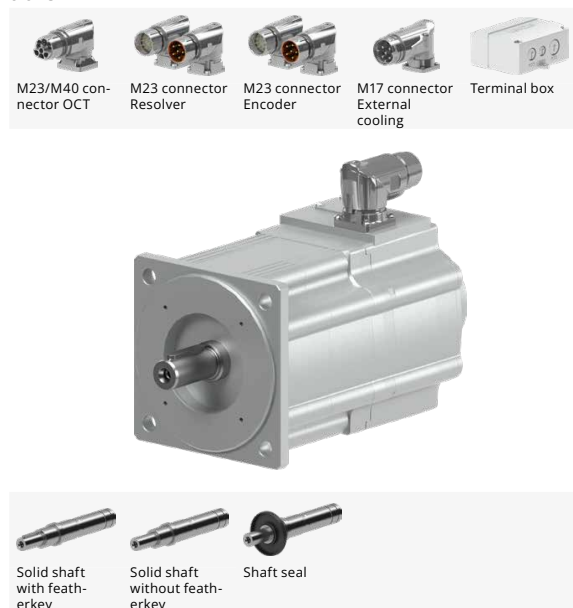
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]			
MCS 14D30-	12.5	10.5	29.0	3000	6000	3.3	9.7	15.2	188.5 x 339 x 143	16647528		
MCS 14D14-	12.5	12.0	29.0	1350	6000	1.7	5.4	15.2	188.5 x 339 x 143	16647546		
MCS 14H28-	25.5	20.5	54.8	2775	6000	6.0	15.0	20.2	188.5 x 379 x 143	16639896		
MCS 14H12-	25.5	23.5	54.8	1200	6000	3.0	8.3	20.2	188.5 x 379 x 143	16647521		
MCS 14L30-	34.5	25.5	77.1	3000	6000	8.0	20.8	24.7	217.5 x 419 x 143	16647501		
MCS 14L14-	34.5	30.5	77.1	1350	6000	4.3	11.8	24.7	188.5 x 419 x 143	16647527		
MCS 14P26-	43.5	33.0	105.0	2625	6000	9.1	21.9	29.7	217.5 x 459 x 143	16519901		
MCS 14P11-	43.5	42.0	105.0	1050	6000	4.6	13.4	29.7	188.5 x 459 x 143	16647523		

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number		
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]			
MCS 19F29-	41.5	32.5	86.0	2850	4000	9.7	20.1	30.0	267 x 387 x 192	16647547		
MCS 19F12-	41.5	38.0	86.0	1200	4000	4.8	11.3	30.0	238 x 387 x 192	16647519		
MCS 19J29-	70.5	50.5	129.0	2850	4000	15.1	31.0	37.0	267 x 427 x 192	16550476		
MCS 19J12-	70.5	62.5	129.0	1200	4000	7.9	18.3	37.0	267 x 487 x 192	16647530		
MCS 19P29-	86.0	53.0	190.0	2850	4000	15.8	29.5	47.0	267 x 427 x 192	16544746		
MCS 19P12-	86.0	72.0	190.0	1200	4000	9.0	21.3	47.0	267 x 487 x 192	16647517		

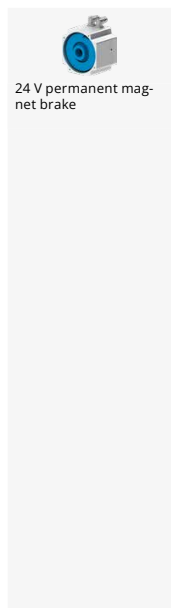
The motors listed are equipped with One Cable Technology as feedback.

Options – MCS synchronous servo motors

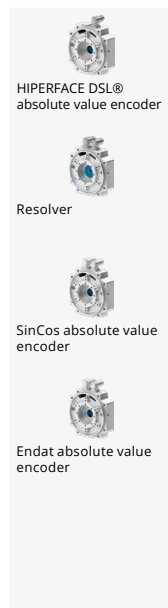
Connections



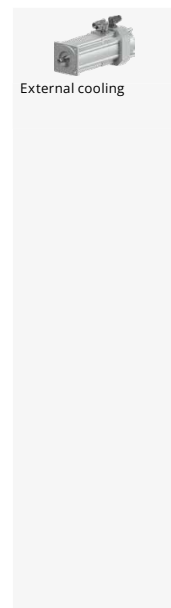
Brake



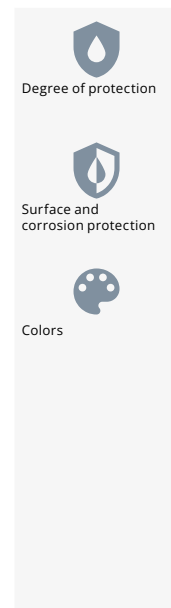
Feedback



Cooling



Operation



Connections

Connector	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	
Terminal box	M17 connector: External cooling	
	For power, feedback, and blower connection	

Brake

24 V permanent magnet brake	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

One Cable Technology (OCT)	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	
Resolver	Resolver RS0	
	Resolver for functional safety RV03	
Encoder	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, multi-turn, 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	

Endat	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

External cooling	For MCS 12
	For MCS 14
	For MCS 19

Operation

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

Machine connections

Shaft	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	
Shaft seal	Simple seal	Included as standard
	Oil-tight seal	

Accessories – MCS synchronous servo motors



















System cables

		Material number
OCT motor cables	See brochure	
Motor cables	See brochure	
Feedback cables	See brochure	
Blower cables	See brochure	



m850 synchronous servo motors

m850, self-cooled

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
m850-S40/S9000	0.18	0.12	0.72	9000	10000	0.11	0.7	0.5	88 x 119 x 40	in preparation
m850-S40/L9000	0.35	0.21	1.4	9000	10000	0.2	1.2	0.7	88 x 144 x 40	in preparation
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
m850-S60/S6000	0.7	0.5	2.6	6000	10000	0.325	0.7	1.45	104 x 152 x 62	in preparation
m850-S60/L6000	1.5	0.9	5.8	6000	10000	0.55	1.2	2	104 x 185 x 62	in preparation
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
m850-S80/S5500	2.8	1.7	10.5	5500	10000	1.0	2.3	3.2	124 x 195 x 82	in preparation
m850-S80/L5500	3.5	2.1	13.4	5500	10000	1.2	2.8	3.85	124 x 213 x 82	in preparation
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
m850-S120/S3960	6.5	4.8	14.5	3960	6000	2.0	4.3	6.5	162.5 x 229 x 121	16242142  
m850-S120/M3960	11.0	7.4	29.0	3960	6000	3.1	6.4	9.25	162.5 x 267 x 121	16582899  
m850-S120/L3960	15.0	9.0	44.0	3960	6000	3.7	7.8	12.0	162.5 x 305 x 121	16245382  
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
m850-S140/S3240	11.0	8.5	26.0	3240	6000	2.9	6.3	9.5	185 x 232 x 142	16259352  
m850-S140/M3240	21.0	14.0	53.5	3240	6000	4.8	10.0	14.5	185 x 272 x 142	16273893  
m850-S140/L3240	28.0	17.4	80.0	3240	6000	5.9	12.2	19.5	206 x 312 x 142	16510170  
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
m850-S190/S3000	27.0	16.0	71.0	3000	4500	5.0	10.3	19.8	232 x 264 x 190	16271868  
m850-S190/M3000	46.0	24.0	120	3000	4500	7.5	15.4	28.5	253 x 312 x 190	16474784  
m850-S190/L2520	67.0	35.0	200	2520	4500	9.2	17.7	41.0	253 x 376 x 190	16500269  

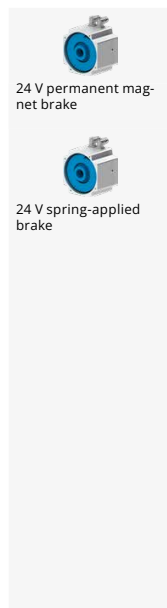
The motors listed are equipped with One Cable Technology as feedback.

Options – m850 synchronous servo motors

Connections



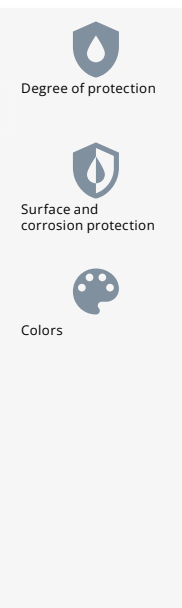
Brake



Feedback



Operation



Connections

Connector	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	

Brake

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

Feedback

One Cable Technology (OCT)	m850-S40 ... m850-S80	HIPERFACE® DSL digital absolute value encoder AM17-8V-D	Included as standard
	m850-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	
Resolver	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	
Encoder	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




Degree of protection	m850-S40 ... m850-S80	IP65/IP21 (A side)	
	m850-S120 ... m850-S190	IP65	
Surface and corrosion protection	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	
Color	m850-S40 ... m850-S80	primed, RAL 9005 (jet black)	Included as standard
	m850-S120 ... m850-S190	primed	Included as standard
	RAL colors		

Machine connections

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









Accessories – m850 synchronous servo motors

System cables

		Material number
OCT motor cables	See brochure	
Motor cables	See brochure	
Feedback cables	See brochure	

SDSGA asynchronous servo motors

SDSGA, self-cooled

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

The motors listed are equipped with resolvers as feedback.

Options – SDSGA asynchronous servo motors

Connections



Brake



Feedback



Connections

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

Brake

24 V spring-applied brake	SDSGAxx-047	Braking torque 1 Nm
	SDSGAxx-056	Braking torque 1 Nm
	SDSGAxx-063	Braking torque 2 Nm

Feedback

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

Machine connections

Shaft	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	





















Accessories – SDSGA asynchronous servo motors

System cables

		Material number
Motor cables	See brochure	
Feedback cables	See brochure	

MCA asynchronous servo motors























































MCA, self-cooled

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

The motors listed are equipped with resolvers as feedback.

MCA asynchronous servo motors

MCA externally cooled

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

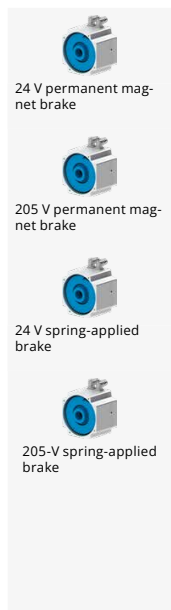
The motors listed are equipped with resolvers as feedback.

Options – MCA asynchronous servo motors

Connections



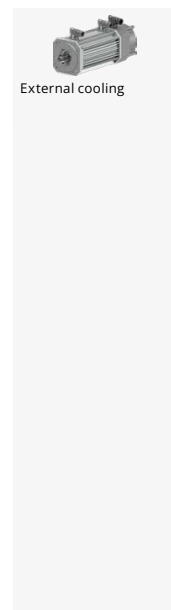
Brake



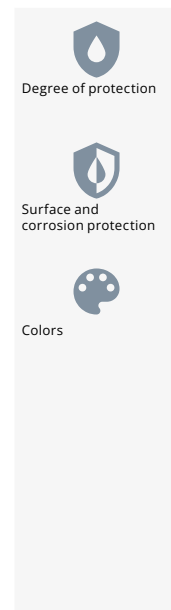
Feedback



Cooling



Operation



Connections

Connector	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	
Terminal box	M40 / M23 connector: Power connection / Endat connection	
	M17 connector: External cooling	

Brake

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

Resolver	Resolver RS0	Included as standard
	Resolver for functional safety RV03	
Encoder	HIPERFACE® SinCos absolute value encoder AM1024-8V-H, multi-turn, 1024 pulses	
	HIPERFACE® SinCos absolute value encoder AS1024-8V-H, single-turn, 1024 pulses	
Endat	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	
Incremental encoder	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

External cooling	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

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

Machine connections


Shaft	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	
Shaft seal	Simple seal	Included as standard
	Oil-tight seal	

Accessories – MCA asynchronous servo motors

Cooling

		Material number
Dust filter for external cooling	For MCA 20	
	For MCA 22	
	For MCA 26	





System cables









		Material number
Motor cables	See brochure	
Feedback cables	See brochure	
Blower cables	See brochure	











MQA asynchronous servo motors

MQA externally cooled

	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MQA 20X29H	76.0	66.2	250.0	2930	6500	20.3	46.9	63.0	376 x 577 x 196	16207850  
MQA 20X14H	76.0	71.3	250.0	1420	6500	10.6	26.5	63.0	376 x 577 x 196	16157287  

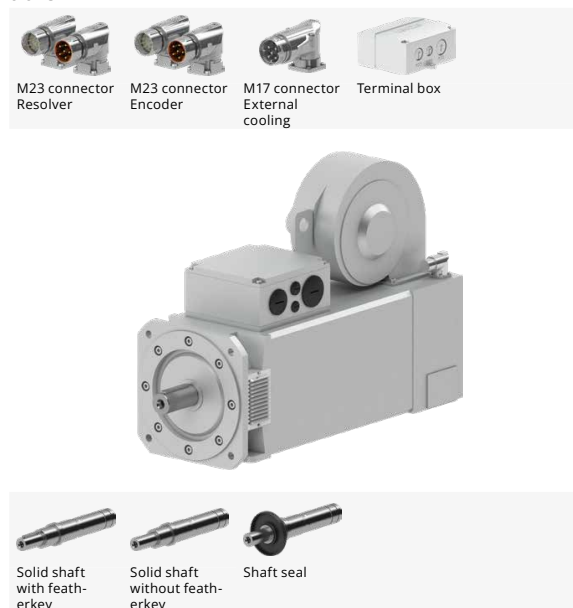
	M_0	M_{rated}	M_{max}	n_{rated}	n_{max}	P_{rated}	I_{rated}	m	H x L x T	Material number
	[Nm]	[Nm]	[Nm]	[1/min]	[1/min]	[kW]	[A]	[kg]	[mm]	
MCA 22P29H	156.0	125.0	500.0	2935	6500	38.4	86.0	102.0	448 x 691 x 220	16216315  
MCA 22P17H	156.0	130.0	500.0	1670	6500	22.7	50.3	102.0	448 x 691 x 220	16201237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

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

The motors listed are equipped with resolvers as feedback.

Options – MQA asynchronous servo motors

Connections



Brake



Feedback



Cooling



Operation



Connections

Connector	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	
	M17 connector: External cooling	
Terminal box	For power, feedback, and blower connection	

Brake

24 V spring-applied brake	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
205-V spring-applied brake	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

Resolver	Resolver RS0	Included as standard
	Resolver for functional safety RV03	
Encoder	HIPERFACE® SinCos absolute value encoder AM1024-8V-H, multi-turn, 1024 pulses	
	HIPERFACE® SinCos absolute value encoder AS1024-8V-H, single-turn, 1024 pulses	
Endat	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	
Incremental encoder	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

External cooling	For MQA 20
	For MQA 22
	For MQA 26

Operation

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

Machine connections

Shaft	Solid shaft with featherkey	Included as standard
	Solid shaft without featherkey	
Shaft seal	Simple seal	Included as standard
	Oil-tight seal	
	Dust-tight seal	

Accessories – MQA asynchronous servo motors

Cooling

		Material number
Dust filter for external cooling	For MQA 20	
	For MQA 22	
	For MQA 26	

System cables

		Material number
Motor cables	See brochure	
Feedback cables	See brochure	
Blower cables	See brochure	

