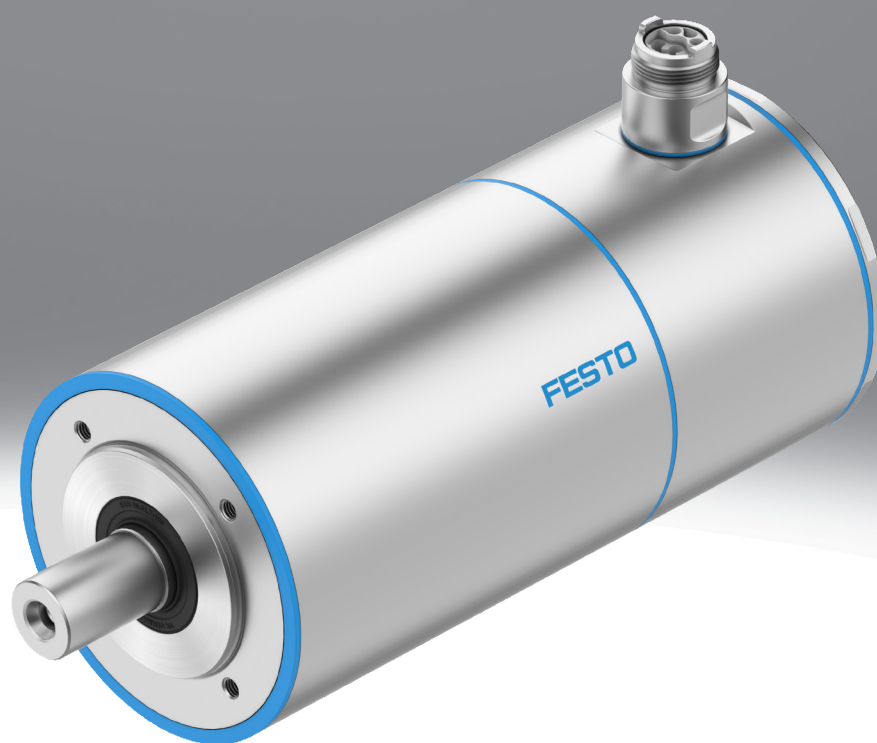


Servo motor EMMH-AS

FESTO



Characteristics

At a glance

The stainless steel servomotor EMMH-AS in clean design is the ideal solution for the most demanding environmental conditions. Hygienic, robust and compact - perfect for the food, pharmaceutical and packaging industries.

- Hygienic series for the most demanding environmental conditions
 - One Cable Plug with integrated pressure equalisation hose
 - Stainless steel housing made from 1.4404 / 316L with protection class IP69K
 - Suitable for contact with food
 - Easy-to-clean clean design for simple maintenance
 - Maximum corrosion resistance for a long service life
 - NSF-H1 Grease certified for hygiene-critical applications
 - Digital absolute measuring system Multi-turn without battery
- Fits perfectly into our comprehensive product portfolio of electromechanical actuators, motors, servo drives and control systems
- Optional:
- Holding brake
 - Shaft with feather key
 - Suitable stainless steel gearboxes from Neugart (type HLAE)

Engineering tools

[Link](#) [electric motion sizing](#)



Save time with engineering tools: Smart engineering for the optimal solution. Our goal is to increase your productivity. Our engineering tools play an integral part in achieving this goal. They help you size your system correctly, tap into unimagined productivity reserves and generate additional productivity along the entire value chain. In every phase of your project, from the initial contact to the modernisation of your machine, you will come across a number of different tools that will be of use to you.

Electric Motion Sizing

- Create the optimum drive package quickly and reliably. Electric Motion Sizing calculates suitable combinations of electric axis, electric motor and servo drive using just a few application details. It provides all the relevant data including the bill of materials and documentation for your selected combination. This avoids design errors and results in significantly improved energy efficiency for the system. A smooth connection to the Festo Automation Suite also makes commissioning easier for you.

Festo Automation Suite

- Parameterisation, programming and commissioning in a clear and user-friendly interface
- Optimal support for complex processes thanks to guided wizards (e.g. for initial commissioning, drive configuration, etc.)
- Quick access to the required documents and further information
- Easy integration of electric drives in the controller programming

Diagrams

[Link](#) [emmh-as](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

Radial shaft seal

[A] With shaft sealing ring, double lip

The double-lipped radial shaft seal guarantees reliable protection against dust and liquids and thus ensures a long-lasting seal for the stainless steel motor.

Characteristics

Electrical connection

[S1] Straight plug M17

The space-saving one-cable solution with integrated pressure compensation tubing reduces the installation effort, increases operational safety and ensures reliable leak tightness.

Measuring unit

[M] Absolute encoder, multi-turn

- A unique value in coded form is assigned to the angular position and each full turn.
- This type counts the full turns until the specified maximum is reached (including when switched off).
- Homing is only required once it has been installed in the application.

Brake

[B] With brake

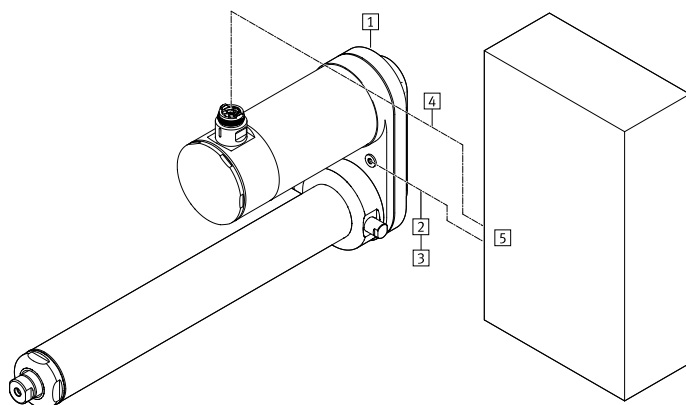
The holding brake should not be used as a safety brake.

Thermal motor monitoring

[T] Integrated into the winding

The temperature monitoring integrated in the winding precisely records the motor temperature directly in the motor. This increases operational safety and reliably prevents overheating. This technology is particularly suitable for hygienic use in the food industry.

Application example



An indispensable measure for pressure compensation and preventing condensation

Air is exchanged between the interior of the cylinder and the environment via a pressure compensation hole in the motor mounting kits [1]. This prevents negative pressure or excess pressure from building up inside the cylinder. Connecting plastic tubing [2] to a push-in fitting [3] prevents unwanted media from being drawn in. The plastic tubing must be routed to an area that is not in the food environment. This area could be the control cabinet [5], for example. The motor cable [4], which also contains plastic tubing, is also routed here. Both tubes are left open, allowing air to circulate. Excess pressure or negative pressure must not be connected.

Stainless steel push-in fittings type NPQR are recommended; see www.festo.com/catalogue/npqr
For further information, see www.festo.com/catalogue/eamm

Type code

001	Series	
EMMH	Servo motor	

002	Motor type	
AS	AC synchronous	

003	Flange size, motors [mm]	
68	68	
88	88	
108	108	
138	138	

004	Length	
H	Very long	
M	Medium	

005	Output shaft	
	Smooth shaft	
K	Shaft with featherkey according to DIN 6885	

006	Radial shaft seal	
A	With shaft sealing ring, double lip	

007	Winding	
HS	High voltage, standard	

008	Electrical connection	
S1	Straight plug M17	

009	Measuring unit	
M	Absolute encoder, multi-turn	

010	Brake	
	None	
B	With brake	

011		
T	Integrated into the winding	

Datasheet

General technical data – EMMH-AS-68, 88

Flange size, motors [mm]	68				88			
Length	Very long [H]		Medium [M]		Very long [H]		Medium [M]	
Winding	High voltage, standard [HS]							
Brake	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]
Nominal operating voltage DC	680 V							
Nominal motor current	1.6 A	1.2 A	0.9 A		2.5 A	2.3 A	1.8 A	
Continuous stall current	2.4 A	2.3 A	1 A		4.8 A	4.6 A	2.9 A	2.7 A
Nominal power rating of motor	375 W	260 W	210 W	195 W	620 W	580 W	390 W	
Nominal torque	1.15 Nm	0.8 Nm	0.65 Nm	0.6 Nm	1.9 Nm	1.8 Nm	1.2 Nm	
Peak current	7.5 A		3 A		16.5 A		9.5 A	
Peak torque	5.9 Nm		2.1 Nm		14.3 Nm		6.8 Nm	
Standstill torque	1.9 Nm	1.75 Nm	0.75 Nm		3.95 Nm		2.1 Nm	2 Nm
Standstill torque constant ¹⁾	0.79 Nm/A	0.76 Nm/A	0.75 Nm/A		0.83 Nm/A		0.74 Nm/A	
Nominal rotary speed	3,100 rpm							
Max. rotational speed	8,350 rpm		9,550 rpm		8,000 rpm			
Max. mechanical speed	10,000 rpm				8,000 rpm			
Max. brake no-load speed	–	12,000 rpm	–	12,000 rpm	–	10,000 rpm	–	10,000 rpm
Angular acceleration	100,000 rad/s ²							
Motor constant	0.73 Nm/A		0.72 Nm/A		0.79 Nm/A		0.69 Nm/A	
Voltage constant, phase-to-phase	53.6 mV/min		49.1 mV/min		55.3 mV/min		49.6 mV/min	
Electric time constant	2.2 ms		1.8 ms		3.9 ms		3.5 ms	
Thermal time constant	55 min		46 min		62 min		61 min	
Thermal resistance	1.25 K/W		1.66 K/W		1.01 K/W		1.14 K/W	
Number of pole pairs	5							
Phase-phase winding resistance	4.8 Ohm		21.3 Ohm		1.8 Ohm		3.6 Ohm	
Phase-phase winding inductance	9.5 mH		37.5 mH		7.1 mH		15 mH	
Winding longitudinal inductivity Ld (phase)	4.3 mH		16.9 mH		3.5 mH		6.8 mH	
Winding cross inductivity Lq (phase)	4.8 mH		18.8 mH		3.9 mH		7.5 mH	
Total mass moment of inertia of output	0.7 kgcm ²	0.809 kgcm ²	0.26 kgcm ²	0.359 kgcm ²	2.09 kgcm ²	2.56 kgcm ²	1.12 kgcm ²	1.53 kgcm ²
Permissible axial shaft load	68 N		56 N		86 N		76 N	
Permissible radial shaft load	340 N		280 N		430 N		380 N	

1) Internal stall torque constant

Technical data – Brake – EMMH-AS-68, 88

Flange size, motors [mm]	68		88	
Length	Very long [H]	Medium [M]	Very long [H]	Medium [M]
Winding	High voltage, standard [HS]			
Operating voltage DC for brake	24 V			
Brake current consumption	0.44 A		0.5 A	
Power consumption, brake	10.5 W		12 W	
Brake holding torque	2.8 Nm		6 Nm	
Brake separation time	40 ms		50 ms	
Brake closing time	28 ms		45 ms	
DC brake response delay	10 ms			
Brake coil resistance	54.5 Ohm		48 Ohm	
Brake coil inductivity	1,000 mH		2,100 mH	
Mass moment of inertia of brake	0.099 kgcm ²		0.41 kgcm ²	
Max. friction per braking process	310 J		570 J	
Number of emergency stops per hour	1			
Total brake friction	310 kJ		570 kJ	

Datasheet

General technical data – EMMH-AS-108, 138

Flange size, motors [mm]	108				138			
Length	Very long [H]		Medium [M]		Very long [H]		Medium [M]	
Winding	High voltage, standard [HS]							
Brake	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]
Nominal operating voltage DC	680 V							
Nominal motor current	4.9 A	3.6 A	4.5 A	4.4 A	6.6 A	6.2 A	4.9 A	4.3 A
Continuous stall current	8 A	7.1 A	6.5 A		11.9 A		7.9 A	7.4 A
Nominal power rating of motor	1,000 W	750 W	840 W	810 W	1,520 W	1,410 W	1,510 W	1,300 W
Nominal torque	4.8 Nm	3.55 Nm	4 Nm	3.85 Nm	9.7 Nm	9 Nm	7.2 Nm	6.2 Nm
Peak current	27.5 A		22.8 A		42.8 A		23.1 A	
Peak torque	26.3 Nm		19 Nm		59 Nm		33.3 Nm	
Standstill torque	8.2 Nm	7.3 Nm	5.9 Nm		18.1 Nm		11.9 Nm	11 Nm
Standstill torque constant ¹⁾	1.03 Nm/A		0.92 Nm/A		1.52 Nm/A		1.51 Nm/A	
Nominal rotary speed	2,000 rpm				1,500 rpm		2,000 rpm	
Max. rotational speed	7,000 rpm				4,550 rpm		4,590 rpm	
Max. mechanical speed	7,000 rpm				5,000 rpm			
Max. brake no-load speed	–	10,000 rpm	–	10,000 rpm	–	10,000 rpm	–	10,000 rpm
Angular acceleration	100,000 rad/s ²							
Motor constant	1 Nm/A		0.89 Nm/A		1.48 Nm/A		1.47 Nm/A	
Voltage constant, phase-to-phase	66.8 mV/min		59.5 mV/min		98.3 mV/min		97.6 mV/min	
Electric time constant	5.6 ms		5.2 ms		11.2 ms		9.8 ms	
Thermal time constant	89 min		82 min		111 min		100 min	
Thermal resistance	0.81 K/W		0.77 K/W		0.73 K/W		0.68 K/W	
Number of pole pairs	5							
Phase-phase winding resistance	0.77 Ohm		1.03 Ohm		0.34 Ohm		0.89 Ohm	
Phase-phase winding inductance	4.4 mH		5.3 mH		3.8 mH		8.8 mH	
Winding longitudinal inductivity Ld (phase)	2 mH		2.4 mH		1.7 mH		3.9 mH	
Winding cross inductivity Lq (phase)	2.2 mH		2.7 mH		1.9 mH		4.4 mH	
Total mass moment of inertia of output	5.1 kgcm ²	5.95 kgcm ²	3.57 kgcm ²	4.3 kgcm ²	19 kgcm ²	21.3 kgcm ²	9.78 kgcm ²	12.1 kgcm ²
Permissible axial shaft load	147 N		137 N		262 N		227 N	
Permissible radial shaft load	735 N		685 N		1,310 N		1,135 N	

1) Internal stall torque constant

Technical data – Brake – EMMH-AS-108, 138

Flange size, motors [mm]	108		138	
Length	Very long [H]	Medium [M]	Very long [H]	Medium [M]
Winding	High voltage, standard [HS]			
Operating voltage DC for brake	24 V			
Brake current consumption	0.57 A		0.68 A	
Power consumption, brake	13.6 W		16.4 W	
Brake holding torque	11 Nm		20 Nm	
Brake separation time	60 ms		90 ms	
Brake closing time	58 ms		81 ms	
DC brake response delay	10 ms			
Brake coil resistance	42.1 Ohm		35.3 Ohm	
Brake coil inductivity	2,600 mH		3,200 mH	
Mass moment of inertia of brake	0.85 kgcm ²	0.73 kgcm ²	2.3 kgcm ²	2.32 kgcm ²
Max. friction per braking process	910 J		1,980 J	
Number of emergency stops per hour	1			
Total brake friction	910 kJ		1,980 kJ	

Datasheet

Operating and environmental conditions

Conforms to standard	IEC 60034
Motor type to EN 60034-7	IM B14, IM V18
Degree of protection	IP69K
Ambient temperature	-30 ... 40°C
Note on ambient temperature ¹⁾	Up to 80°C with derating of -1.5% per degree Celsius, Up to 80°C with derating -2%/°C
Storage temperature	-20 ... 70°C
Max. winding temperature	155°C
Temperature monitoring	Digital motor temperature transmission via EnDat® 2.2
Rating class as per EN 60034-1	S1
Temperature class as per EN 60034-1	F
Relative air humidity	0 - 100%
Concentricity, coaxiality, axial runout to DIN SPEC 42955	N
Balance quality	G 2.5
Pollution degree	2
Max. installation height	3,000 m
Note on max. installation height	As of 1,000 m: only with derating of -1.0% per 100 m
Bearing lifetime under nominal conditions	20,000 h
Switching cycles holding brake	10 million idle actuations (without friction work!)
CE mark (see declaration of conformity) ²⁾	To EU EMC Directive To EU Low Voltage Directive In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity) ³⁾	To UK instructions for EMC To UK RoHS instructions To UK regulations for electrical equipment
Approval	RCM c UL us - Recognised (Oil)
Certificate issuing authority	UL E342973
Suitable for use with food	Approved for direct contact with food
Vibration resistance	As per EN 60068-2-6
Shock resistance	As per EN 60068-2-29, 15 g/11 ms to EN 60068-2-27
Corrosion resistance class CRC ⁴⁾	4 - Very high corrosion stress, (except laser marking)
LABS (PWIS) conformity	VDMA24364 zone III
Note on materials	RoHS compliant

1) Without friction work

2) More information www.festo.com/catalogue/emmt → Downloads.3) More information www.festo.com/catalogue/emmt → Downloads.4) More information www.festo.com/x/topic/crc

Weight - EMMH-AS-68, 88

Flange size, motors [mm]	68				88			
Length	Very long [H]		Medium [M]		Very long [H]		Medium [M]	
Brake	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]
Product weight	3,300 g	3,900 g	1,900 g	2,500 g	6,000 g	6,700 g	4,500 g	5,200 g

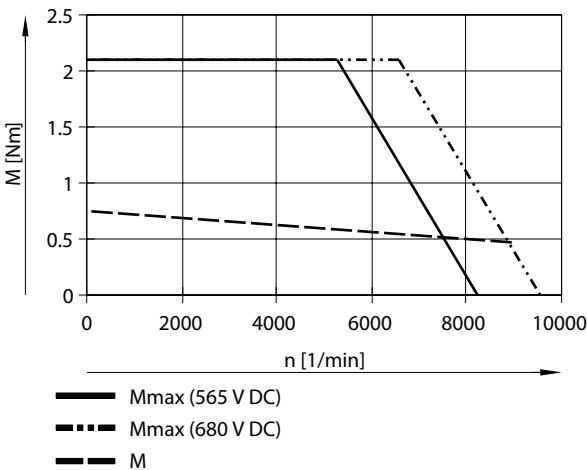
Weight - EMMH-AS-108, 138

Flange size, motors [mm]	108				138			
Length	Very long [H]		Medium [M]		Very long [H]		Medium [M]	
Brake	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]	None []	With brake [B]
Product weight	8,900 g	10,300 g	7,300 g	8,900 g	20,100 g	24,500 g	12,500 g	14,400 g

Datasheet

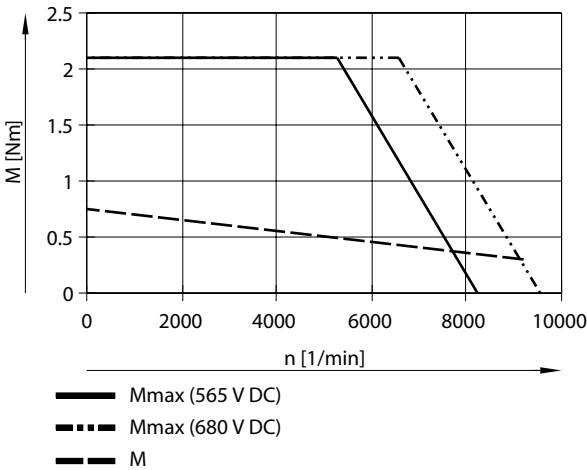
Technical data – Encoder, multi-turn				
Flange size, motors [mm]	68	88	108	138
Winding	High voltage, standard [HS]			
Rotor position sensor	Absolute encoder, multi-turn			
rotor position sensor, DC operating voltage	5 V			
rotor position sensor, DC operating voltage range	3.6 ... 14 V			
Rotor position encoder interface	EnDat 22			
rotor position sensor, position values per revolution	524,288			
Rotor position sensor, encoder measuring principle	Inductive			
Rotor position transducer resolution	19 bit			
rotor position sensor, absolute detectable revolutions	4,096			
rotor position sensor, system accuracy of angle measurement	-120 ... 120 arcsec		-65 ... 65 arcsec	

Torque M as a function of rotational speed n for EMMH-AS-68-MA-HS



Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).
Mmax = peak torque
M = nominal torque

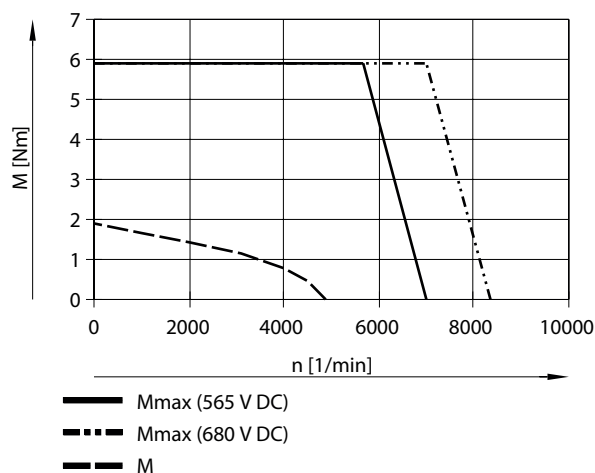
Torque M as a function of rotational speed n for EMMH-AS-68-MA-HS-B



Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).
Mmax = peak torque
M = nominal torque

Datasheet

Torque M as a function of rotational speed n for EMMH-AS-68-HA-HS



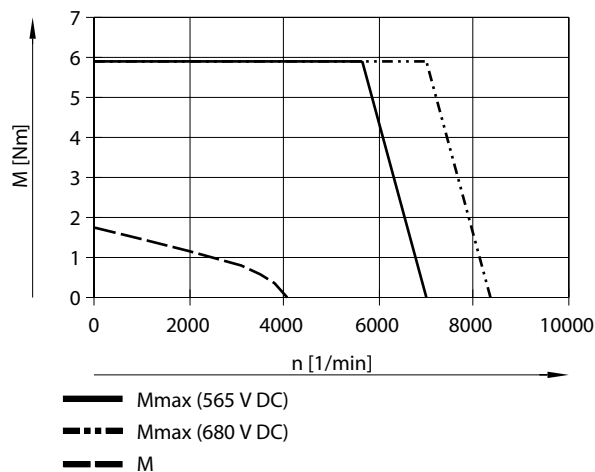
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-68-HS-B



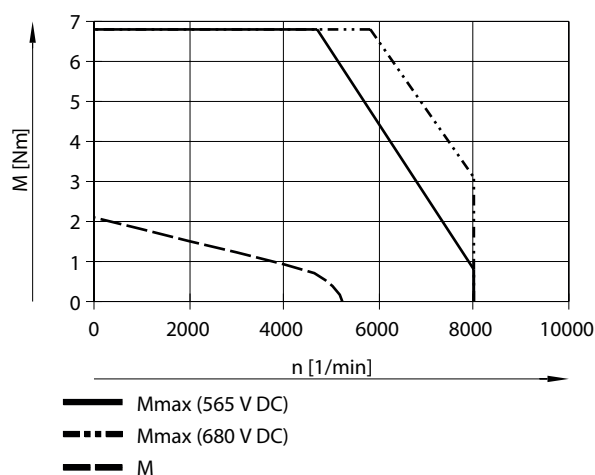
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-88-MA-HS



Typical motor characteristic curve with nominal voltage and optimal motor controller.

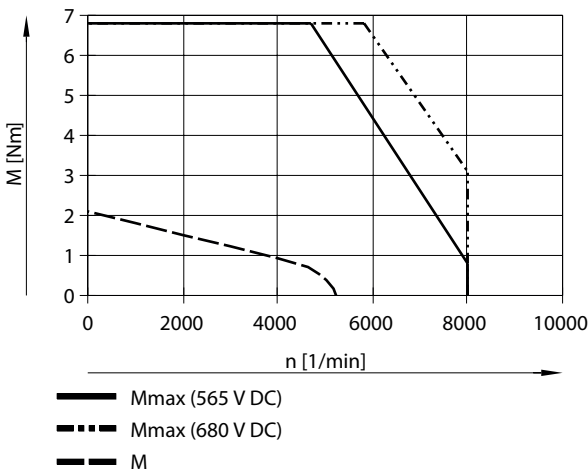
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

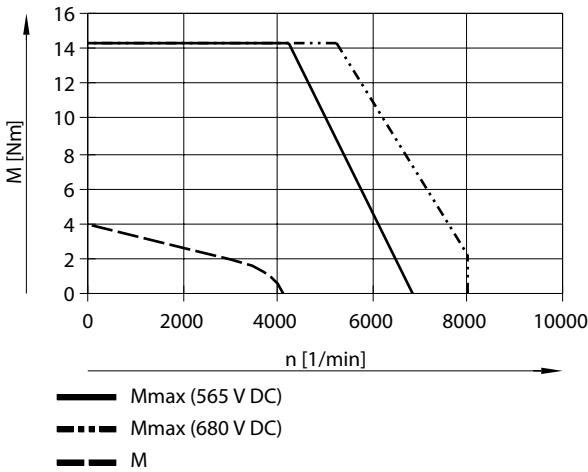
Datasheet

Torque M as a function of rotational speed n for EMMH-AS-88-MA-HS-B



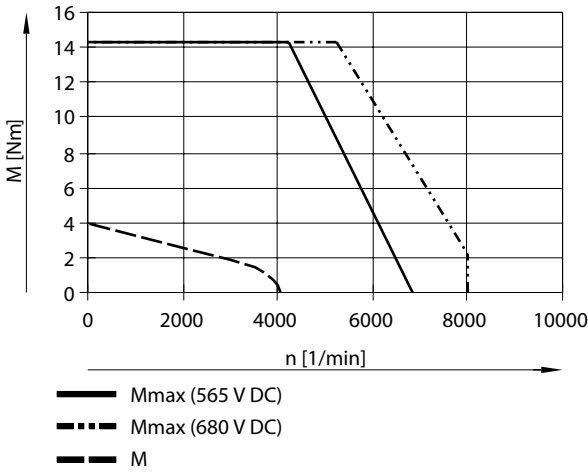
Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).
Mmax = peak torque
M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-88-HA-HS



Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).
Mmax = peak torque
M = nominal torque

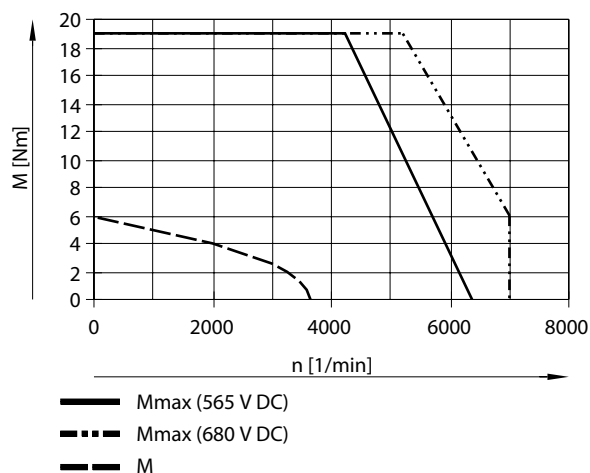
Torque M as a function of rotational speed n for EMMH-AS-88-HA-HS-B



Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).
Mmax = peak torque
M = nominal torque

Datasheet

Torque M as a function of rotational speed n for EMMH-AS-108-MA-HS



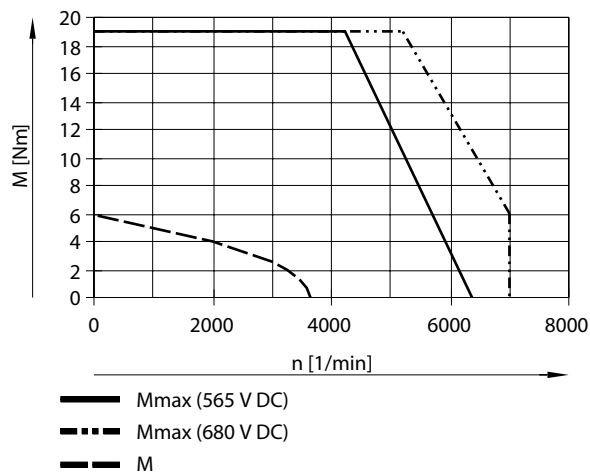
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-108-MA-HS-B



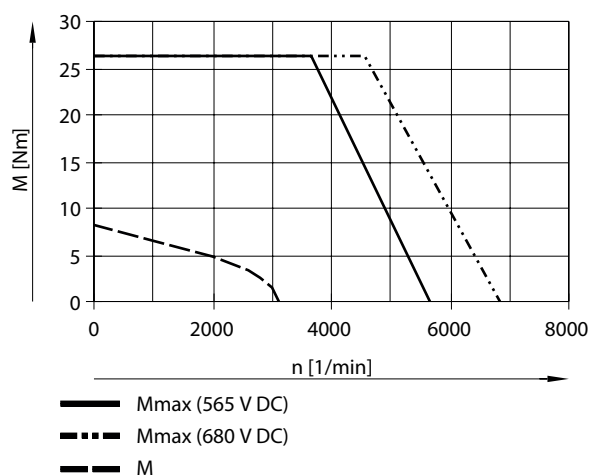
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-108-HA-HS



Typical motor characteristic curve with nominal voltage and optimal motor controller.

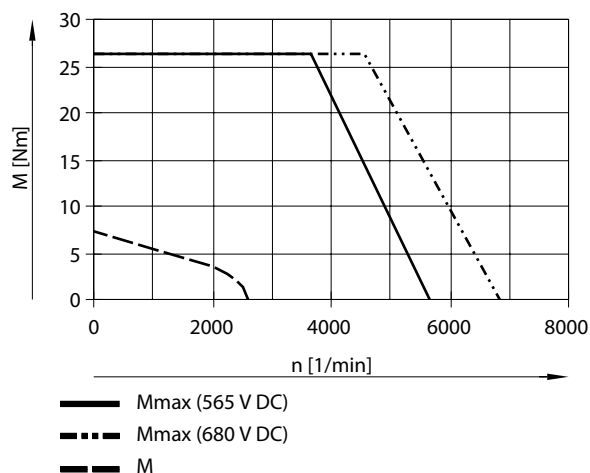
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Datasheet

Torque M as a function of rotational speed n for EMMH-AS-108-HA-HS-B



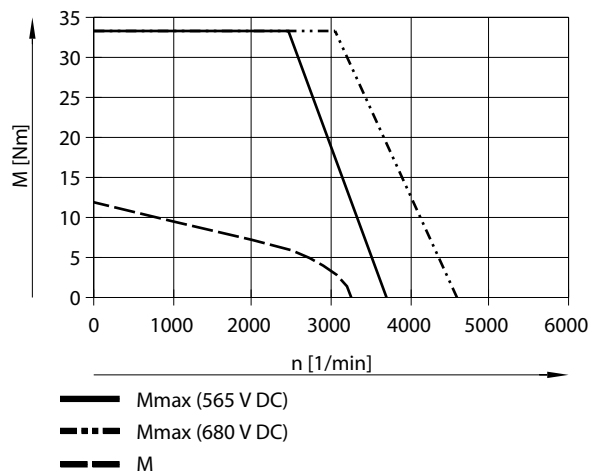
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-138-MA-HS



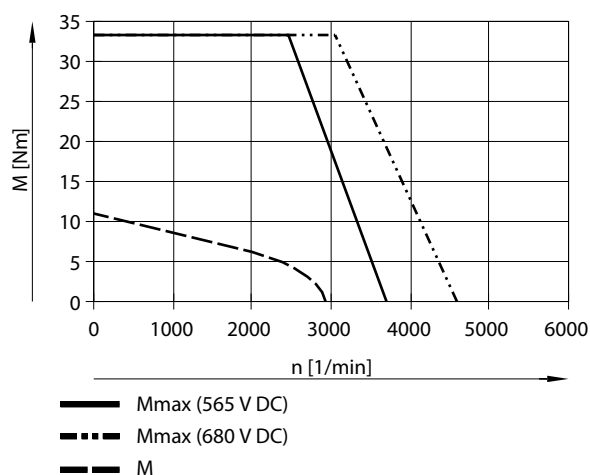
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-138-MA-HS-B



Typical motor characteristic curve with nominal voltage and optimal motor controller.

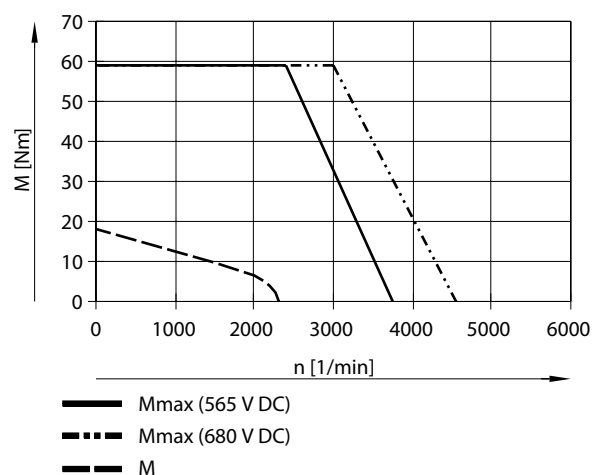
Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Datasheet

Torque M as a function of rotational speed n for EMMH-AS-138-HA-HS



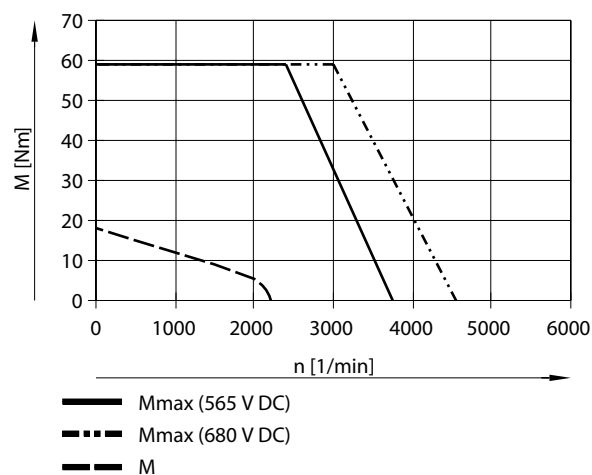
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Torque M as a function of rotational speed n for EMMH-AS-138-HA-HS-B



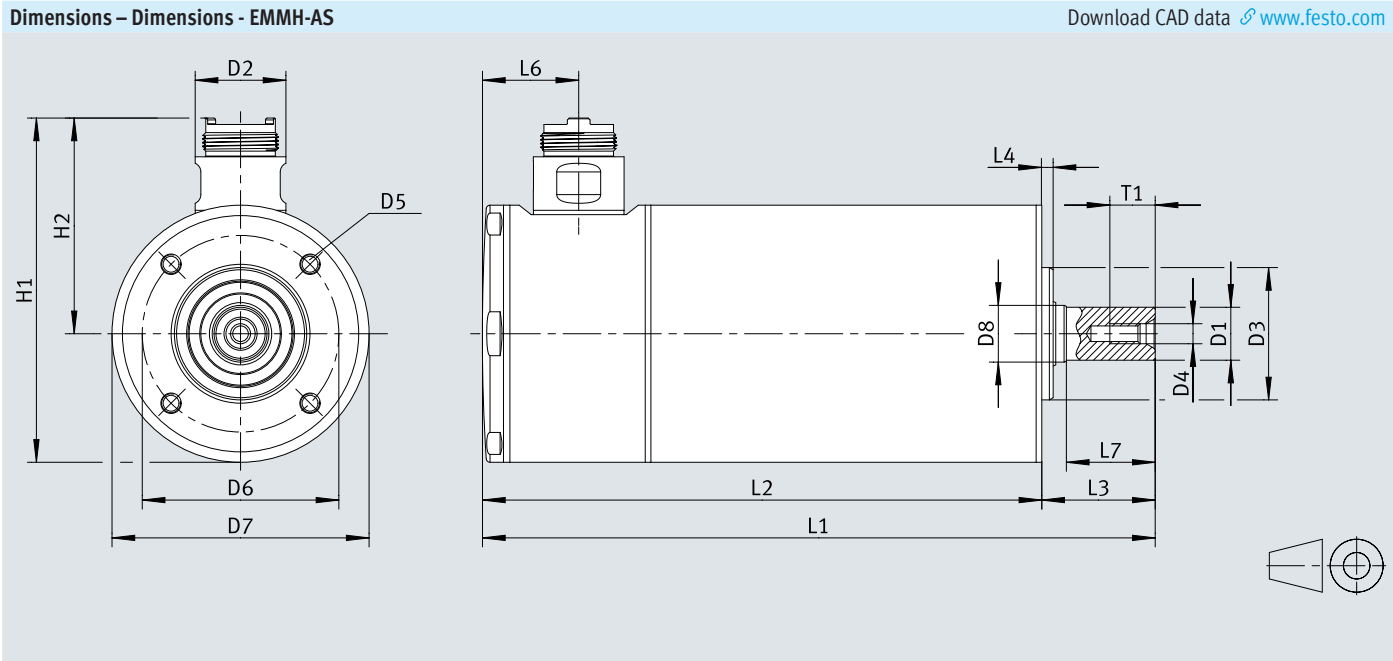
Typical motor characteristic curve with nominal voltage and optimal motor controller.

Observe the maximum permissible rotational speeds of add-ons and installation components (such as brake, encoder, etc.).

Mmax = peak torque

M = nominal torque

Dimensions



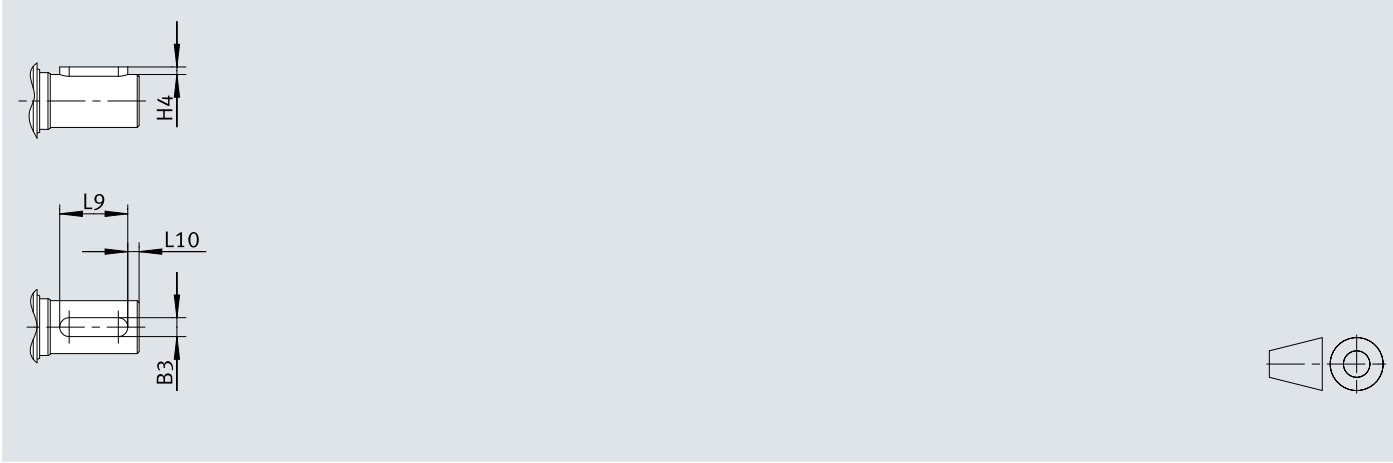
Dimensions

	D1 Ø h6	D2 Ø	D3 Ø h7	D4	D5	D6 Ø	D7 Ø	D8 Ø h11
EMMH-AS-68-MA-HS	14	24	35	M5	M5	52	68	15
EMMH-AS-68-MA-HS-B								
EMMH-AS-68-HA-HS								
EMMH-AS-68-HA-HS-B								
EMMH-AS-88-MA-HS	19	24	55	M6	M5	65	88	20
EMMH-AS-88-MA-HS-B								
EMMH-AS-88-HA-HS								
EMMH-AS-88-HA-HS-B								
EMMH-AS-108-MA-HS	19	24	65	M6	M6	80	108	25
EMMH-AS-108-MA-HS-B								
EMMH-AS-108-HA-HS								
EMMH-AS-108-HA-HS-B								
EMMH-AS-138-MA-HS	22	24	95	M8	M8	110	138	25
EMMH-AS-138-MA-HS-B								
EMMH-AS-138-HA-HS								
EMMH-AS-138-HA-HS-B								

	H1 ±1	H2 ±1	L1 ±2	L2 ±2	L3 +0,5/-1	L4 ±0,2	L6	L7	T1
EMMH-AS-68-MA-HS	90,8	56,8	144	114	30	3	25,5	23,5	12
EMMH-AS-68-MA-HS-B			178	148					
EMMH-AS-68-HA-HS			194	164					
EMMH-AS-68-HA-HS-B			228	198					
EMMH-AS-88-MA-HS	111,3	67,3	178	143	35	3	25,6	28,6	16
EMMH-AS-88-MA-HS-B			213	178					
EMMH-AS-88-HA-HS			223	188					
EMMH-AS-88-HA-HS-B			258	223					
EMMH-AS-108-MA-HS	131,7	77,7	197	157	40	3	25,9	33,5	16
EMMH-AS-108-MA-HS-B			234	194					
EMMH-AS-108-HA-HS			227	187					
EMMH-AS-108-HA-HS-B			264	224					
EMMH-AS-138-MA-HS	162,1	93,1	219	164	55	3,5	26,3	48	19
EMMH-AS-138-MA-HS-B			266	211					
EMMH-AS-138-HA-HS			279	224					
EMMH-AS-138-HA-HS-B			326	271					

Dimensions

Dimensions – Dimensions - Featherkey for EMMH-AS Download CAD data www.festo.com



	B3	H4	L9	L10
	h9		-0,2	±0,2
EMMH-AS-68-...-KA	5	2	18	3
EMMH-AS-88-...-KA	6	2,5	22	3
EMMH-AS-108-...-KA	6	2,5	28	4
EMMH-AS-138-...-KA	8	3	40	5

Ordering data

EMMH-AS-68				
Length	Brake	Output shaft	Part no.	Type
Very long	None	Smooth shaft	8215345	EMMH-AS-68-HA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215346	EMMH-AS-68-HKA-HS-S1M-T
	With brake	Smooth shaft	8215347	EMMH-AS-68-HA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215348	EMMH-AS-68-HKA-HS-S1MB-T
Medium	None	Smooth shaft	8215341	EMMH-AS-68-MA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215342	EMMH-AS-68-MKA-HS-S1M-T
	With brake	Smooth shaft	8215343	EMMH-AS-68-MA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215344	EMMH-AS-68-MKA-HS-S1MB-T

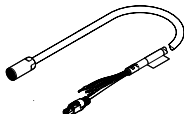
EMMH-AS-88				
Length	Brake	Output shaft	Part no.	Type
Very long	None	Smooth shaft	8215353	EMMH-AS-88-HA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215354	EMMH-AS-88-HKA-HS-S1M-T
	With brake	Smooth shaft	8215355	EMMH-AS-88-HA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215356	EMMH-AS-88-HKA-HS-S1MB-T
Medium	None	Smooth shaft	8215349	EMMH-AS-88-MA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215350	EMMH-AS-88-MKA-HS-S1M-T
	With brake	Smooth shaft	8215351	EMMH-AS-88-MA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215352	EMMH-AS-88-MKA-HS-S1MB-T

EMMH-AS-108				
Length	Brake	Output shaft	Part no.	Type
Very long	None	Smooth shaft	8215361	EMMH-AS-108-HA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215362	EMMH-AS-108-HKA-HS-S1M-T
	With brake	Smooth shaft	8215363	EMMH-AS-108-HA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215364	EMMH-AS-108-HKA-HS-S1MB-T
Medium	None	Smooth shaft	8215357	EMMH-AS-108-MA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215358	EMMH-AS-108-MKA-HS-S1M-T
	With brake	Smooth shaft	8215359	EMMH-AS-108-MA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215360	EMMH-AS-108-MKA-HS-S1MB-T

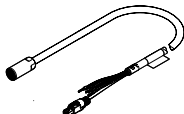
EMMH-AS-138				
Length	Brake	Output shaft	Part no.	Type
Very long	None	Smooth shaft	8215369	EMMH-AS-138-HA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215370	EMMH-AS-138-HKA-HS-S1M-T
	With brake	Smooth shaft	8215371	EMMH-AS-138-HA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215372	EMMH-AS-138-HKA-HS-S1MB-T
Medium	None	Smooth shaft	8215365	EMMH-AS-138-MA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215366	EMMH-AS-138-MKA-HS-S1M-T
	With brake	Smooth shaft	8215367	EMMH-AS-138-MA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215368	EMMH-AS-138-MKA-HS-S1MB-T

Accessories

Motor cable with cable cross-section 1.5 mm² for servo drive CMMT-AS

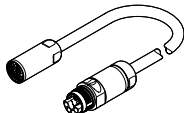
	Bending radius, fixed cable	Cable characteristic	Ambient temperature	Cable length	Part no.	Type
	57.5 mm	Suitable for use in the food industry	-40 ... 90 °C	2.5 m	8226143	NEBM-H17G12-FH-2.5-Q9N-R3LEG14
				5 m	8226144	NEBM-H17G12-FH-5-Q9N-R3LEG14
				10 m	8226145	NEBM-H17G12-FH-10-Q9N-R3LEG14

Configurable motor cable with cable cross-section 1.5 mm² for servo drive CMMT-AS

	Bending radius, fixed cable	Ambient temperature	Cable length ¹⁾	Part no.	Type
	48 ... 74.8 mm	-40 ... 90 °C	0.5 ... 99.9 m	8190874	NEBM-M23/40

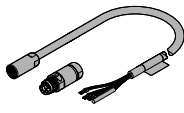
1) Choice of cable lengths: 0.5 ... 29.9 m, in increments of 0.1 m.

Configurable motor cable with cable cross-section 1.5 mm², version: Extension with mounted plug

	Bending radius, fixed cable	Ambient temperature	Cable length ¹⁾	Part no.	Type
	48 ... 74.8 mm	-40 ... 90 °C	0.5 ... 99.9 m	8190874	NEBM-M23/40

1) Choice of cable lengths: 0.5 ... 29.9 m, in increments of 0.1 m.

Configurable motor cable with cable cross-section 1.5 mm², version: Extension with plug kit

	Bending radius, fixed cable	Ambient temperature	Cable length ¹⁾	Part no.	Type
	48 ... 74.8 mm	-40 ... 90 °C	0.5 ... 99.9 m	8190874	NEBM-M23/40

1) Choice of cable lengths: 0.5 ... 29.9 m, in increments of 0.1 m.