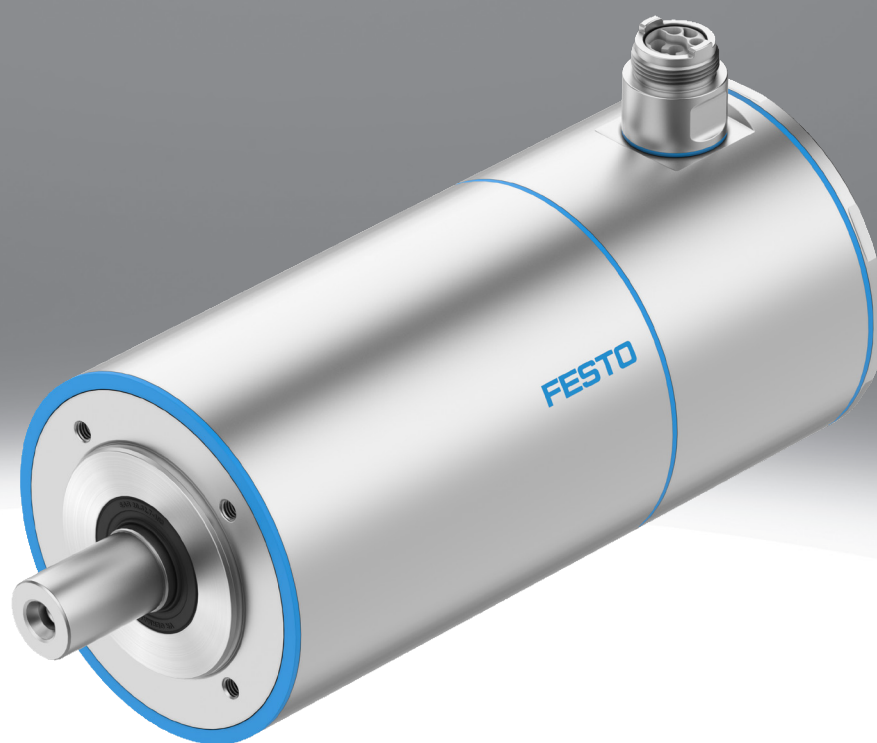


Servo motor EMMH-AS

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 equalization hose
 - Stainless steel housing from 1.4404 / 316L with protection class IP69K
 - Suitable for food contact.
 - 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 holistic product portfolio of electromechanical actuators, motors, drive controllers and control systems
- Optional:
- Holding brake
 - Shaft with featherkey
 - Suitable stainless steel gearboxes from Neugart (Typ: 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. Throughout the entire value chain, they help you size your system correctly, tap into unimagined productivity reserves or generate additional productivity. In every phase of your project, from initial contact to modernization of your machine, you will come across a number of tools that will prove beneficial to you.

Electric Motion Sizing

- Quickly and reliably to the optimum drive package: Electric Motion Sizing calculates suitable combinations of electric axis, electric motor and servo drive from just a few items of application data. You receive all relevant data for your selected combination, including the bill of materials and documentation. This avoids incorrect designs and results in significantly improved energy efficiency of the system. Consistency right through to Festo Automation Suite also makes commissioning easier for you.

Festo Automation Suite

- Parameterization, programming and commissioning in a clear and user-friendly interface
- Optimal support for complex procedures by guided assistants (e.g. for initial commissioning, drive configuration ...)
- Quick access to required documents and further information
- Easy integration of electric drives into the control programming

Diagrams

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



The diagrams shown in this document are also available online. There, it is possible to display precise values.

Rotary shaft seal

[A] With shaft sealing ring, double lip

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

Electrical connection

[S1] Straight plug M17

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

Characteristics

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).
- A reference run is only required once it has been installed in the application.

Brake

[B] With brake

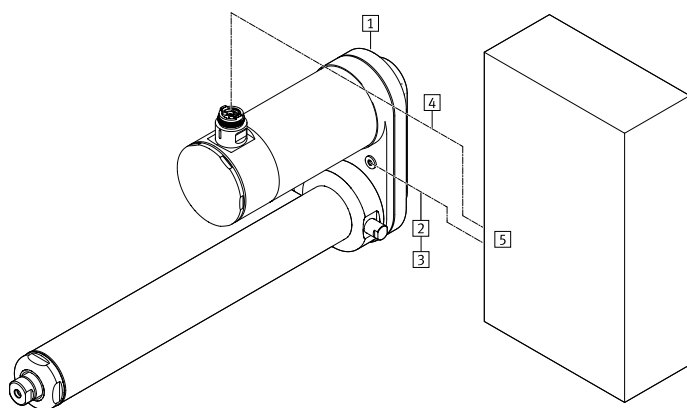
The holding brake should not be used as a safety brake.

Thermal motor monitoring

[T] Integrated in winding

The winding-integrated temperature monitoring system records the motor temperature precisely and 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 essential measure for pressure equalization and to preventing condensation

Air is exchanged between the inside of the cylinder and the surrounding environment via a pressure compensation hole in the motor mounting kits [1]. This prevents negative pressure or overpressure 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 routed there as well. Both tubing pieces are left open, allowing air to circulate. Overpressure or negative pressure may not be connected.

We recommend NPQR-type stainless steel push-in fittings; see www.festo.com/catalogue/npqr
For more information, visit 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	Rotary 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	
	Without	
B	With brake	

011		
T	Integrated in winding	

Datasheet

General technical data – EMMH-AS-68, 88

General technical data - Enim 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	Without []	With brake [B]	Without []	With brake [B]	Without []	With brake [B]	Without []	With brake [B]
Nominal operating voltage DC	680 V							
Motor nominal 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
Motor nominal power	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	
Stall 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 constants	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	
Winding inductance phase-phase	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	
Cross inductivity Lq (phase)	4.8 mH		18.8 mH		3.9 mH		7.5 mH	
Total output inertia moment	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

Technical data Brake - LHM11 AS 66, 88						
Flange size, motors [mm]	68			88		
Length	Very long [H]		Medium [M]	Very long [H]		Medium [M]
Winding	High-voltage, standard [HS]					
Brake DC operating voltage	24 V					
Brake current consumption	0.44 A			0.5 A		
Brake power consumption	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		
Brake mass moment of inertia	0.099 kgcm ²			0.41 kgcm ²		
Max. friction work per braking operation	310 J			570 J		
Number of emergency stops per hour	1					
Total brake friction work	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	Without []	With brake [B]	Without []	With brake [B]	Without []	With brake [B]	Without []	With brake [B]
Nominal operating voltage DC	680 V							
Motor nominal 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
Motor nominal power	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	
Stall 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 constants	1 Nm/A		0.89 Nm/A		1.48 Nm/A		1.47 Nm/A	
Voltage constant, phase-to-phase	66.8 mVmin		59.5 mVmin		98.3 mVmin		97.6 mVmin	
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	
Winding inductance phase-phase	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	
Cross inductivity Lq (phase)	2.2 mH		2.7 mH		1.9 mH		4.4 mH	
Total output inertia moment	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]			
Brake DC operating voltage	24 V			
Brake current consumption	0.57 A		0.68 A	
Brake power consumption	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	
Brake mass moment of inertia	0.85 kgcm ²	0.73 kgcm ²	2.3 kgcm ²	2.32 kgcm ²
Max. friction work per braking operation	910 J		1,980 J	
Number of emergency stops per hour	1			
Total brake friction work	910 kJ		1,980 kJ	

Datasheet

Operating and environmental conditions

Conforms to standard	IEC 60034
Motor type as per 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 according to EN 60034-1	S1
Thermal class according to EN 60034-1	F
Relative air humidity	0 - 100%
Concentricity, coaxiality, axial runout according to DIN SPEC 42955	N
Balancing quality	G 2.5
Contamination level	2
Max. installation height	3,000 m
Information on max. installation height	with 1,000 m and longer 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 marking (see declaration of conformity) ²⁾	As per EU EMC directive As per EU low voltage directive As per EU RoHS directive
UKCA marking (see declaration of conformity) ³⁾	To UK instructions for EMC To UK RoHS instructions To UK instructions for electrical equipment
Certification	RCM compliance mark c UL us - recognized (OL)
Certificate issuing authority	UL E342973
For use in the food industry	Approved for direct food contact
Vibration resistance	as per EN 60068-2-6
Shock resistance	as per EN 60068-2-29, 15 g/11 ms as per EN 60068-2-27
Corrosion resistance class (CRC) ⁴⁾	4 - Particularly high corrosion stress, (except laser marking)
LABS (PWIS) conformity	VDMA24364 Zone III
Note on materials	RoHS compliant

1) Without friction

2) Further information www.festo.com/catalogue/emmt → Downloads.

3) Further information www.festo.com/catalogue/emmt → Downloads.

4) For more information, visit www.festo.com/x/topic/kbk

Weights – EMMH-AS-68, 88

Flange size, motors [mm]	68				88			
Length	Very long [H]		Medium [M]		Very long [H]		Medium [M]	
Brake	Without []	With brake [B]	Without []	With brake [B]	Without []	With brake [B]	Without []	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

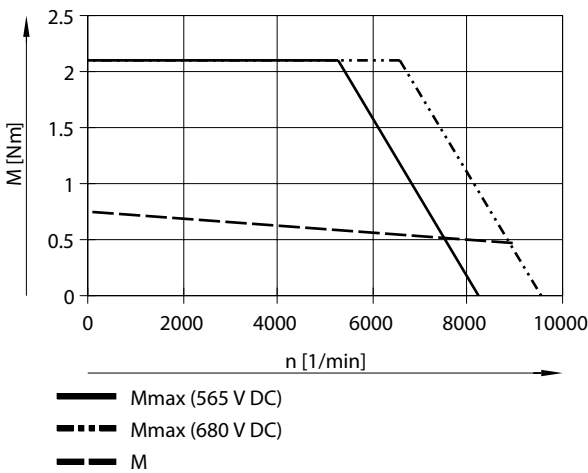
Weights – EMMH-AS-108, 138

Flange size, motors [mm]	108				138			
Length	Very long [H]		Medium [M]		Very long [H]		Medium [M]	
Brake	Without []	With brake [B]	Without []	With brake [B]	Without []	With brake [B]	Without []	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

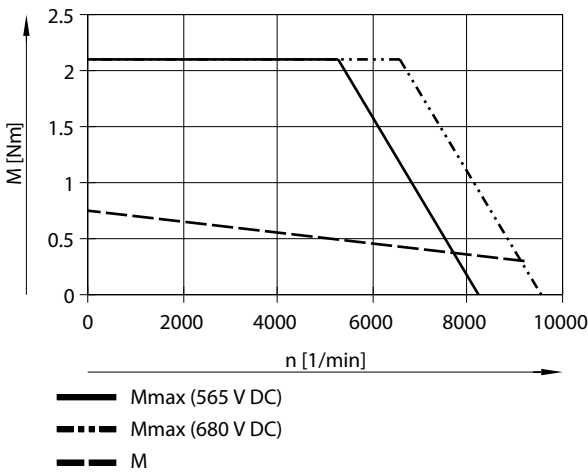
Technical data multi-turn encoder				
Flange size, motors [mm]	68	88	108	138
Winding	High-voltage, standard [HS]			
Rotor position sensor	Absolute multi-turn encoder			
Rotor position encoder for DC operating voltage	5 V			
Rotor position encoder for DC operating voltage range	3.6 ... 14 V			
Rotor position sensor interface	EnDat 22			
Rotor position encoder for positional values per revolution	524,288			
Rotor position sensor measuring principle	Inductive			
Rotor position sensor resolution	19 bit			
Rotor position encoder for absolutely detectable revolutions	4,096			
Rotor position encoder system accuracy 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 characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).
Mmax = Peak torque
M = Nominal torque

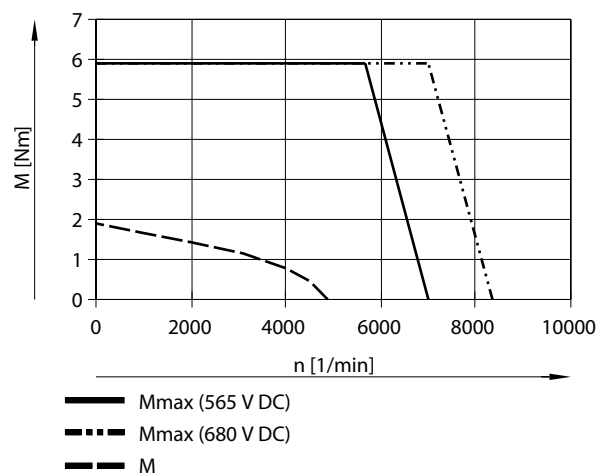
Torque M as a function of rotational speed n for EMMH-AS-68-MA-HS-B



Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on 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

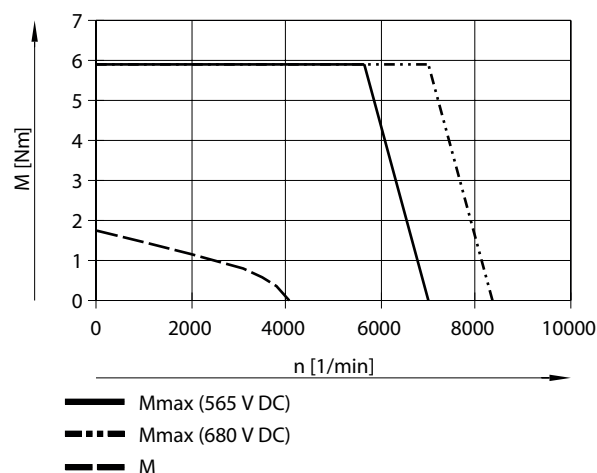


Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

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

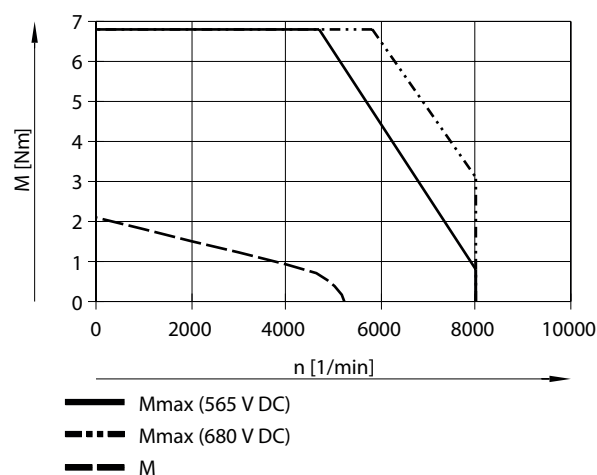


Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

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



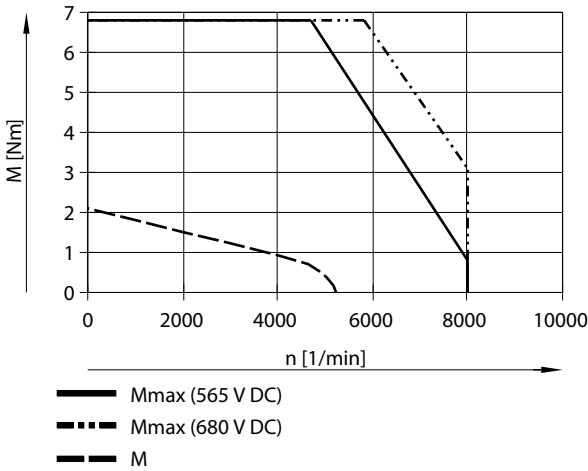
Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

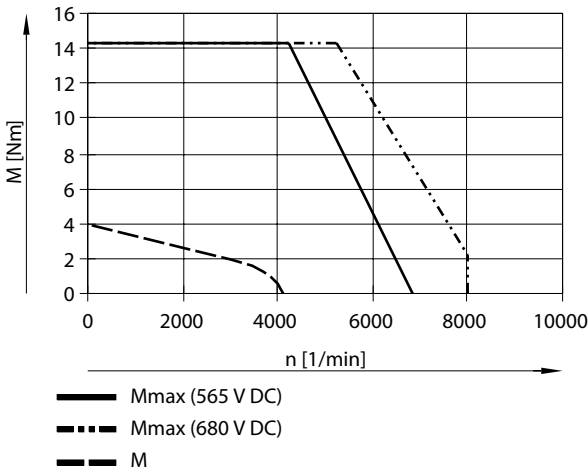
Datasheet

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



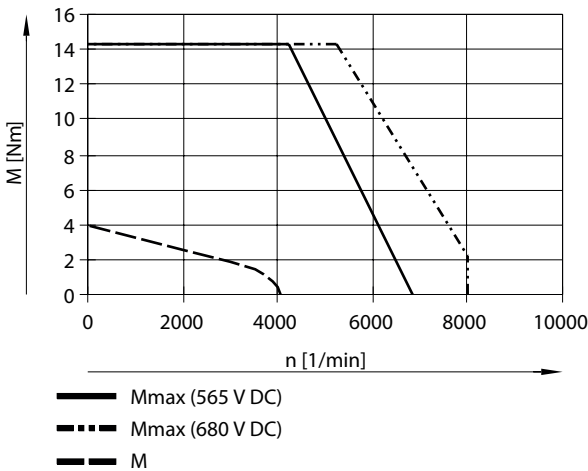
Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).
Mmax = Peak torque
M = Nominal torque

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



Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).
Mmax = Peak torque
M = Nominal torque

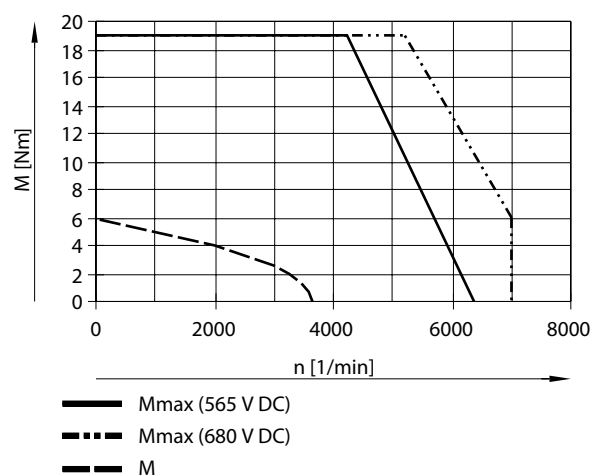
Torque M as a function of rotational speed n for EMMH-AS-88-HA-HS-B



Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on 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

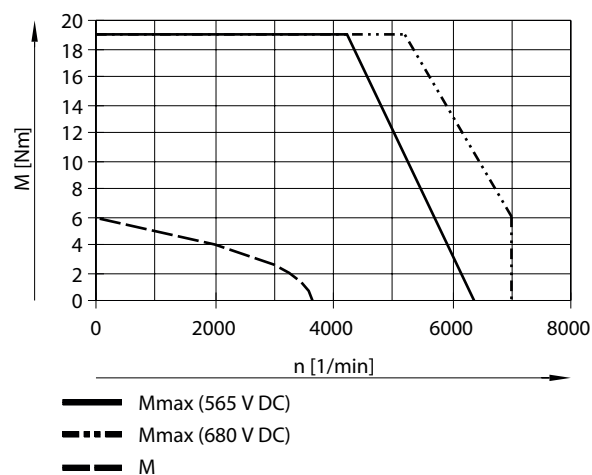


Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

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

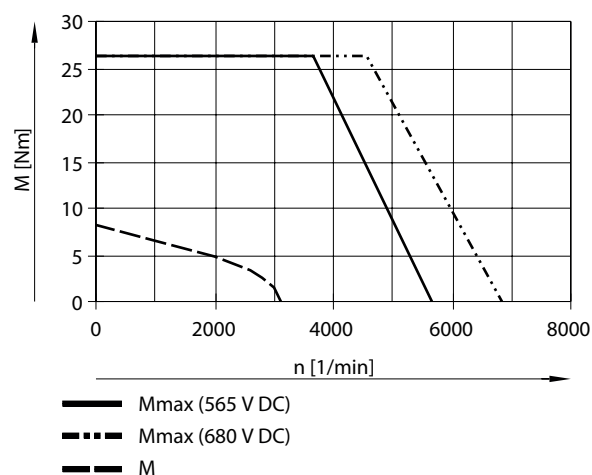


Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

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



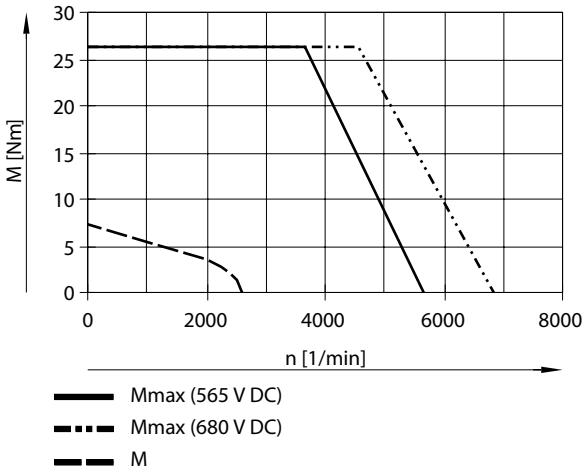
Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

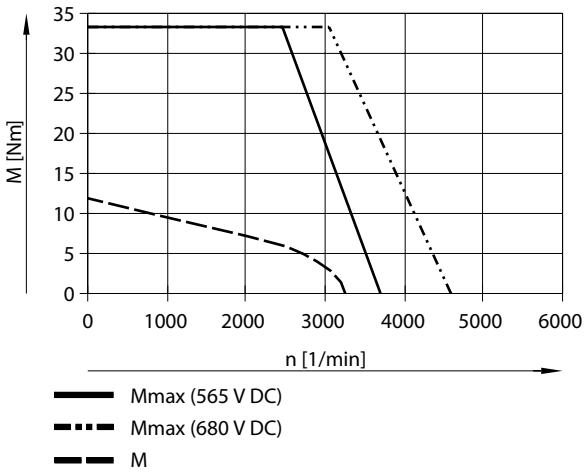
Datasheet

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



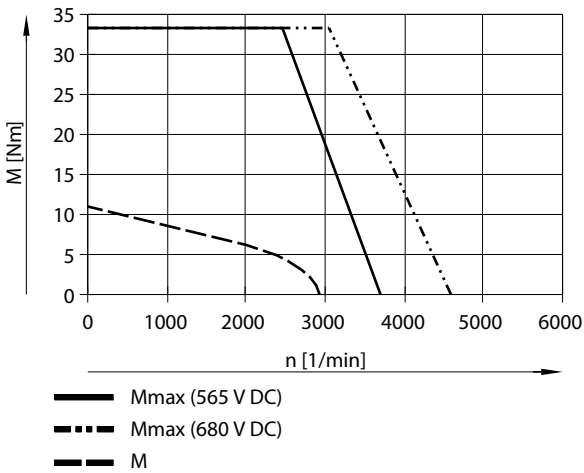
Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).
Mmax = Peak torque
M = Nominal torque

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



Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).
Mmax = Peak torque
M = Nominal torque

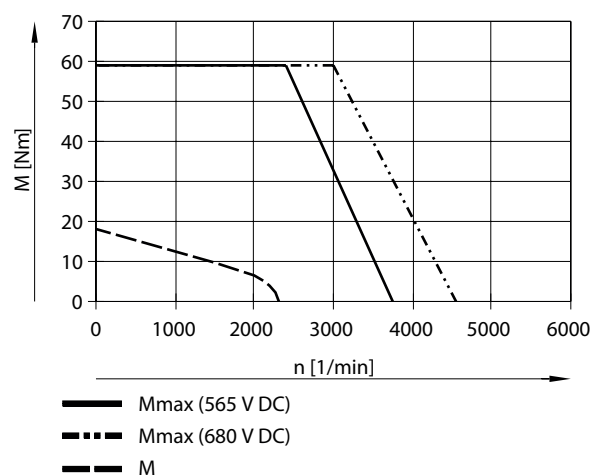
Torque M as a function of rotational speed n for EMMH-AS-138-MA-HS-B



Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on 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

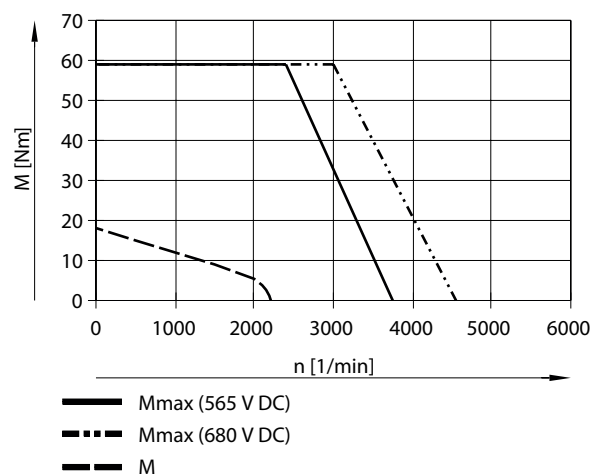


Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

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

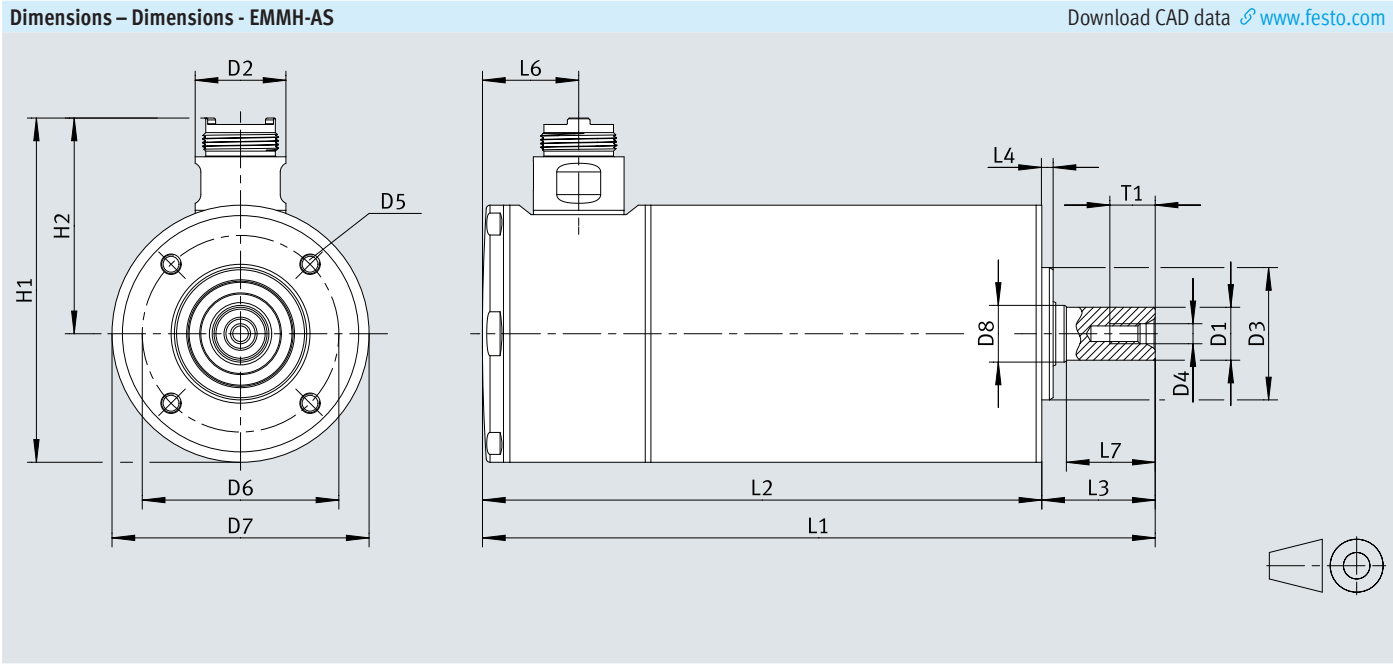


Typical motor characteristics at nominal voltage and optimal motor controller. Observe the max. permissible rotational speeds of add-on and installation components (such as brake, encoder, etc.).

Mmax = Peak torque

M = Nominal torque

Dimensions



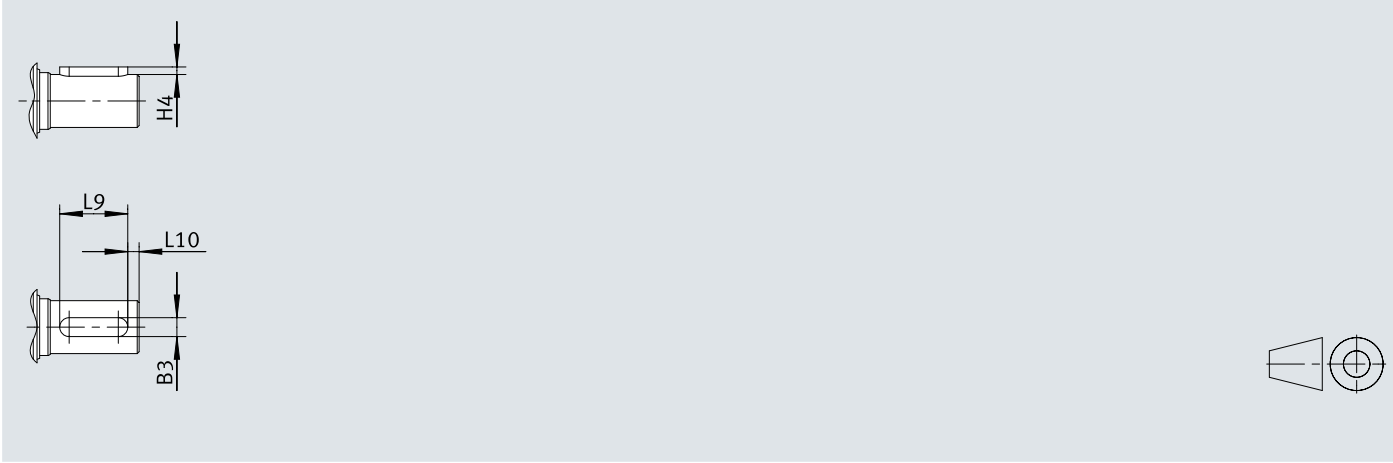
Dimensions

	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	Without	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	Without	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

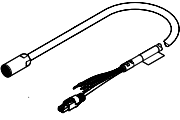
EMMH-AS-88				
Length	Brake	Output shaft	Part no.	Type
Very long	Without	Smooth shaft	8215353	EMMH-AS-88-HA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215354	EMMH-AS-88-HKA-HS-S1M-T
	With brake	Smooth shaft	8215355	EMMH-AS-88-HA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215356	EMMH-AS-88-HKA-HS-S1MB-T
Medium	Without	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	Without	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	Without	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

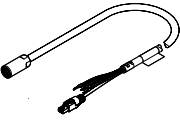
EMMH-AS-138				
Length	Brake	Output shaft	Part no.	Type
Very long	Without	Smooth shaft	8215369	EMMH-AS-138-HA-HS-S1M-T
		Shaft with featherkey according to DIN 6885	8215370	EMMH-AS-138-HKA-HS-S1M-T
	With brake	Smooth shaft	8215371	EMMH-AS-138-HA-HS-S1MB-T
		Shaft with featherkey according to DIN 6885	8215372	EMMH-AS-138-HKA-HS-S1MB-T
Medium	Without	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 CMMT-AS servo drive

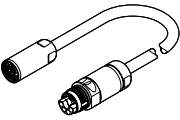
	Bending radius, fixed cable installation	Cable characteristic	Ambient temperature	Cable length	Part no.	Type
	57.5 mm	suitable for use in the food industry	-40 ... 90 °C	2.5 m	8226143	NEBM-H17G12-FH-2.5-Q9N-R3LEG14
				5 m	8226144	NEBM-H17G12-FH-5-Q9N-R3LEG14
				10 m	8226145	NEBM-H17G12-FH-10-Q9N-R3LEG14

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

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

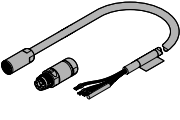
1) Choice of cable lengths: 0.5 ... 29.9 m, in increments of 0.1 m.

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

	Bending radius, fixed cable installation	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 installation	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.