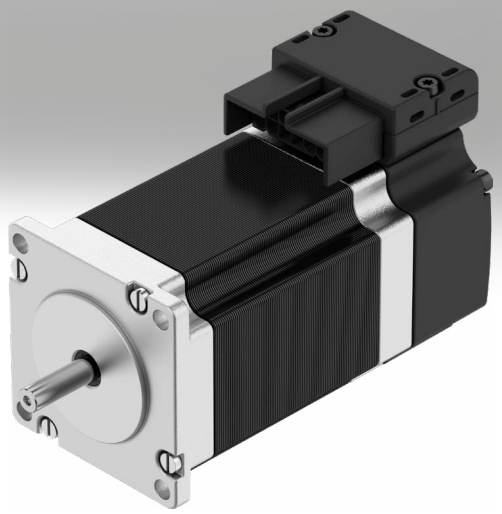
Stepper motors EMMB-ST



Key features

At a glance

- Two-phase hybrid technology
- 3 flange sizes available: M = 0.25 ... 6.6 Nm
- Degree of protection IP20 for motor housing with connection technology
- Degree of protection IP40 for motor shaft

Connection technology:
- Simple connection technology (OCP: one cable plug) – hybrid cable: motor cable and connecting cable for supply and encoder in one
- Forward or backward orientation possible

Digital absolute encoder system:
- Single-turn
- Multi-turn, battery-free

Engineering tools More information ➔ electric motion sizing

Save time with smart engineering tools 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 which 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 you with all the relevant data including the bill of materials and documentation for the 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.

Graphs More information ➔ emmb-st

The graphs shown in this document are also available online. There, precise values can be displayed.

Measuring unit

[S]	Absolute encoder, single-turn
[M]	Absolute encoder, multi-turn

- The angular position is assigned to a unique value in coded form.
- The position is only sensed within one turn. All subsequent turns need to be counted by the higher-level device.
- When switched off, the position is only sensed within one turn.
- A homing run is required after switch-on.

- 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.

Type codes

001	Series	
EMMB	Motor	

002	Motor type	
ST	Stepper motor ST	

003	Flange size, motors [mm]	
42	42	
57	57	
87	87	

004	Length	
L	Long	
M	Medium	
S	Short	

005	Electrical connection	
S	Straight plug	

006	Measuring unit	
	None	
M	Absolute encoder, multi-turn	
S	Absolute encoder, single turn	

007	Brake	
	None	
B	With brake	

Datasheet

General technical data - EMMB-ST-42						
Flange size, motors [mm]	42 mm					
Length	[S]			[L]		
Measuring unit	[ ]	[M]	[S]	[ ]	[M]	[S]
Nominal operating voltage DC	48 V					
Nominal motor current	1.8 A			2.9 A		
Continuous stall current	2 A			3.7 A		
Peak current	2 A			4 A		
Rated motor output[1)]	–	17 W		–	49 W	
Step angle with full step	1.8 deg					
Stepping angle tolerance	±5%					
Motor holding torque	0.25 Nm			0.63 Nm		
Nominal torque[1)]	–	0.24 Nm		–	0.47 Nm	
Peak torque	0.25 Nm			0.63 Nm		
Nominal rotational speed[1)]	–	600 rpm		–	1,000 rpm	
Maximum speed	2,700 rpm			3,200 rpm		
Max. mechanical rotational speed	9,000 rpm					
Motor constant	0.159 Nm/A			0.162 Nm/A		
Voltage constant phase	12.1 mVmin			10.6 mVmin		
Electric time constant	1.4 ms			1.3 ms		
Thermal time constant	22 mins			16 mins		
Thermal resistance	3.5 K/W			2.4 K/W		
I^2T time motor	2 s					
Number of phases	2					
Number of pole pairs	50					
Winding resistance phase	2.1 Ohm			0.6 Ohm		
Winding inductance phase per individual phase (unlinked)	3 mH			0.8 mH		
Winding series inductance Ld (phase)	1.6 mH			1.45 mH		
Winding shunt inductance Lq (phase)	3 mH			0.8 mH		
Permissible axial shaft load	10 N					
Permissible radial shaft load	28 N					
Measuring flange	200 x 200 x 15 mm, steel					

1) For motors without encoders, no nominal operating point is defined.

Datasheet

General technical data - EMMB-ST-57						
Flange size, motors [mm]	57 mm					
Length	[M]			[L]		
Measuring unit	[ ]	[M]	[S]	[ ]	[M]	[S]
Nominal operating voltage DC	48 V					
Nominal motor current	5.1 A			5 A		
Continuous stall current	6.1 A			5.8 A		
Peak current	8 A					
Rated motor output[1)]	–	81 W		–	83 W	
Step angle with full step	1.8 deg					
Stepping angle tolerance	±5%					
Motor holding torque	1.05 Nm			1.8 Nm		
Nominal torque[1)]	–	0.77 Nm		–	1.58 Nm	
Peak torque	1.1 Nm			2.1 Nm		
Nominal rotational speed[1)]	–	1,000 rpm		–	500 rpm	
Maximum speed	2,600 rpm			1,500 rpm		
Max. mechanical rotational speed	8,000 rpm					
Motor constant	0.152 Nm/A			0.32 Nm/A		
Voltage constant phase	13.1 mVmin			22.6 mVmin		
Electric time constant	2.9 ms			3.7 ms		
Thermal time constant	28 mins			32 mins		
Thermal resistance	1.6 K/W			1.5 K/W		
I^2T time motor	2 s					
Number of phases	2					
Number of pole pairs	50					
Winding resistance phase	0.17 Ohm			0.26 Ohm		
Winding inductance phase per individual phase (unlinked)	0.5 mH			0.95 mH		
Winding series inductance Ld (phase)	0.7 mH			1.75 mH		
Winding shunt inductance Lq (phase)	0.5 mH			0.95 mH		
Permissible axial shaft load	15 N					
Permissible radial shaft load	75 N					
Measuring flange	200 x 200 x 15 mm, steel					

1) For motors without encoders, no nominal operating point is defined.

Datasheet

General technical data - EMMB-ST-87						
Flange size, motors [mm]	87 mm					
Length	[S]			[M]		
Measuring unit	[ ]	[M]	[S]	[ ]	[M]	[S]
Nominal operating voltage DC	48 V					
Nominal motor current	6.9 A			7.5 A		
Continuous stall current	9.5 A			8.2 A		
Peak current	12 A					
Rated motor output[1)]	–	142 W		–	87 W	
Step angle with full step	1.8 deg					
Stepping angle tolerance	±5%					
Motor holding torque	2.4 Nm			6.6 Nm		
Nominal torque[1)]	–	1.7 Nm		–	5.9 Nm	
Peak torque	2.7 Nm			6.8 Nm		
Nominal rotational speed[1)]	–	800 rpm		–	140 rpm	
Maximum speed	2,200 rpm			600 rpm		
Max. mechanical rotational speed	8,000 rpm					
Motor constant	0.24 Nm/A			0.79 Nm/A		
Voltage constant phase	15.4 mVmin			56.6 mVmin		
Electric time constant	1.75 ms			8.5 ms		
Thermal time constant	37 mins			33 mins		
Thermal resistance	0.91 K/W			0.88 K/W		
I^2T time motor	2 s					
Number of phases	2					
Number of pole pairs	50					
Winding resistance phase	0.13 Ohm			0.27 Ohm		
Winding inductance phase per individual phase (unlinked)	0.35 mH			2.3 mH		
Winding series inductance Ld (phase)	0.56 mH			3.6 mH		
Winding shunt inductance Lq (phase)	0.35 mH			2.3 mH		
Permissible axial shaft load	60 N					
Permissible radial shaft load	220 N					
Measuring flange	250 x 250 x 15 mm, steel					

1) For motors without encoders, no nominal operating point is defined.

Datasheet

Technical data - Brakes			
Flange size, motors [mm]	42	57	87
Brake holding torque	0.63 Nm	1.74 Nm	4.26 Nm
Brake DC operating voltage	24 V		
Brake current consumption	0.34 A	0.38 A	0.49 A
Brake power consumption	8.2 W	9 W	12 W
Brake coil resistance	70.9 Ohm	63.8 Ohm	49.2 Ohm
Brake coil inductivity	146 mH	107 mH	110 mH
Brake separation time	28 ms	32 ms	44 ms
Brake closing time	41 ms	97 ms	110 ms
DC brake response delay	8 ms	11 ms	30 ms
Max. brake no-load speed	9,000 rpm	8,000 rpm	7,000 rpm
Brake max. friction	1,500 J	6,000 J	14,000 J
Mass moment of inertia, brake	0.006 kgcm²	0.024 kgcm²	0.11 kgcm²
Switching cycles, holding brake	10 million idle actuations (without friction!)		

Technical data – Encoder						
Flange size, motors [mm]	42		57		87	
Measuring unit	[S]	[M]	[S]	[M]	[S]	[M]
Rotor position sensor measuring principle	Magnetic					
Rotary position encoder interface	BiSS-C					
Rotor position encoder for absolute detectable revolutions	–	16,384	–	16,384	–	16,384
Rotor position encoder, DC operating voltage	5 V			14 V	5 V	14 V
Rotor position encoder, DC operating voltage range	4.75 ... 5.25 V	4.5 ... 5.5 V	4.75 ... 5.25 V	4.75 ... 15 V	4.75 ... 5.25 V	4.75 ... 15 V
Rotor position encoder, sinusoidal/cosinusoidal periods per revolution	2					
Rotor position encoder, position values per revolution	65,536	131,072	65,536	131,072	65,536	131,072
Rotor position encoder resolution	16 bit	17 bit	16 bit	17 bit	16 bit	17 bit
Rotor position encoder, system accuracy of angle measurement	-65 ... 65 arcsec	-310 ... 310 arcsec	-65 ... 65 arcsec	-360 ... 360 arcsec	-65 ... 65 arcsec	-360 ... 360 arcsec
Rotor position encoder, max. operating speed	5,500 rpm	12,000 rpm	5,500 rpm	12,000 rpm	5,500 rpm	12,000 rpm
Rotor position encoder, temperature range	-40 ... 105 °C					
MTTF, subcomponent[1)]	687 years, rotor position encoder	20 years, rotor position encoder	687 years, rotor position encoder	20 years, rotor position encoder	687 years, rotor position encoder	20 years, rotor position encoder

1) The data given applies to an encoder temperature/operating temperature of 40 °C.

Datasheet

Total output moment of inertia - EMMB-ST-42												
Flange size, motors [mm]	42											
Length	[S]						[L]					
Measuring unit	[ ]		[M]		[S]		[ ]		[M]		[S]	
Brake	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]
Total output moment of inertia	0.035 kgcm²	0.041 kgcm²	0.037 kgcm²	0.043 kgcm²	0.035 kgcm²	0.041 kgcm²	0.082 kgcm²	0.088 kgcm²	0.084 kgcm²	0.09 kgcm²	0.082 kgcm²	0.088 kgcm²

Total output moment of inertia - EMMB-ST-57												
Flange size, motors [mm]	57											
Length	[M]						[L]					
Measuring unit	[ ]		[M]		[S]		[ ]		[M]		[S]	
Brake	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]
Total output moment of inertia	0.3 kgcm²	0.324 kgcm²	0.306 kgcm²	0.33 kgcm²	0.3 kgcm²	0.324 kgcm²	0.48 kgcm²	0.504 kgcm²	0.486 kgcm²	0.51 kgcm²	0.48 kgcm²	0.504 kgcm²

Total output moment of inertia - EMMB-ST-87												
Flange size, motors [mm]	87											
Length	[S]						[M]					
Measuring unit	[ ]		[M]		[S]		[ ]		[M]		[S]	
Brake	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]
Total output moment of inertia	1 kgcm²	1.11 kgcm²	1.006 kgcm²	1.116 kgcm²	1 kgcm²	1.11 kgcm²	1.9 kgcm²	2.01 kgcm²	1.906 kgcm²	2.016 kgcm²	1.9 kgcm²	2.01 kgcm²

Weight												
Flange size, motors [mm]	42				57				87			
Length	[S]		[L]		[M]		[L]		[S]		[M]	
Brake	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]	[ ]	[B]
Product weight	300 g	520 g	490 g	700 g	810 g	1,220 g	1,170 g	1,580 g	1,890 g	2,720 g	3,320 g	4,150 g

Datasheet

Operating and environmental conditions						
Flange size, motors [mm]	42		57		87	
Length	[S]	[L]	[M]	[L]	[S]	[M]
Conforms to standard	IEC 60034					
Motor type to EN 60034-7	IM B5, IM V1, IM V3					
Degree of protection	IP20					
Note on degree of protection	IP40 for motor shaft without radial shaft seal					
Ambient temperature	0 ... 40 °C	-15 ... 40 °C				
Note on ambient temperature	Up to 80 °C with derating -2%/°C					
Storage temperature	-20 ... 70 °C					
Max. winding temperature	130 °C					
Temperature monitoring	Digital Motor temp. via BiSS-C					
Rating class according to EN 60034-1	S1					
Thermal class according to EN 60034-1	B					
Relative humidity	0 - 90%					
CE marking (see declaration of conformity) [1]	To EU EMC Directive To EU RoHS Directive					
UKCA marking (see declaration of conformity)[2]	To UK EMC regulations To UK RoHS regulations					
Certification	RCM					
Vibration resistant	Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6					
Shock resistance	Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27					
Isolation resistance AC	0.6					
Electrical connection 1, connection type	Hybrid plug					
LABS (PWIS) conformity	VDMA24364 zone III					
Note on materials	RoHS-compliant					

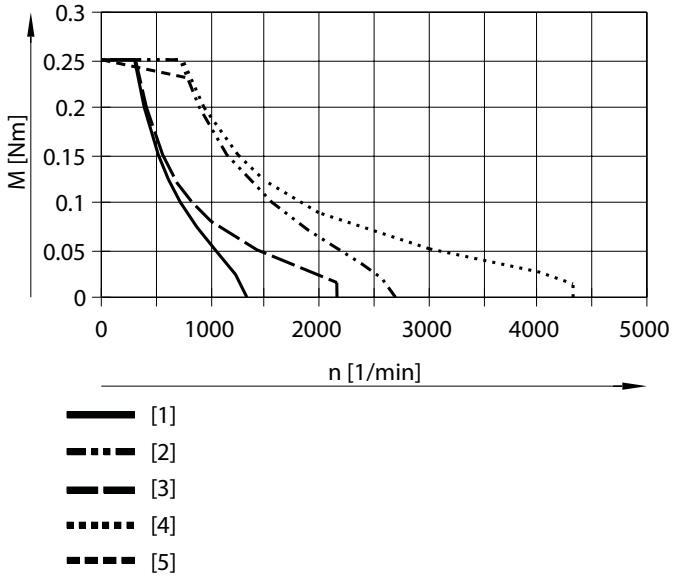
1) More information www.festo.com/catalogue/emms-st ⇢ Support/Downloads.

2) More information www.festo.com/catalogue/emms-st ⇢ Support/Downloads.

Datasheet

Torque M as a function of rotational speed n

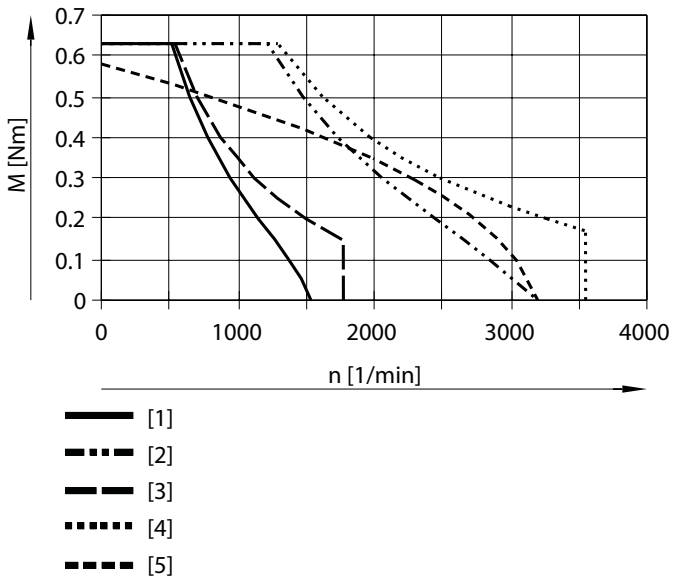
EMMB-ST-42-S



[1] Peak torque at 24V DC
[2] Peak torque at 48V DC
[3] Field weakened peak torque at 24V DC
[4] Field weakened peak torque at 48V DC
[5] Nominal torque

Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speed of add-on and installation components (such as encoder, brake etc.)!

EMMB-ST-42-L



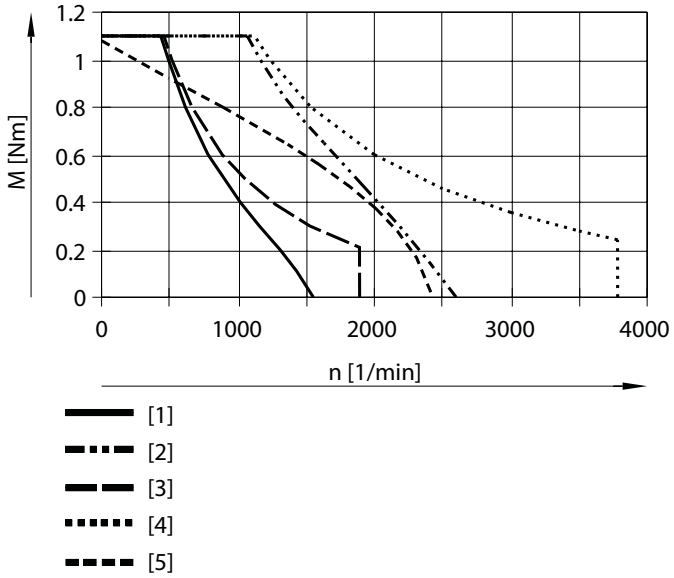
[1] Peak torque at 24V DC
[2] Peak torque at 48V DC
[3] Field weakened peak torque at 24V DC
[4] Field weakened peak torque at 48V DC
[5] Nominal torque

Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speed of add-on and installation components (such as encoder, brake etc.)!

Datasheet

Torque M as a function of rotational speed n

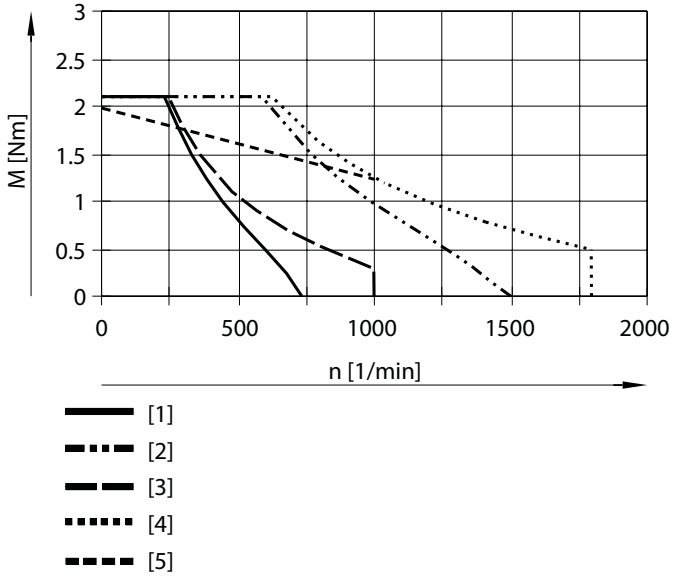
EMMB-ST-57-M



[1] Peak torque at 24V DC
[2] Peak torque at 48V DC
[3] Field weakened peak torque at 24V DC
[4] Field weakened peak torque at 48V DC
[5] Nominal torque

Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speed of add-on and installation components (such as encoder, brake etc.)!

EMMB-ST-57-L



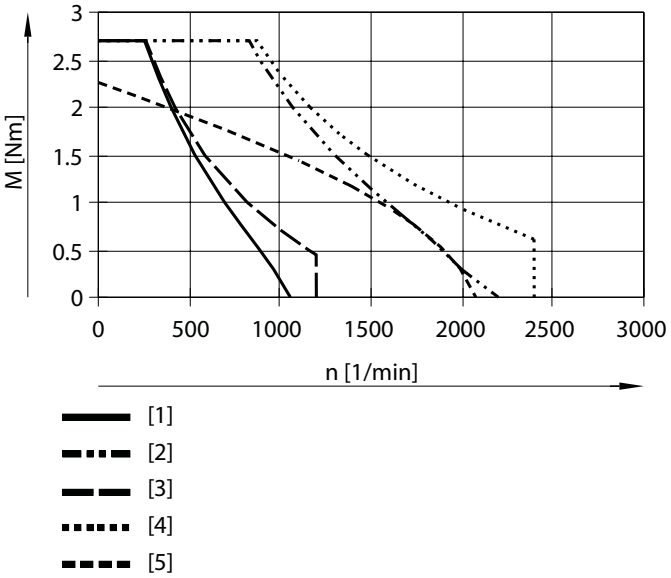
[1] Peak torque at 24V DC
[2] Peak torque at 48V DC
[3] Field weakened peak torque at 24V DC
[4] Field weakened peak torque at 48V DC
[5] Nominal torque

Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speed of add-on and installation components (such as encoder, brake etc.)!

Datasheet

Torque M as a function of rotational speed n

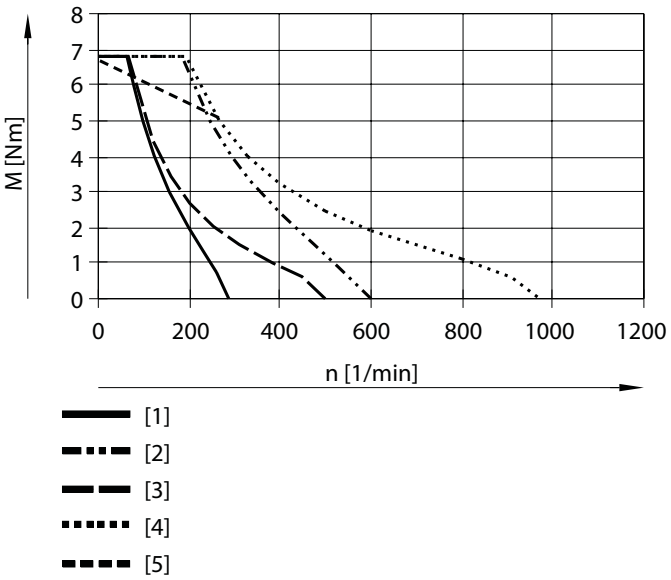
EMMB-ST-87-S



[1] Peak torque at 24V DC
[2] Peak torque at 48V DC
[3] Field weakened peak torque at 24V DC
[4] Field weakened peak torque at 48V DC
[5] Nominal torque

Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speed of add-on and installation components (such as encoder, brake etc.)!

EMMB-ST-87-M

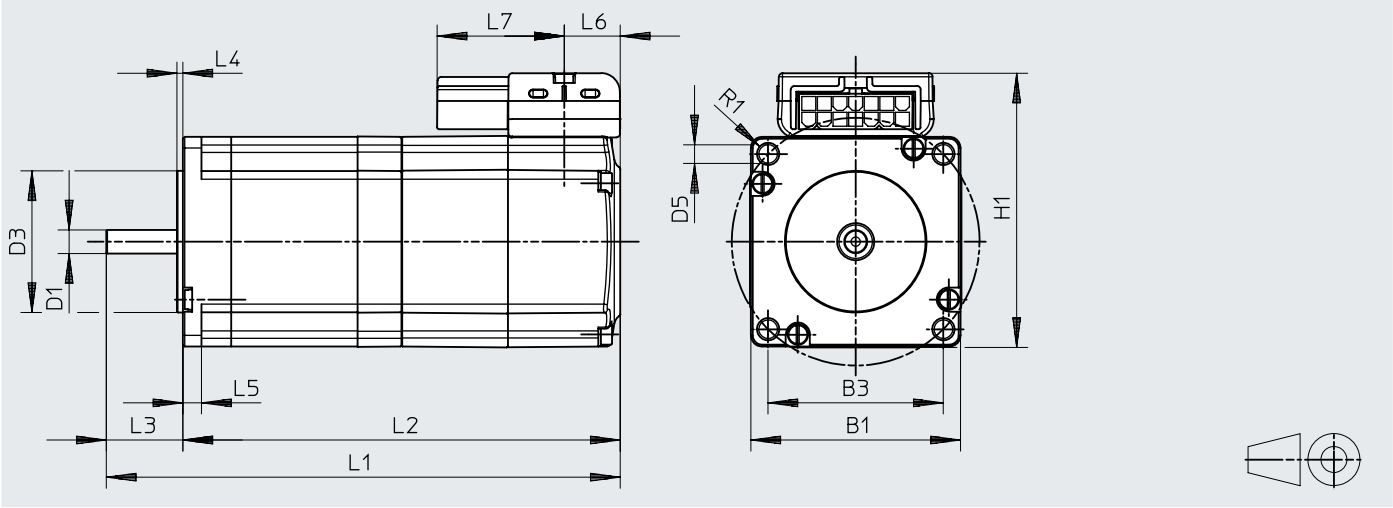


[1] Peak torque at 24V DC
[2] Peak torque at 48V DC
[3] Field weakened peak torque at 24V DC
[4] Field weakened peak torque at 48V DC
[5] Nominal torque

Typical motor characteristic curve with nominal voltage and optimal motor controller.
Observe the maximum permissible rotational speed of add-on and installation components (such as encoder, brake etc.)!

Datasheet

Dimensions – EMMB-ST-42/-57/-87 Download CAD data ➔ www.festo.com



		B1	B3 ±0.2	D1 ø h6	D3 ø h8	D5	H1
EMMB-ST-42	S	42	31	5	22	M3	55
	S-B						
	L						
	L-B						
EMMB-ST-57	M	56.4	47.1	6.4	38.1	5	75
	M-B						
	L						
	L-B						
EMMB-ST-87	S	85.9	69.5	11	73	6.6	75
	S-B						
	M						
	M-B						

		L1	L2 ±2	L3 ±0.5	L4 ±0.2	L5	L6	L7	R1
EMMB-ST-42	S	94	70	24	2	–	15	25.6	2.3
	S-B	124	100						
	L	112	88						
	L-B	142	118						
EMMB-ST-57	M	108.3	88	20.6	1.6	5	15.1	34.2	3
	M-B	138.3	118						
	L	129.3	109						
	L-B	159.3	139						
EMMB-ST-87	S	120.7	93.7	27	2	8	15.1	34.2	5.5
	S-B	149.2	122.2						
	M	154.2	127.2						
	M-B	182.7	155.7						

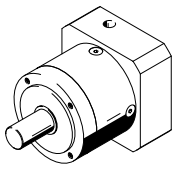
Ordering data

Ordering data Length	Measuring unit	Brake	Part no.	Type
EMMB-ST-42				
Short [S]	None	None	**8156125**	**EMMB-ST-42-S-S**
	Absolute encoder, single-turn [S]		**8156126**	**EMMB-ST-42-S-SS**
	Absolute encoder, multi-turn [M]		**8156127**	**EMMB-ST-42-S-SM**
	None	With brake [B]	**8156128**	**EMMB-ST-42-S-SB**
	Absolute encoder, single-turn [S]		**8156129**	**EMMB-ST-42-S-SSB**
	Absolute encoder, multi-turn [M]		**8156130**	**EMMB-ST-42-S-SMB**
Long [L]	None	None	**8156131**	**EMMB-ST-42-L-S**
	Absolute encoder, single-turn [S]		**8156132**	**EMMB-ST-42-L-SS**
	Absolute encoder, multi-turn [M]		**8156133**	**EMMB-ST-42-L-SM**
	None	With brake [B]	**8156134**	**EMMB-ST-42-L-SB**
	Absolute encoder, single-turn [S]		**8156135**	**EMMB-ST-42-L-SSB**
	Absolute encoder, multi-turn [M]		**8156136**	**EMMB-ST-42-L-SMB**
EMMB-ST-57				
Medium [M]	None	None	**8156137**	**EMMB-ST-57-M-S**
	Absolute encoder, single-turn [S]		**8156138**	**EMMB-ST-57-M-SS**
	Absolute encoder, multi-turn [M]		**8156139**	**EMMB-ST-57-M-SM**
	None	With brake [B]	**8156140**	**EMMB-ST-57-M-SB**
	Absolute encoder, single-turn [S]		**8156141**	**EMMB-ST-57-M-SSB**
	Absolute encoder, multi-turn [M]		**8156142**	**EMMB-ST-57-M-SMB**
Long [L]	None	None	**8156143**	**EMMB-ST-57-L-S**
	Absolute encoder, single-turn [S]		**8156144**	**EMMB-ST-57-L-SS**
	Absolute encoder, multi-turn [M]		**8156145**	**EMMB-ST-57-L-SM**
	None	With brake [B]	**8156146**	**EMMB-ST-57-L-SB**
	Absolute encoder, single-turn [S]		**8156147**	**EMMB-ST-57-L-SSB**
	Absolute encoder, multi-turn [M]		**8156148**	**EMMB-ST-57-L-SMB**
EMMB-ST-87				
Short [S]	None	None	**8156149**	**EMMB-ST-87-S-S**
	Absolute encoder, single-turn [S]		**8156150**	**EMMB-ST-87-S-SS**
	Absolute encoder, multi-turn [M]		**8156151**	**EMMB-ST-87-S-SM**
	None	With brake [B]	**8156152**	**EMMB-ST-87-S-SB**
	Absolute encoder, single-turn [S]		**8156153**	**EMMB-ST-87-S-SSB**
	Absolute encoder, multi-turn [M]		**8156154**	**EMMB-ST-87-S-SMB**
Medium [M]	None	None	**8156155**	**EMMB-ST-87-M-S**
	Absolute encoder, single-turn [S]		**8156156**	**EMMB-ST-87-M-SS**
	Absolute encoder, multi-turn [M]		**8156157**	**EMMB-ST-87-M-SM**
	None	With brake [B]	**8156158**	**EMMB-ST-87-M-SB**
	Absolute encoder, single-turn [S]		**8156159**	**EMMB-ST-87-M-SSB**
	Absolute encoder, multi-turn [M]		**8156160**	**EMMB-ST-87-M-SMB**

Accessories

Planetary gear for EMMB-ST-42

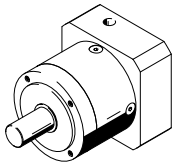
Datasheets → Internet: emga



Gear ratio	Product weight	Part no.	Type
3:1	350 g	☆ **549428**	**EMGA-40-P-G3-SST-42**
5:1	350 g	☆ **549429**	**EMGA-40-P-G5-SST-42**
8:1	400 g	**8141762**	**EMGA-40-P-G8-SST-42**
12:1	450 g	**8141763**	**EMGA-40-P-G12-SST-42**

Planetary gear for EMMB-ST-57

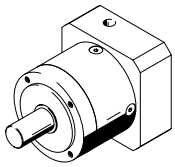
Datasheets → Internet: emga



Gear ratio	Product weight	Part no.	Type
3:1	900 g	☆ **549430**	**EMGA-60-P-G3-SST-57**
5:1	900 g	☆ **549431**	**EMGA-60-P-G5-SST-57**
8:1	900 g	**8141764**	**EMGA-60-P-G8-SST-57**
12:1	1100 g	**8141765**	**EMGA-60-P-G12-SST-57**

Planetary gear for EMMB-ST-87

Datasheets → Internet: emga



Gear ratio	Product weight	Part no.	Type
3:1	2100 g	☆ **549432**	**EMGA-80-P-G3-SST-87**
5:1	2100 g	☆ **549433**	**EMGA-80-P-G5-SST-87**
8:1	2100 g	**8141766**	**EMGA-80-P-G8-SST-87**
12:1	2600 g	**8141767**	**EMGA-80-P-G12-SST-87**

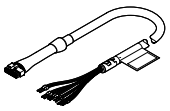
Accessories

Recommended cable cross section as a function of cable length and servo drive CMMT-ST

	Up to 5 m	Up to 10 m	Up to 20 m	Up to 25 m
EMMB-ST-42-S-...	Q6	Q6	Q6	Q6
EMMB-ST-42-L-...	Q6	Q6	Q6	Q6
EMMB-ST-57-M-...	Q6	Q7	Q9	Q9
EMMB-ST-57-L-...	Q6	Q7	Q9	Q9
EMMB-ST-87-S-...	Q7	Q9	Q9	Q9
EMMB-ST-87-M-...	Q7	Q9	Q9	Q9

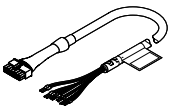
Q6 = 0.5 mm²
Q7 = 0.75 mm²
Q9 = 1.5 mm²

Ordering data – Motor cable for EMMB-ST-42

	Cable cross section [1]	Bending radius, flexible cable installation	Cable characteristic	Cable length	Part no.	Type
	0.5 mm²	78.75 mm	Suitable for energy chains	2.5 m	**8181675**	**NEBM-L5G14-EH-2.5-Q6N-LE12**
				5 m	**8181664**	**NEBM-L5G14-EH-5-Q6N-LE12**
				7.5 m	**8181676**	**NEBM-L5G14-EH-7.5-Q6N-LE12**
				10 m	**8181672**	**NEBM-L5G14-EH-10-Q6N-LE12**
	0.5 ... 1.5 mm²	78.75 ... 81 mm	Suitable for energy chains	0.5 ... 25 m	**8181663**	**NEBM-LX/M17-**

1) For NEBM-LX/M17-...: selectable cable length: 0.5 ... 25 m, in 0.5 m grid and all cable cross-sections Q6, Q7, Q9

Ordering data – Motor cable for EMMB-ST-57/87

	Cable cross section [1]	Bending radius, flexible cable installation	Cable characteristic	Cable length	Part no.	Type
	0.5 mm²	78.75 mm	Suitable for energy chains	2.5 m	**8181677**	**NEBM-L10G14-EH-2.5-Q6N-LE12**
				5 m	**8181667**	**NEBM-L10G14-EH-5-Q6N-LE12**
				7.5 m	**8181669**	**NEBM-L10G14-EH-7.5-Q6N-LE12**
				10 m	**8181665**	**NEBM-L10G14-EH-10-Q6N-LE12**
	0.75 mm²	78.75 mm	Suitable for energy chains	2.5 m	**8181666**	**NEBM-L10G14-EH-2.5-Q7N-LE12**
				5 m	**8181671**	**NEBM-L10G14-EH-5-Q7N-LE12**
				7.5 m	**8181674**	**NEBM-L10G14-EH-7.5-Q7N-LE12**
				10 m	**8181673**	**NEBM-L10G14-EH-10-Q7N-LE12**
	0.5 ... 1.5 mm²	78.75 ... 81 mm	Suitable for energy chains	0.5 ... 25 m	**8181663**	**NEBM-LX/M17-**

1) For NEBM-LX/M17-...: selectable cable length: 0.5 ... 25 m, in 0.5 m grid and all cable cross-sections Q6, Q7, Q9