Expansion of the HMD NG Modular System HMD05



With a square dimension of 50 x 50 mm and two different flange sizes, the new HMD05 servo motor complements the already successfully launched HMD NG series and our HeiMotion modular system with an additional motor size. The advantages familiar from this series, such as short overall lengths, numerous voltage variants, and extremely low cogging torques, are also featured in the HMD05.

This version of the HMD NG motor is available in two different lengths, allowing for even performance options with nominal speeds ranging from 3,000 to 6,000 rpm. In addition, the power range extends from 120 to 410 W.

General Information

Flange dimensions	50 mm / 53 mm
Rated speed	10,000 rpm
Insulation class	F
Protection class	IP65 as standard, shaft outlet IP21 (ball bearing with sealing disc on request) -Optional with shaft seal IP65 (no dry running)
Connector plug	Y-Tec / I-Tec
Brake model	Holding brake; static braking torque up to 1.1 Nm (at 20°C)
Encoder version	see HMD NG catalog
Encoder interface	Sinus / Cosinus / HIPERFACE® / BiSS-C / SSI / HIPERFACE DSL® / Hall encoder / EnDat® 2.2 (see HMD NG catalog)

Heidrive
An Allient Company

HMD05-005

24 / 48 V



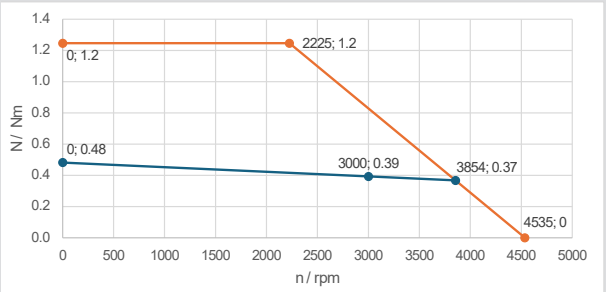
Specifications[1)]

		HMD05-005		
Rated speed [rpm]	n_n	3,000	3,000	6,000
Number of pole pairs	p	5	5	5
Wiring of the motor winding	f_n	250	250	500
DC bus voltage [V_{DC}]	U_{ZK}	24	48	48
Rated voltage motor [V_{rms}]	U_{mot}	14.6	28.3	24.9
Rated power [W] [1)]	P_n	123	127	146
Rated torque [Nm]	M_n	0.39	0.40	0.23
Rated current per phase [A_{rms}]	I_n	7.7	4.1	6.2
Stall torque [Nm]	**M_0**	**0.48**	**0.49**	**0.48**
Stall current per phase [A_{rms}]	I_0	9.2	4.8	11.5
Peak torque [Nm]	M_{max}	1.25	1.26	1.25
Peak current [A_{rms}]	I_{max}	23.2	12.2	23.2
Maximum speed [rpm]	n_{max}	4,535	4,695	9,284
Voltage constant at 1.000 rpm [V_{rms}]	k_e	2.99	5.76	2.99
Torque constant [Nm / A_{rms}]	k_t	0.05	0.09	0.03
Winding resistance (2 phases) at 20 °C [Ω]	R_{pp}	0.28	1.10	0.28
Winding inductance (2 phases) [mH]	L_{pp}	0.25	0.95	0.26

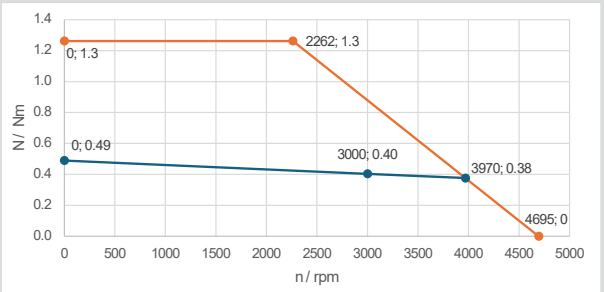
[1)] Calculated values

Performance

HMD05-005-024-30

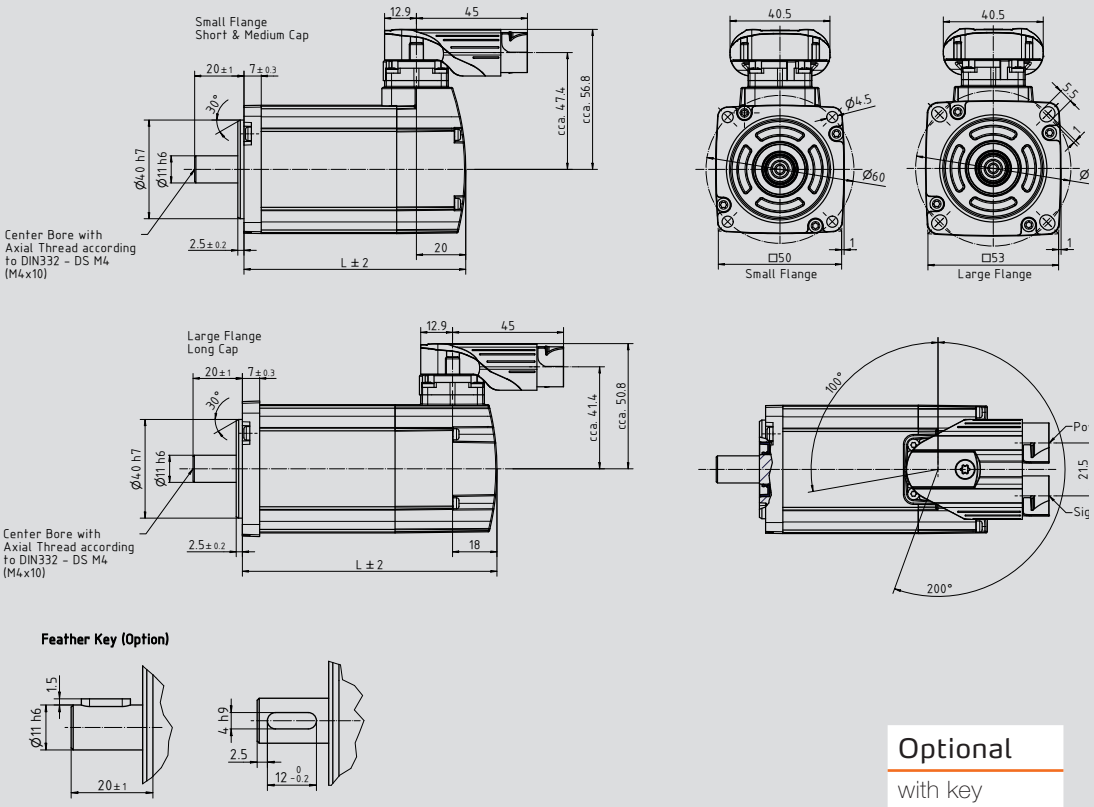


HMD05-005-048-30



M max
M (S1)

Dimensions

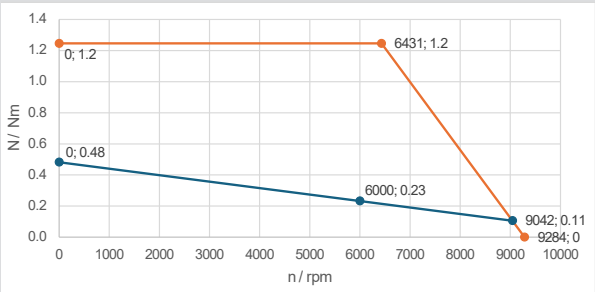


Optional
with key

Motor Type	L [mm] *with encoder category 1** without brake	L [mm] *with encoder category 1** with brake	L [mm] *with encoder category 2** without brake	L [mm] *with encoder category 2** with brake	L [mm] *with encoder category 3** without brake	L [mm] *with encoder category 3** with brake
HMD05-005	83 mm	109 mm	90 mm	116 mm	103.3 mm	129.3 mm

** Encoder category 1: Resolver, HES, HEM, SEK, SEL (ECI1118 on request)*
Encoder category 2: AM34, ENx35, EQI1131
Encoder category 3: EKS, EKM, SKS, SKM, EDS35, CKS36, EES, EEM

HMD05-005-048-60



HMD05-005

320 / 560 V



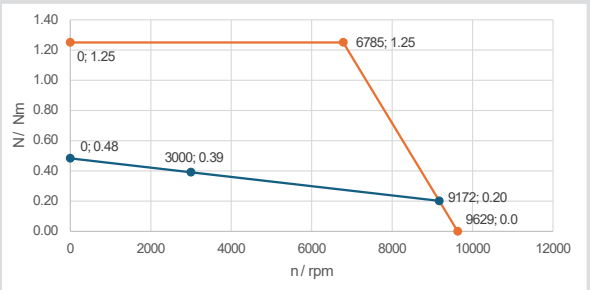
Specifications[1)]

		HMD05-005			
Rated speed [rpm]	n_n	3,000	6,000	3,000	6,000
Number of pole pairs	p	5	5	5	5
Wiring of the motor winding	f_n	250	500	250	500
DC bus voltage [V_{DC}]	U_{ZK}	320	320	560	560
Rated voltage motor [V_{rms}]	U_{mot}	93.73	160.37	93.73	160.37
Rated power [W] [1)]	P_n	123	140	123	140
Rated torque [Nm]	M_n	0.39	0.22	0.39	0.22
Rated current per phase [A_{rms}]	I_n	1.7	0.8	1.7	0.7
Stall torque [Nm]	**M_0**	**0.48**	**0.48**	**0.48**	**0.48**
Stall current per phase [A_{rms}]	I_0	1.8	1.4	1.8	1.4
Peak torque [Nm]	M_{max}	1.25	1.25	1.25	1.25
Peak current [A_{rms}]	I_{max}	3.6	3.6	3.6	3.6
Maximum speed [rpm]	n_{max}	9,629	9,629	10,001[2)]	10,001[2)]
Voltage constant at 1.000 rpm [V_{rms}]	k_e	19.2	19.2	19.2	19.2
Torque constant [Nm / A_{rms}]	k_t	0.23	0.32	0.23	0.32
Winding resistance (2 phases) at 20 °C [Ω]	R_{pp}	11.4	11.4	11.4	11.4
Winding inductance (2 phases) [mH]	L_{pp}	10.6	10.8	10.6	10.8

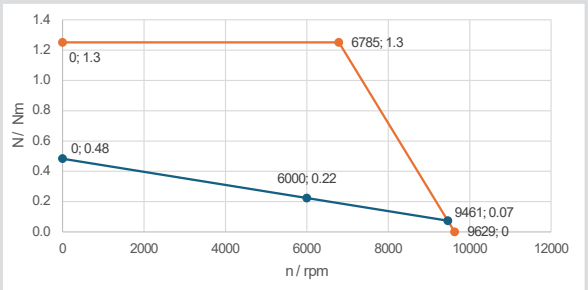
[1)] Calculated values
[2)] Max. mechanical rpm limit = 10,000 rpm (higher upon request)

Performance

HMD05-005-320-30

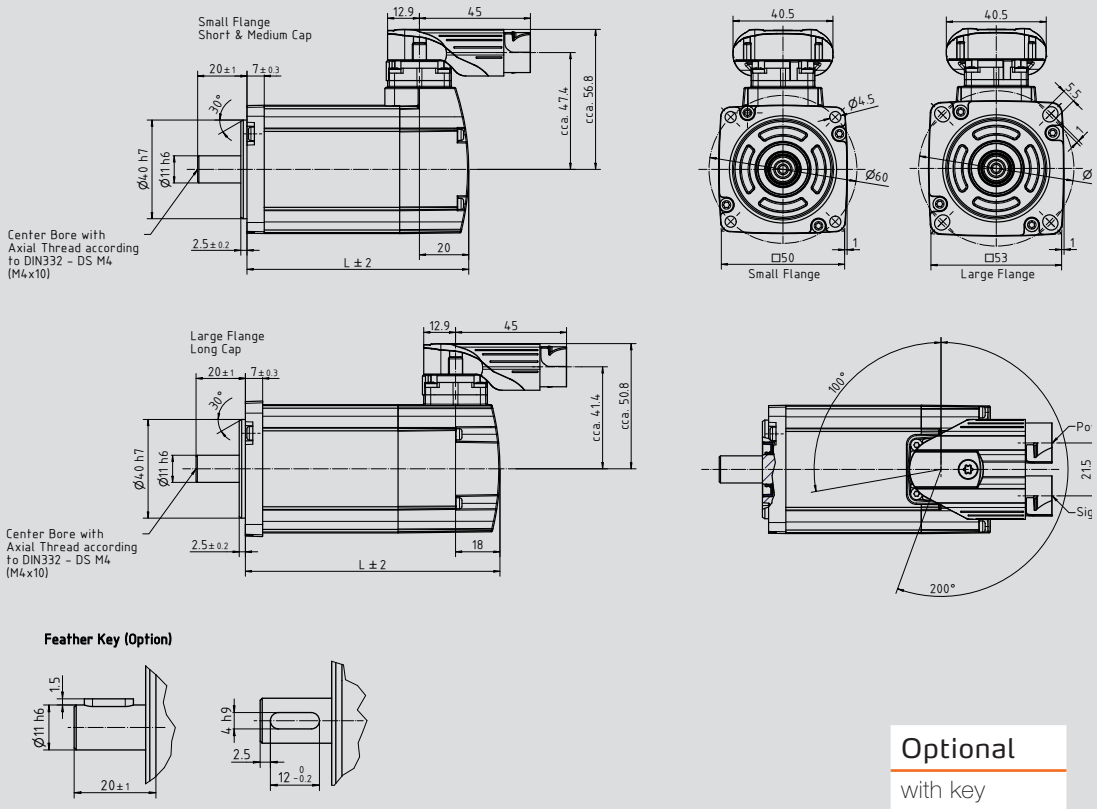


HMD05-005-320-60



M max
M (S1)

Dimensions

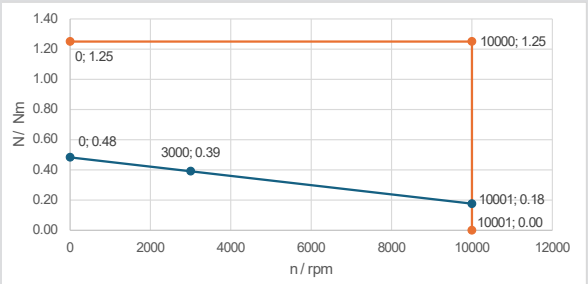


Optional
with key

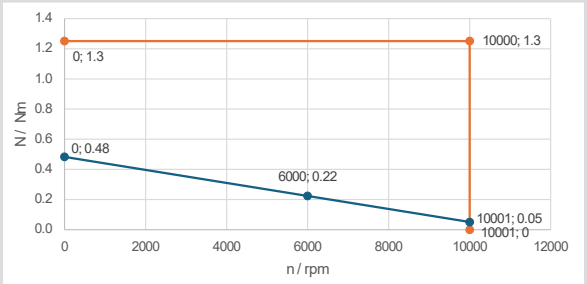
Motor Type	L [mm] *with encoder category 1**		L [mm] *with encoder category 2**		L [mm] *with encoder category 3**	
	without brake	with brake	without brake	with brake	without brake	with brake
HMD05-005	83 mm	109 mm	90 mm	116 mm	103.3 mm	129.3 mm

** Encoder category 1: Resolver, HES, HEM, SEK, SEL (ECI1118 on request)*
Encoder category 2: AM34, ENx35, EQI1131
Encoder category 3: EKS, EKM, SKS, SKM, EDS35, CKS36, EES, EEM

HMD05-005-560-30



HMD05-005-560-60



HMD05-010

24 / 48 V



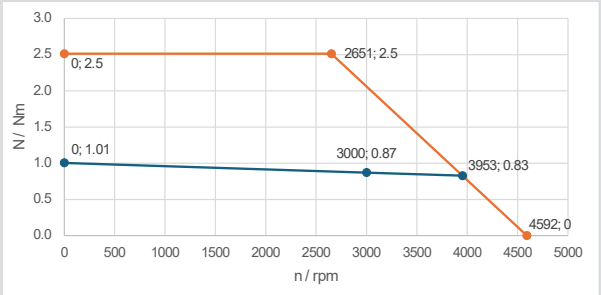
Specifications[1)]

		HMD05-010		
Rated speed [rpm]	n_n	3,000	3,000	6,000
Number of pole pairs	p	5	5	5
Wiring of the motor winding	f_n	250	250	500
DC bus voltage [V_{DC}]	U_{ZK}	24	48	48
Rated voltage motor [V_{rms}]	U_{mot}	13.53	26.99	23.94
Rated power [W] [1)]	P_n	273	265	411
Rated torque [Nm]	M_n	0.87	0.84	0.65
Rated current per phase [A_{rms}]	I_n	16.1	7.8	12.1
Stall torque [Nm]	**M_0**	**1.01**	**0.98**	**1.01**
Stall current per phase [A_{rms}]	I_0	18.2	8.9	18.2
Peak torque [Nm]	M_{max}	2.51	2.47	2.51
Peak current [A_{rms}]	I_{max}	45.8	22.4	45.8
Maximum speed [rpm]	n_{max}	4,592	4,596	9,344
Voltage constant at 1.000 rpm [V_{rms}]	k_e	2.99	5.97	2.99
Torque constant [Nm / A_{rms}]	k_t	0.05	0.11	0.05
Winding resistance (2 phases) at 20 °C [Ω]	R_{pp}	0.115	0.459	0.115
Winding inductance (2 phases) [mH]	L_{pp}	0.12	0.51	0.13

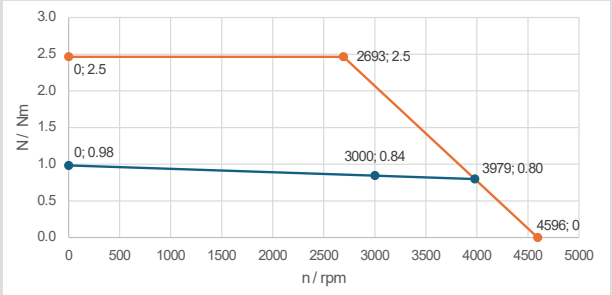
[1)] Calculated values

Performance

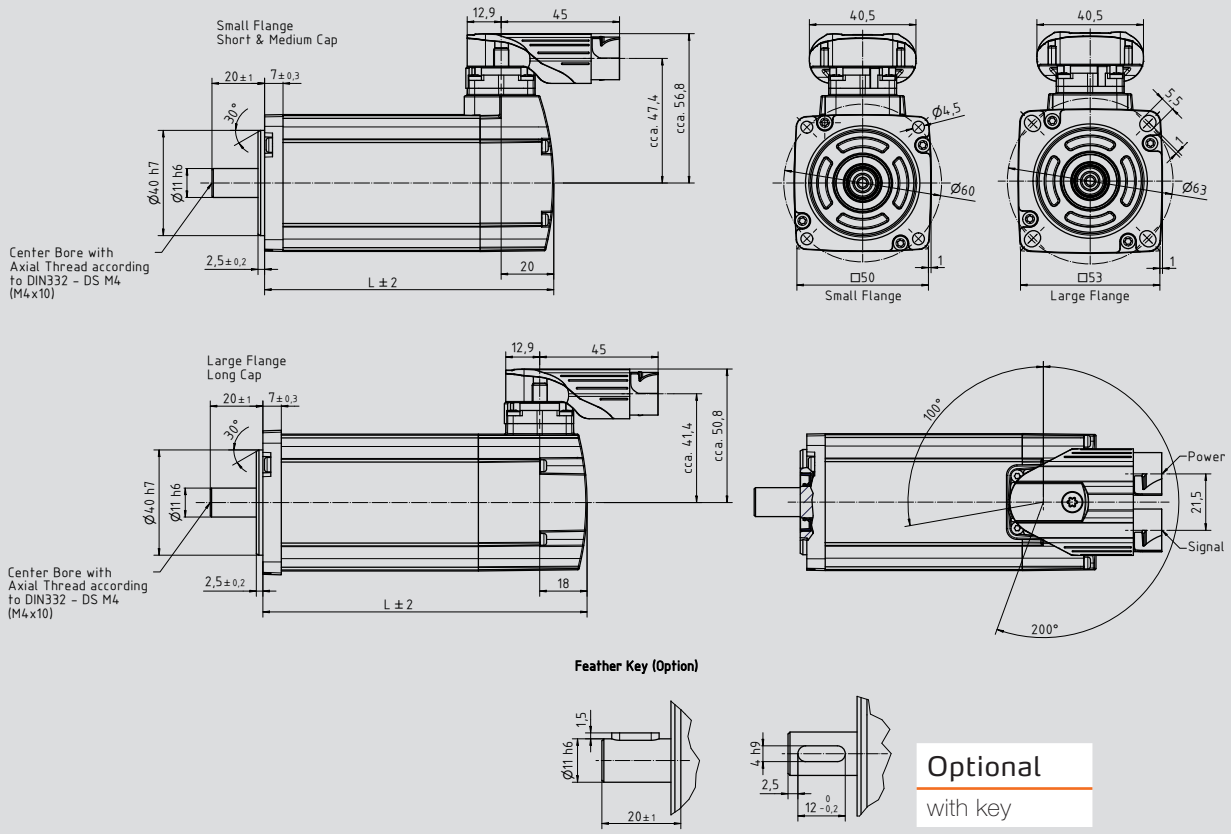
HMD05-010-024-30



HMD05-010-048-30



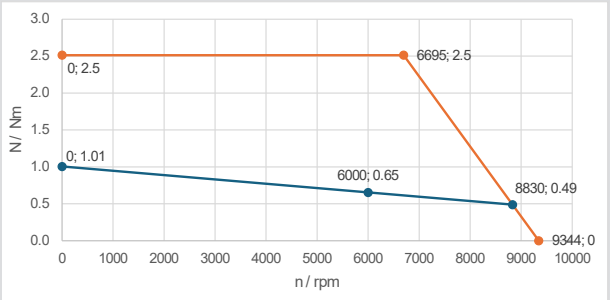
Dimensions



Motor Type	L [mm] *with encoder category 1** without brake	L [mm] *with encoder category 1** with brake	L [mm] *with encoder category 2** without brake	L [mm] *with encoder category 2** with brake	L [mm] *with encoder category 3** without brake	L [mm] *with encoder category 3** with brake
HMD05-010	103 mm	129 mm	110 mm	136 mm	123.3 mm	149.3 mm

** Encoder category 1: Resolver, HES, HEM, SEK, SEL (ECI1118 on request)*
Encoder category 2: AM34, ENx35, EQI1131
Encoder category 3: EKS, EKM, SKS, SKM, EDS35, CKS36, EES, EEM

HMD05-010-048-60



HMD05-010

320 / 560 V



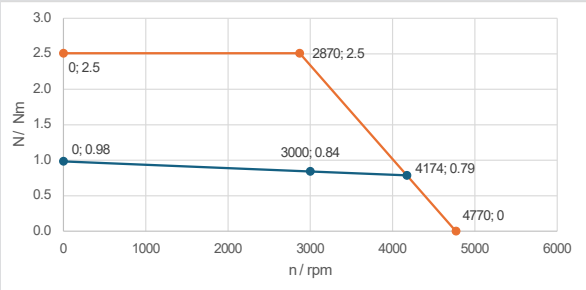
Specifications[1)]

		HMD05-010			
Rated speed [rpm]	n_n	3,000	6,000	3,000	6,000
Number of pole pairs	p	5	5	5	5
Wiring of the motor winding	f_n	250	500	250	500
DC bus voltage [V_{DC}]	U_{ZK}	320	320	560	560
Rated voltage motor [V_{rms}]	U_{mot}	173.19	174.34	173.19	307.70
Rated power [W] [1)]	P_n	265	384	265	382
Rated torque [Nm]	M_n	0.84	0.61	0.84	0.61
Rated current per phase [A_{rms}]	I_n	1.2	1.6	1.2	0.9
Stall torque [Nm]	**M_0**	**0.98**	**0.98**	**0.98**	**0.98**
Stall current per phase [A_{rms}]	I_0	1.4	2.4	1.4	1.4
Peak torque [Nm]	M_{max}	2.51	2.53	2.51	2.51
Peak current [A_{rms}]	I_{max}	3.5	6.3	3.5	3.5
Maximum speed [rpm]	n_{max}	4,770	8,534	8,460	8,460
Voltage constant at 1.000 rpm [V_{rms}]	k_e	38.4	21.8	38.4	38.4
Torque constant [Nm / A_{rms}]	k_t	0.69	0.39	0.69	0.69
Winding resistance (2 phases) at 20 °C [Ω]	R_{pp}	18.4	5.88	18.4	18.4
Winding inductance (2 phases) [mH]	L_{pp}	21.2	6.92	21.2	21.5

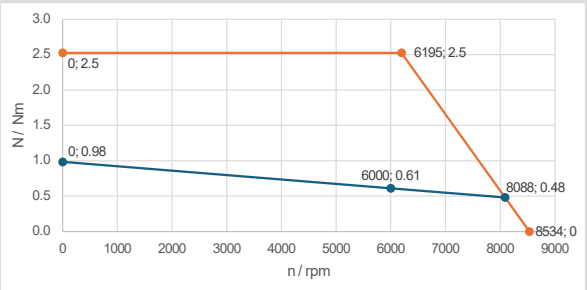
[1)] Calculated values

Performance

HMD05-010-320-30

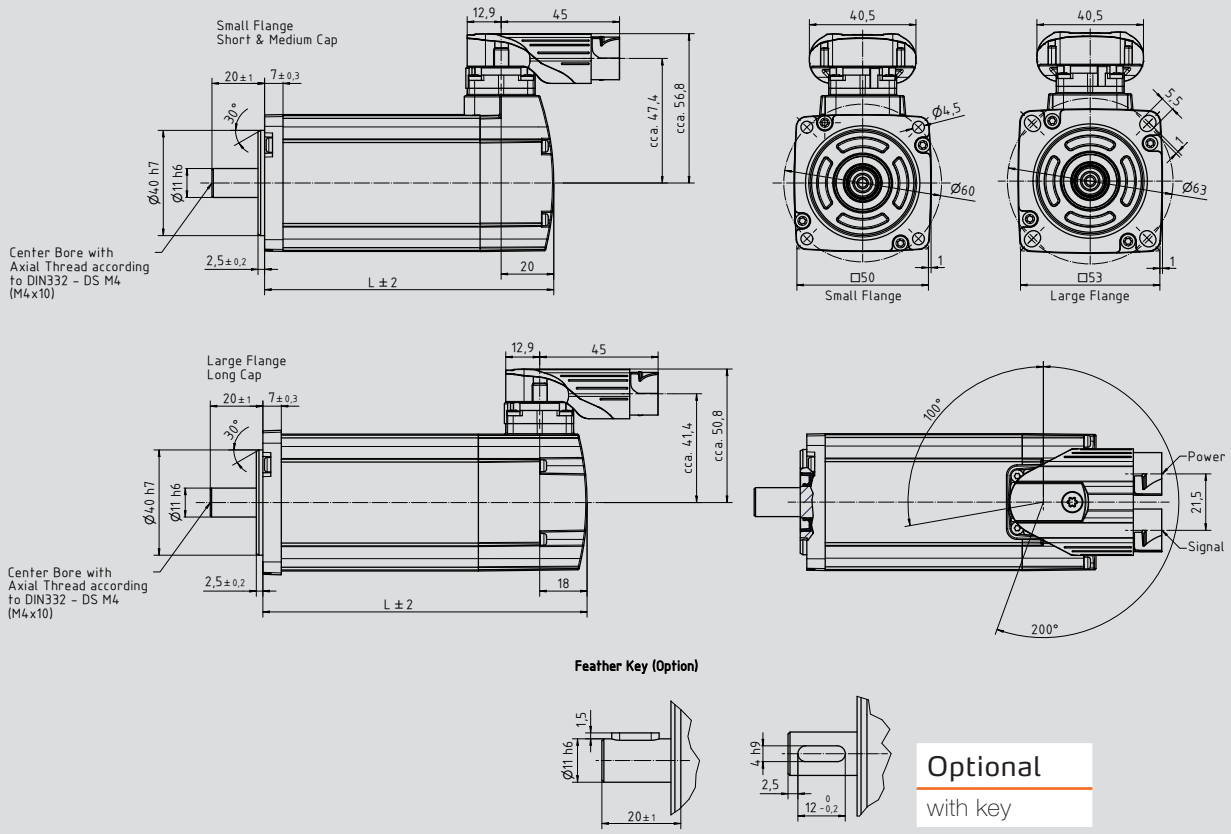


HMD05-010-320-60



M max
M (S1)

Dimensions

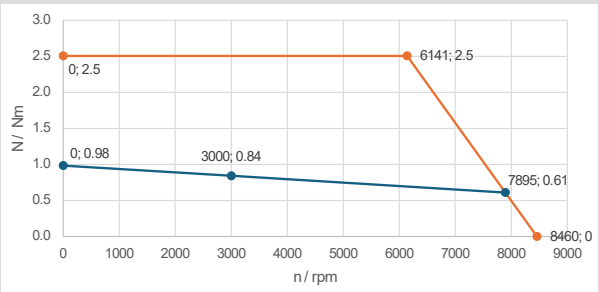


Optional
with key

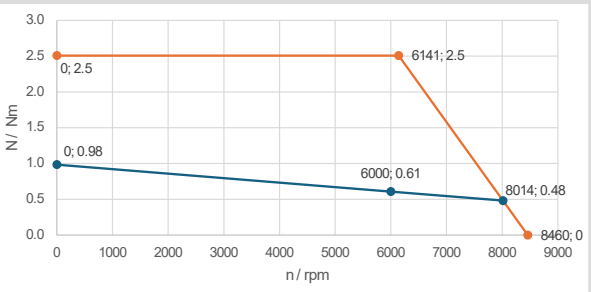
Motor Type	L [mm] *with encoder category 1** without brake	L [mm] *with encoder category 1** with brake	L [mm] *with encoder category 2** without brake	L [mm] *with encoder category 2** with brake	L [mm] *with encoder category 3** without brake	L [mm] *with encoder category 3** with brake
HMD05-010	103 mm	129 mm	110 mm	136 mm	123.3 mm	149.3 mm

** Encoder category 1: Resolver, HES, HEM, SEK, SEL (ECI1118 on request)*
Encoder category 2: AM34, ENx35, EQI1131
Encoder category 3: EKS, EKM, SKS, SKM, EDS35, CKS36, EES, EEM

HMD05-010-560-30



HMD05-010-560-60



Options Encoder & Connectors*

Standard

Resolver



Specification:
- Accuracy: ± 10‘
- Operating temperature: +155°C / - 55°C

HIPERFACE®

SEK / SEL37

(Singleturn / Multiturn)



Specification:
- 16 sin/cos periods per revolution
- Absolute position with a resolution of 512 steps per revolution
- Operating temperature: +115°C / - 40°C

HIPERFACE® by SICK

SKS / SKM36

(Singleturn / Multiturn)



Specification:
- 128 sin/cos periods per revolution
- Absolute position with a revolution of 4,096 steps per revolution
- Operating temperature: +115°C / - 40°C

TÜVRheinland CERTIFIED SIL/PL Capability

HIPERFACE® by SICK

BiSS-C / SSI®

HES / HEM

(Singleturn / Multiturn)



Specification:
- Singleturn encoder with a resolution of 12 bit
- Multiturn encoder with a total resolution of 32 bit
- SSI/BiSS-C -interface differential and single-ended

AM34

(Singleturn / Multiturn)



Specification:
- Singleturn accuracy: 16 bit
- Multiturn accuracy: 12 bit (mechanical)
- Operating temperature: +115°C / - 40°C

TÜVRheinland CERTIFIED SIL/PL Capability

*For detailed information on encoders and connectors, see the HMD NG catalog.

HIPERFACE DSL®

EKS / EKM36

(Singleturn / Multiturn)



Specification:
- Absolute position with a resolution of 18 bit
- Measuring of 4,096 revolutions (multiturn)
- Operating temperature: +115°C / - 20°C

EES / EEM37

(Singleturn / Multiturn)



Specification:
- Absolute position with a resolution of 17 bit
- Measuring of 4,096 revolutions (multiturn)
- Operating temperature: +115°C / - 40°C

Inductive Sensing Encoder EnDAT® 2.2

ECI1118

(Singleturn encoder)

Order Code: E1S



Specifications:
- Inductive encoder system without integral bearing
- Purely serial EnDAT® 2.2 interface
- For machines with high demands on dynamics and robustness
- High system accuracy
- Digital data transmission
- Electronic type plate

EQI1131

(Multiturn encoder)

Order Code: E1M



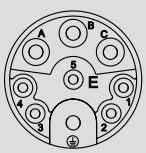
Specifications:
- Inductive encoder system without integral bearing
- Multiturn function via gearbox
- Purely serial EnDAT® 2.2 interface
- For machines with high demands on dynamics and robustness
- High system accuracy
- Digital data transmission
- Electronic type plate

I-Tec Connectors



Specification:
- One cable solution for DSL encoder
- Rated current: 14 A_{rms}

Possible plug inlays:



9-pole
9 x Ø 1 mm (3+PE+5)

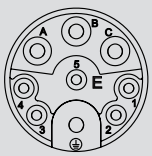
Y-Tec Connectors



Specification:
- Rated current: 14 A_{rms}

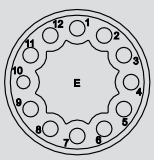
Possible plug inlays:

Motor side



9-pole
9 x Ø 1 mm (3+PE+5)

Signal side



12-pole
12 x Ø 1 mm

Technical data subject to change! Last changes: 10/2026

Heidrive GmbH
Starenstraße 23
D-93309 Kelheim

Phone +49 9441/707-0
Fax +49 9441/707-259

info@heidrive.de
www.heidrive.com