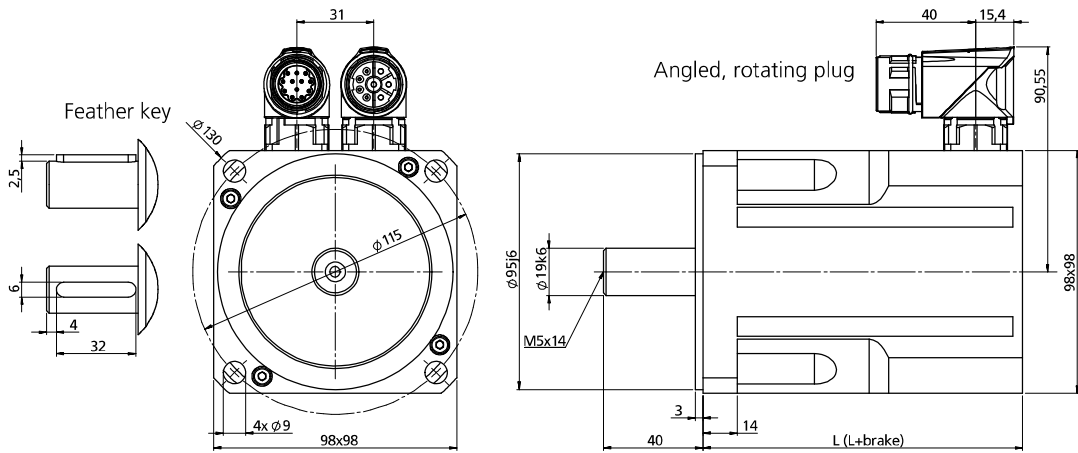


4.19 Motor type:
LSH-097
($U_{dc} = 320\text{ V}$)



4.19.1 Dimensional sketch and technical data



4

Motor type	L with resolver xR [mm]	L+brake with resolver xR [mm]	L with opt. encoder G12.xy [mm]	L+brake with opt. encoder G12.xy [mm]	L with opt. encoder G6.1x [mm]	L+brake with opt. encoder G6.1x [mm]
LSH-097-1	129	170	166	207	150	191
LSH-097-2	159	200	196	237	180	221
LSH-097-3	189	230	226	267	210	251

Motor type	L with opt. encoder G6.2x [mm]	L+brake with opt. encoder G6.2x [mm]	L with opt. encoder G6.3x [mm]	L+brake with opt. encoder G6.3x [mm]	L with opt. encoder G3/G5 [mm]	L+brake with opt. encoder G3/G5 [mm]
LSH-097-1	148	189	In preparation	In preparation	159	200
LSH-097-2	178	219	In preparation	In preparation	189	230
LSH-097-3	208	249	In preparation	In preparation	219	260

Table: Overview of motor lengths – for overview of encoder types see section 5.1

Technical data ¹⁾	Symbol	LSH-097-1-30-320	LSH-097-2-30-320	LSH-097-3-30-320
Rated speed	n_n	3000 rpm	3000 rpm	3000 rpm
Rated frequency	f_N	250 Hz	250 Hz	250 Hz
DC link voltage (controller)	U_{dc}	320 V	320 V	320 V
Rated voltage	U_n	200 V	200 V	200 V
Rated torque	M_n	3.2 Nm	4.6 Nm	6.1 Nm
Rated current	I_n	5.0 A	7.0 A	8.3 A
Rated power	P	1.0 kW	1.44 kW	1.9 kW
Stall torque	M_0	4.1 Nm	6.3 Nm	8.6 Nm
Stall current	I_0	6.0 A	9.2 A	11.2 A
Maximum permissible torque	M_{max}	11.1 Nm	18.5 Nm	27.0 Nm
Maximum permissible current	I_{max}	24.0 A	40.0 A	53.0 A
Maximum permissible speed	n_{max}	9000 rpm	9000 rpm	9000 rpm
Voltage constant	K_E	40.5 V/1000 rpm	41.5 V/1000 rpm	46.5 V/1000 rpm
Torque constant	K_T	0.67 Nm/A	0.69 Nm/A	0.77 Nm/A
Winding resistance (2 phases)	R_{2ph}	1.24 Ω	0.7 Ω	0.59 Ω
Winding inductance (2 phases)	L_{2ph}	10.6 mH	6.9 mH	6.2 mH
No load speed	n_0	4920 rpm	4810 rpm	4290 rpm
Electrical time constant	T_{el}	8.5 ms	9.9 ms	10.5 ms
Thermal time constant	T_{th}	29 min.	31 min.	33 min.
Moment of inertia of the motor	J	0.00017 kgm ²	0.00026 kgm ²	0.00035 kgm ²
Mass	m	4.28 kg	5.34 kg	6.96 kg
Brake (optional)				
Rated voltage	U_N	24 V \pm 10 %		
Rated current at 20 °C for venting	I_N	0.75 A		
Permissible maximum speed	n_{max}	10000 rpm		
Permissible friction energy	W_R	0.89 x 10 ⁶ Ws		
Mass moment of inertia	J_B	0.000054 kgm ²		
Mass	m	0.46 kg		
Braking torque	M_H	9.0 Nm		

1) All values with a tolerance of \pm 10%.

4.19.2 Characteristics

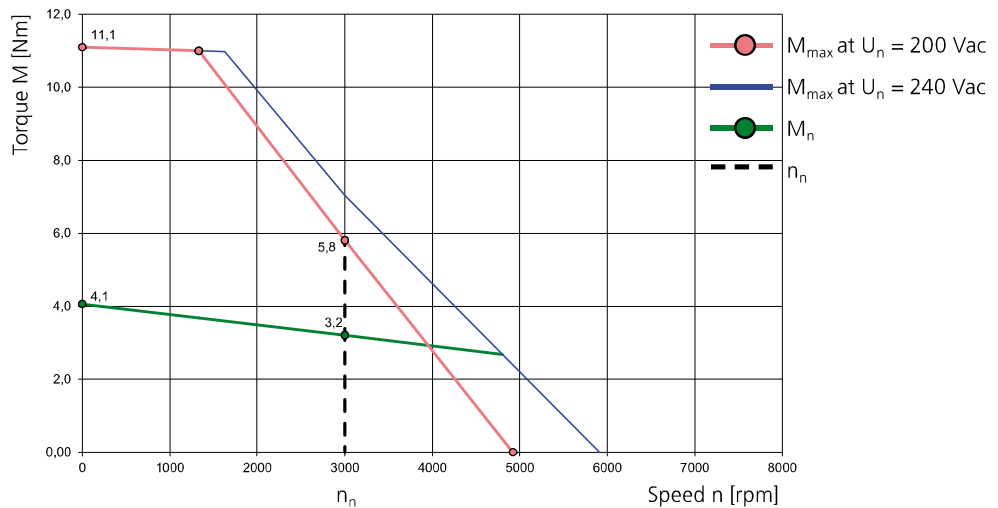
Explanations of characteristics:

The characteristic M_{\max} describes the maximum possible short-time torque at corresponding speed. It is important for dynamic processes.

The characteristic M_n indicates the thermally permissible rated torque.

The characteristics are limited by the respective maximum permissible speed n_{\max} (for n_{\max} refer to the "Technical data" table).

LSH-097-1-30-320



LSH-097-2-30-320

