

# Brushless DC-Motors

with integrated Drive Electronics

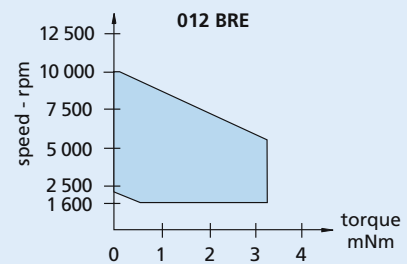
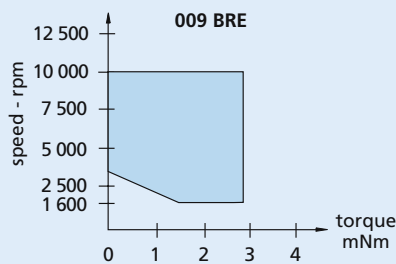
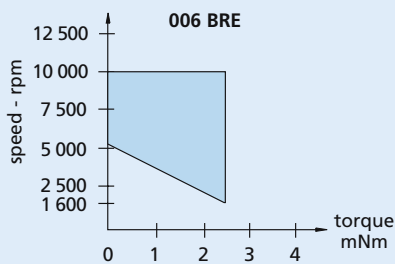
## 3,2 mNm

### Series 1935 ... BRE

	1935 S	006 BRE	009 BRE	012 BRE	
Nominal voltage <sup>1)</sup>	U <sub>N</sub>	6	9	12	Volt
No-load speed	n <sub>0</sub>	7 400	7 650	7 400	rpm
No-load current (with shaft ø 3,0 mm)	I <sub>0</sub>	0,050	0,035	0,027	A
Starting torque	M <sub>A</sub>	2,9	4,0	4,4	mNm
Torque constant	k <sub>M</sub>	6,32	9,74	13,70	mNm/A
Slope of n-M curve	Δn/ΔM	1 470	1 140	1 110	rpm/mNm
Rotor inertia	J	8,1	8,1	8,1	gcm <sup>2</sup>
Operating temperature range		0 ... + 70			°C
Shaft bearings		ball bearings, preloaded			
Shaft load max.:					
– shaft diameter		3			mm
– radial at 3 000 rpm (3 mm from mounting face)		10			N
– axial at 3 000 rpm		1			N
– axial at standstill		150			N
Shaft play:					
– radial	∠	0,015			mm
– axial	∥	0			mm
Housing material		mounting face in aluminium, housing in plastic			
Weight		33			g
Direction of rotation		not reversible - clockwise rotation, viewed from the front face			
<sup>1)</sup> The supply voltage range for the integrated electronics is:		min. 4,5 ... max. 16			V DC

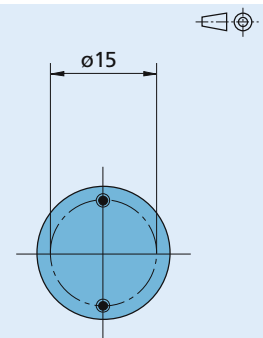
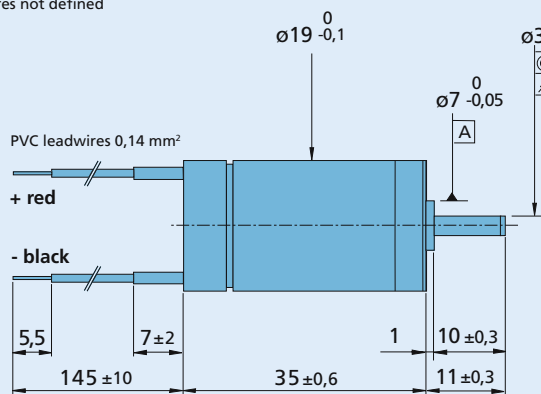
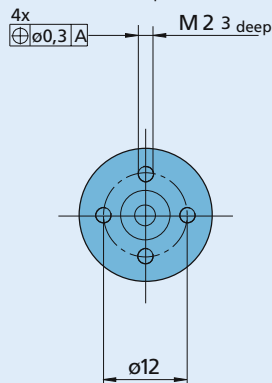
#### Recommended values - mathematically independent of each other

Speed range	n <sub>e</sub>	1 600 – 10 000			rpm
Torque up to	M <sub>e max.</sub>	2,4	2,9	3,2	mNm
Current up to (thermal limits)	I <sub>e max.</sub>	0,50	0,40	0,33	A



Recommended speed - torque range

Orientation with respect to motor leadwires not defined



**Caution:**  
Incorrect lead connection will damage the motor electronics!

1935 S