Brushless DC-Servomotors
with integrated Speed Controller

4,4 mNm
4,8 W

1935 ... BRC

Values at 22°C and nominal voltage	1935 S		006 BRC	009 BRC	012 BRC	
Power supply electronic	U_P		4 ... 18	4 ... 18	4 ... 18	V DC
Power supply motor	U_{mot}		1,7 ... 18	1,7 ... 18	1,7 ... 18	V DC
Nominal voltage for motor	U_N		6	9	12	V
No-load speed (at U_N)	n_0		8 600	8 600	8 100	min⁻¹
Torque constant	k_M		6,48	9,92	13,97	mNm/A
Starting torque	M_A		4	4	4	mNm
Standby current for electronic (at U_N)	I_{el}		0,025	0,025	0,025	A
Speed range (up to 2xU_N, max, 18V)			1 000 ... 17 400	1 000 ... 17 500	1 000 ... 12 300	min⁻¹
Shaft bearings		ball bearings, preloaded				
Shaft load max.:						
– with shaft diameter		3				mm
– radial at 3 000 min⁻¹ (3 mm from mounting flange)		10				N
– axial at 3 000 min⁻¹ (push / pull)		1				N
– axial at standstill (push / pull)		25				N
Shaft play:						
– radial		≤ 0,015				mm
– axial		= 0				mm
Operating temperature range		-25 ... +85				°C
Housing material		mounting face in aluminium, housing in plastic				
Mass		31				g

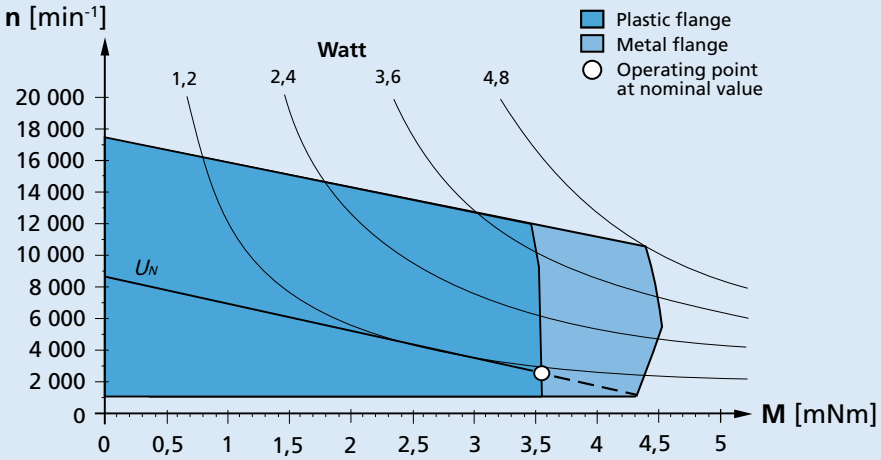
Rated values for continuous operation						
Rated torque	M_N		3,3	3,6	3,1	mNm
Rated current (thermal limit)	I_N		0,63	0,5	0,34	A
Rated speed	n_N		2 500	2 500	2 500	min⁻¹

Interface / range of functions	... BRC
Configuration from Motion Manager 5.0	via USB Programming Adapter
Operating modes	Integrated speed control via PI controller. Setpoint Input via analog voltage input. Can optionally be operated as a voltage controller or in fixed speed mode.
Speed range	Sensorless operation, from 1000 min⁻¹
Additional functions	Digital input as switching input for defining the direction of rotation of the motor Digital output as frequency output. Integrated current limitation to protect against thermal overload.

Note:
The display shows the range of possible operation points of the drives at a given ambient temperature of 22°C.

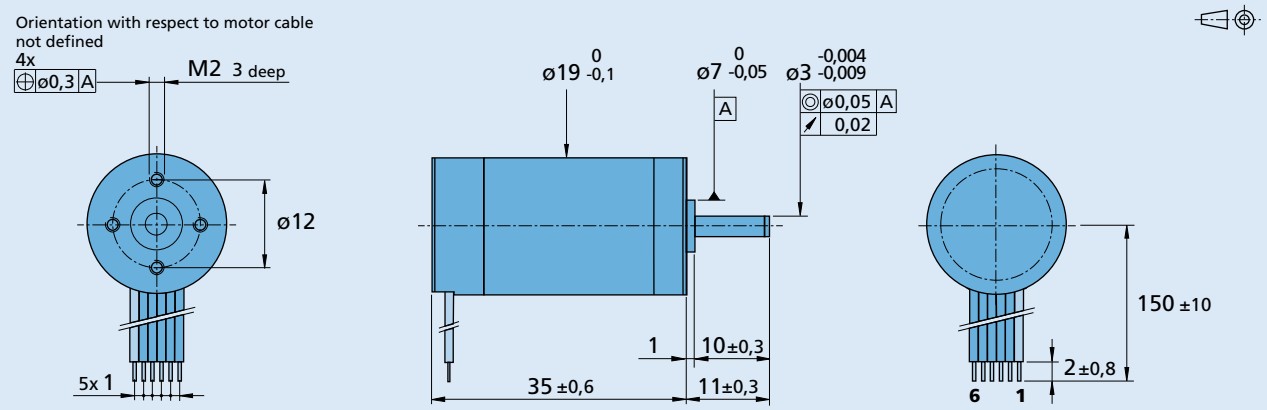
The diagram indicates the recommended speed in relation to the available torque at the output shaft.
It includes the assembly on a plastic- as well as on a metal flange (assembly method: IM B 5).

The nominal voltage linear slope describes the maximal achievable operating points at nominal voltage.
Any points of operation above this linear slope will require a supply voltage $U_{mot} > U_N$.



Recommended operation areas (example: nominal voltage 9V)

Dimensional drawing



1935 S ... BRC

Option, cable and connection information

Example product designation: **1935S012BRC-5809**

Option	Type	Description
5809	Single Leads	single leads, length 150 mm, red (+) / black (-)
5929	Shaft load	axial shaft load at standstill up to 150 N

Connection

Name	Function	Inputs-outputs	Description
1 (red)	*Up*	electronic supply	4 V DC - 18 V DC
2	*Umot*	motor supply	1,7 V DC - 2x U_N (max. 18V)
3	GND	ground	
4	*Unsoll*	Speed command	0 - 10 V DC | > 10 V DC - max. *UP* not defined
5	DIR	direction of rotation	on ground or U < 0,5 V = CCW, *U* > 3 V = CW
6	FG	frequency output	(max. *Up*, I max. 15 mA) 3 lines per revolution

Caution: Incorrect lead connection will damage the motor electronics!

Standard cable
PVC ribbon cable 6 x AWG 28

Note: For details on the connection assignment, see device manual

Product combination

Precision Gearheads / Lead Screws	Encoders	Drive Electronics	Cables / Accessories
		Integrated	To view our large range of accessory parts, please refer to the "Accessories" chapter.