

NEW

Brushless DC-Motors with integrated Drive Electronics

3,5 mNm

Series 1935 ... BRC

	1935 S	006 BRC	009 BRC	012 BRC	
Nominal voltage	U_N	6	9	12	V DC
No-load speed	n_o	8 800	8 700	8 200	min ⁻¹
No-load current (with shaft \varnothing 3 mm)	I_o	0,033	0,021	0,021	A
Starting torque	M_A	4	4	4	mNm
Torque constant	k_M	6,48	9,92	13,97	mNm/A
Slope of n-M curve	$\Delta n/\Delta M$	1 110	915	975	min ⁻¹ /mNm
Rotor inertia	J	8,1	8,1	8,1	gcm ²
Operating temperature range		- 25 ... + 85			°C
Shaft bearings		ball bearings, preloaded			
Shaft load max.:					
- shaft diameter		3			mm
- radial at 3 000 min ⁻¹ (3 mm from mounting face)		10			N
- axial at 3 000 min ⁻¹		1			N
- axial at standstill		25			N
Shaft play:					
- radial	\leq	0,015			mm
- axial	\parallel	0			mm
Housing material		mounting face in aluminium, housing in plastic			
Weight		31			g
Direction of rotation		reversible			

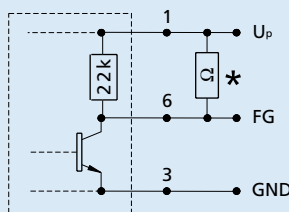
Recommended values - mathematically independent of each other

Speed range	n_e	1 000 - 11 000			min ⁻¹
Torque up to ¹⁾	$M_{e,max.}$	3,5	3,5	3,5	mNm
Current up to (thermal limits) ¹⁾	$I_{e,max.}$	0,72	0,39	0,34	A

¹⁾ Specification applies to $U_{nsoll} = 10$ V

Electronic

Supply voltage	U_p	min. 4 ... max. 18		V DC
Current	$I_{max.}$	15		mA



Circuit diagram

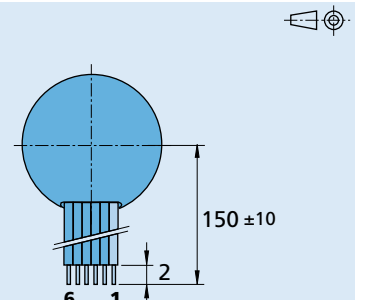
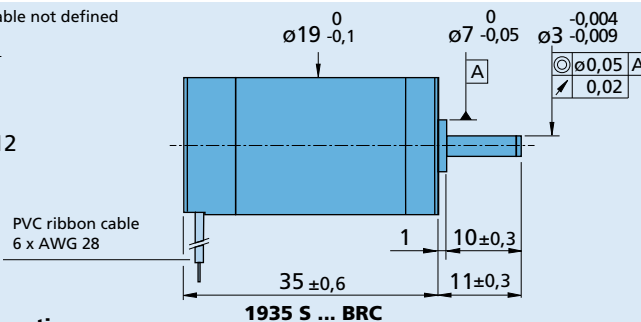
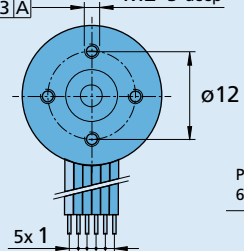
* An additional external pull-up resistor can be added to improve the rise time.

Caution:

$I_{out,max.}$ 15 mA must not be exceeded!

Orientation with respect to motor cable not defined

4x $\varnothing 0,3$ A M2 3 deep



Cable connection

No.	Function	
1 (red)	U_p : electronic supply	4 V DC - 18 V DC
2	U_{mot} : coil supply	1,7 V DC - 18 V DC
3	GND : ground	
4	U_{nsoll} : Speed command	0 - 10 V DC > 10 V DC - max. U_p not defined
5	DIR : direction of rotation	on ground or $U < 0,5$ V = CCW, $U > 3$ V = CW
6	FG : frequency output	(max. U_p , $I_{max.}$ 15 mA) 3 lines per revolution

Caution:

Incorrect lead connection will damage the motor electronics!