

# DC Motor Ø 18

# 1.16.018.XXX



Design	
Commutator	Copper/3-segments
RFI Protection	VDR
Insulation class	Winding F, otherwise A
Protection class	IP20
Commutation	Graphite/copper-carbon brushes
Magnet system	Permanent magnets, 2-pole
Armature	sintered, straight slot
Bearings	2 sintered bronze bearings
Housing	Steel, corrosion protected
End shields	brush end plastic drive end zinc die-cast

Type 1.16.018.XXX			031
<b>Characteristics*</b>			
Rated voltage	V	V	12
Rated power	$P_N$	W	1.4
Rated torque	$T_N$	mNm	2.0
Rated speed	$n_N$	rpm	6500
Rated current	$I_N$	A	0.29

<b>No load characteristics*</b>			
No load speed	$n_o$	rpm	11700
No load current	$I_o$	A	0.06

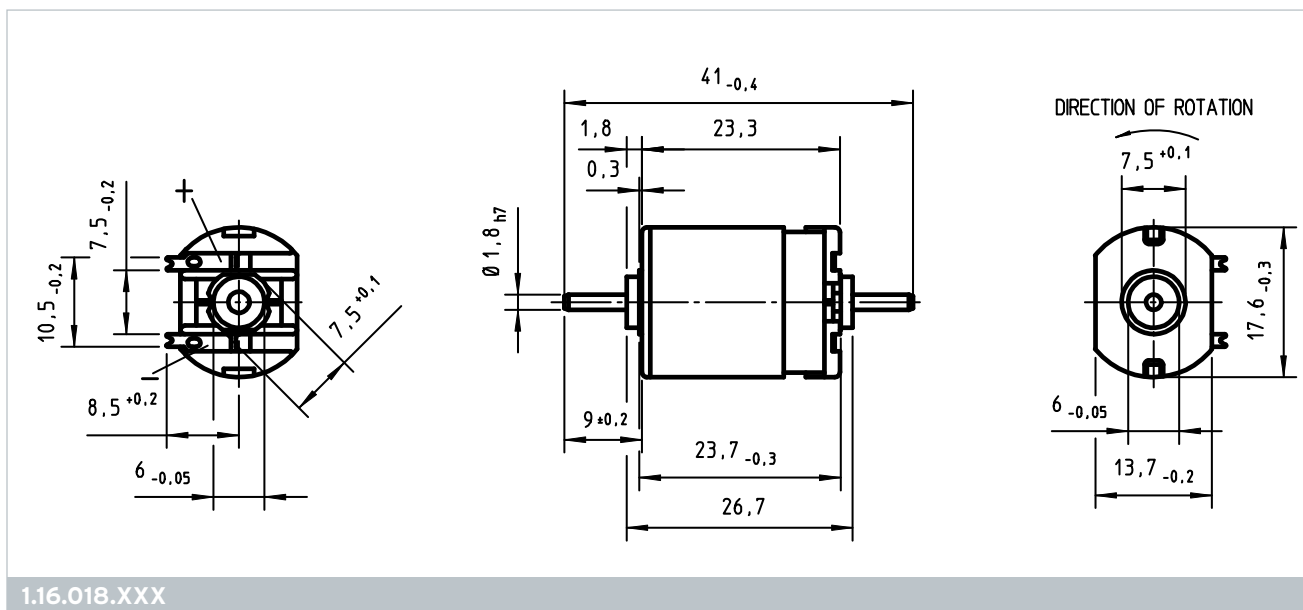
<b>Starting characteristics*</b>			
Starting torque	$T_s$	mNm	4.5
Starting current	$I_s$	A	0.57

<b>Performance characteristics</b>			
max. Output power	$P_{max}$	W	1.4
max. Constant torque	$T_{max}$	mNm	1.0

<b>Motor parameters*</b>			
Weight	G	g	19
Rotor inertia	J	gcm <sup>2</sup>	0.9
Terminal resistance	R	Ohm	21
Mech. time constant	$\tau_m$	ms	-
Electr. time constant	$\tau_e$	ms	-
Speed regulation constant	$R_m$	rpm/mNm	2600
Torque constant	$k_t$	mNm/A	8.8
Thermal resistance	$R_{th1}$	K/W	32
Thermal resistance	$R_{th2}$	K/W	28
Axial play		mm	0.05 - 0.5
Direction of rotation			bidirectional

Operational conditions			
Temperature range	T	°C	-10 - +70
Humidity at room temperature	rel. F.	%	15 - 55
No condensation		g H <sub>2</sub> O / m <sup>3</sup>	2 - 25
Axial force	F <sub>A</sub>	N	1.0
Radial force, 5 mm from mounting surface	F <sub>R</sub>	N	3.0
Operating mode at P <sub>max</sub>			S5
Operating mode at T <sub>max</sub>			S1

\* at 25° C



### Customized versions

The following modifications are available upon request:

- ▶ Speed adjustment through winding change
- ▶ Lead sets
- ▶ Shaft length on both ends
- ▶ Shaft configuration (flat, grooved, etc.)
- ▶ Drive configuration
- ▶ Adapters and mounting plates