

DC-Motor-Tacho Combinations

4 mNm

Precious Metal Commutation

For combination with:

Gearheads: 23/1, 30/1, 38/3

Encoders: 20/21B, 03B, 10/09B, 10/09BP, 5500, 5540

Series 2356 ... S

Characteristics of the DC-Motor-Tacho Combination

Series	mechanical time constant	moment of inertia	angular acceleration	frequency	weight response
2356 S 4,5 S 1,5 G	τ_m 26 ms	J 6,21 gcm ²	α_{max} $29,0 \cdot 10^3 \text{ rad s}^{-2}$	1800 Hz	90 g
2356 S 006 S 1,5 G	23 ms	5,05 gcm ²	$33,9 \cdot 10^3 \text{ rad s}^{-2}$	1800 Hz	90 g
2356 S 009 S 1,5 G	23 ms	5,05 gcm ²	$33,6 \cdot 10^3 \text{ rad s}^{-2}$	1800 Hz	90 g
2356 S 012 S 1,5 G	23 ms	5,05 gcm ²	$32,1 \cdot 10^3 \text{ rad s}^{-2}$	1800 Hz	90 g
2356 S 018 S 1,5 G	23 ms	5,05 gcm ²	$32,5 \cdot 10^3 \text{ rad s}^{-2}$	1800 Hz	90 g
2356 S 024 S 1,5 G	23 ms	5,05 gcm ²	$34,8 \cdot 10^3 \text{ rad s}^{-2}$	1800 Hz	90 g

The characteristics of the DC-Micromotor Series 2338 ... S, used for these combinations are listed on the main catalogue.

Tachogenerator		1,5 G	
EMF constant	K_E	1,5	mV/rpm
Tolerance of EMF constant		14,325	mV/rad s ⁻¹
Load resistance	R_L	± 2	%
Operating speed, max. continuous	$n_{e \text{ max.}}$	≥ 25	k Ω
Terminal resistance	R	≤ 5000	rpm
		260	Ω
Ripple, peak-peak, typical		7	%
Ripple frequency, cycles		14	per turn
Linearity, without load, between 500 and 5000 rpm		$\pm 0,2$	%
Reversion error		$\pm 0,2$	%
Temperature coefficient of EMF		0,02	% / °C
Temperature coefficient of armature resistance		0,4	% / °C
Rotor inductance	L	3000	μH
Direction of rotation		reversible	
Polarity		dependent on direction of rotation	

Features

Mono-axis design

Motor and tachogenerator feature the patented skew wound ironless rotors (System FAULHABER®). The mono-axis design with the two commutator systems, facing each other in a patented arrangement, mounted on a single solid shaft, has excellent torsion characteristics and the highest frequency response possible.

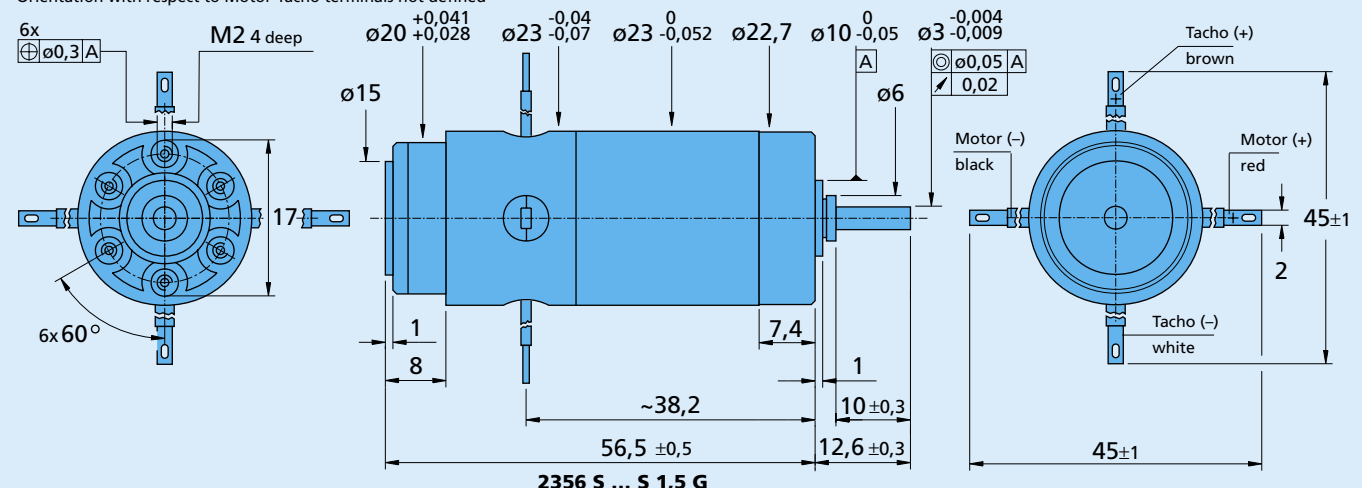
Commutation system

The commutators and brushes are made of high quality precious metal alloy and provide a minimized but constant contact resistance as well as insensibility to changes in environment.

Operating temperature ranges:

Motor-Tacho, standard -30 ... + 85 °C
 Motor-Tacho, optional -30 ... + 125 °C
 Rotor, max. permissible + 125 °C

Orientation with respect to Motor-Tacho terminals not defined



For notes on technical data refer to "Technical Information" on the main catalogue

Specifications subject to change without notice.