

DC-Motor-Tacho Combinations

1,5 mNm

Precious Metal Commutation

For combination with
Gearheads:
15A, 16A, 16/5, 16/7, 16/8

Series 1841 ... S

Characteristics of the DC-Motor-Tacho Combination

| Series | mechanical time constant | moment of inertia | angular acceleration | frequency | weight response |
|--------------------|--------------------------|-----------------------|---|-----------|-----------------|
| 1841 T 006 S 001 G | τ_m 27 ms | 0,85 gcm ² | $\alpha_{max.}$ $41 \cdot 10^3 \text{ rad s}^{-2}$ | 2 150 Hz | 44 g |
| 1841 T 012 S 001 G | 30 ms | 0,90 gcm ² | $46 \cdot 10^3 \text{ rad s}^{-2}$ | 2 150 Hz | 44 g |
| 1841 T 024 S 001 G | 35 ms | 0,91 gcm ² | $45 \cdot 10^3 \text{ rad s}^{-2}$ | 2 150 Hz | 44 g |

The characteristics of the DC-Micromotor, Series 1624 ... S regarding these combination, see on respective datasheet.

| DC-Tachogenerator | | 001 G | |
|--|----------------------|------------------------------------|------------------------|
| EMF constant | K_E | 1,0 | mV/rpm |
| | | 9,55 | mV/rad s ⁻¹ |
| Tolerance of EMF constant | | ± 2 | % |
| Load resistance | R_L | ≥ 20 | kΩ |
| Operating speed, max. continuous | $n_{e \text{ max.}}$ | ≤ 5 000 | rpm |
| Terminal resistance | R | 210 | Ω |
| Ripple, peak-peak, typical | | 7 | % |
| Ripple frequency, cycles | | 14 | per turn |
| Linearity, without load, between 500 and 5 000 rpm | | ± 0,2 | % |
| Reversion error | | ± 0,2 | % |
| Temperature coefficient of EMF | | 0,02 | % / °C |
| Temperature coefficient of armature resistance | | 0,4 | % / °C |
| Rotor inductance | L | 3 000 | 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.

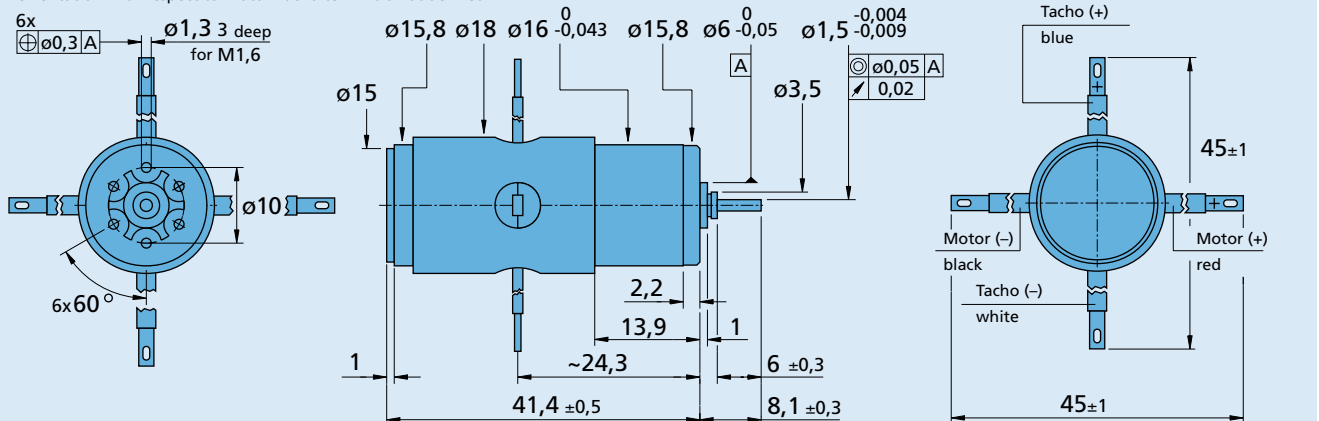
Commutation system

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



1841 T ... S 001 G