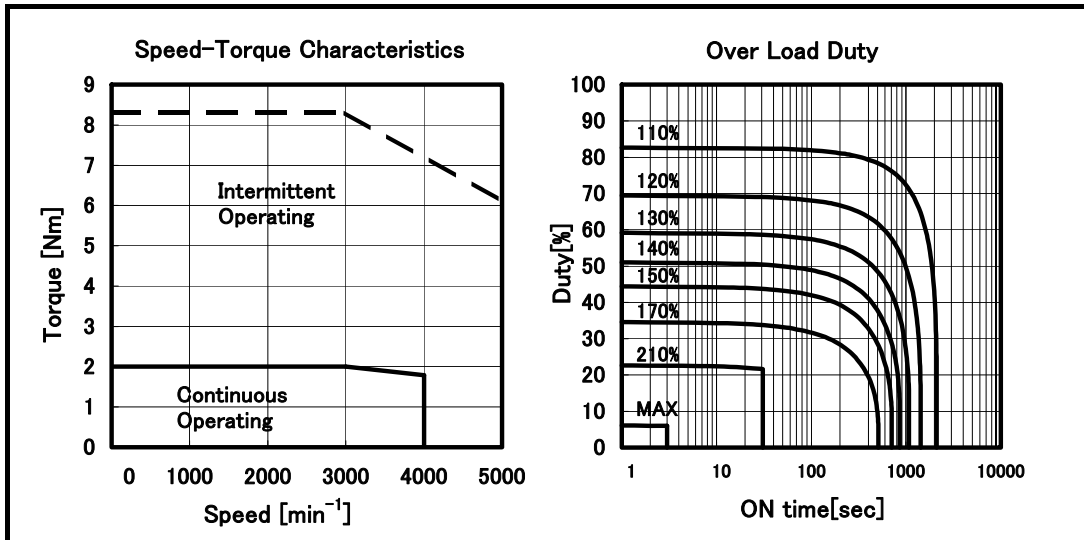


Model  $\alpha i$  F 2/5000

Specification A06B-0205-B□0□



## Data sheet

Parameter	Symbol	Value		Unit
Stall Torque (*)	Ts	2.0		Nm
		20		kgfcm
Stall Current (*)	Is	3.5		A (rms)
Rated Output (*)	Pr	0.75		kW
		1.0		HP
Rating Speed	Nr	4000		$\text{min}^{-1}$
Maximum Speed	Nmax	5000		$\text{min}^{-1}$
Maximum Torque (*)	Tmax	8.3		Nm
		85		kgfcm
Rotor Inertia	Jm	0.000526		$\text{kgm}^2$
		0.00537		kgfcm $\text{s}^2$
Rotor Inertia (with Brake)	Jm	0.000546		$\text{kgm}^2$
		0.00557		kgfcm $\text{s}^2$
Torque constant (*)	Kt	0.57		Nm/A (rms)
		5.8		kgfcm/A (rms)
Back EMF constant (1 phase) (*)	Ke	20		V (rms)/1000 $\text{min}^{-1}$
		0.19		V (rms)sec/rad
Armature Resistance (1 phase) (*)	Ra	1.1		$\Omega$
Mechanical time constant	tm	0.005		s
Thermal time constant	tt	20		min
Static friction	Tf	0.2		Nm
		2		kgfcm
Weight	w	4.3		kg
Weight (with Brake)	w	5.3		kg
Max. Current of Servo Amp.	Imax	20		A (peak)

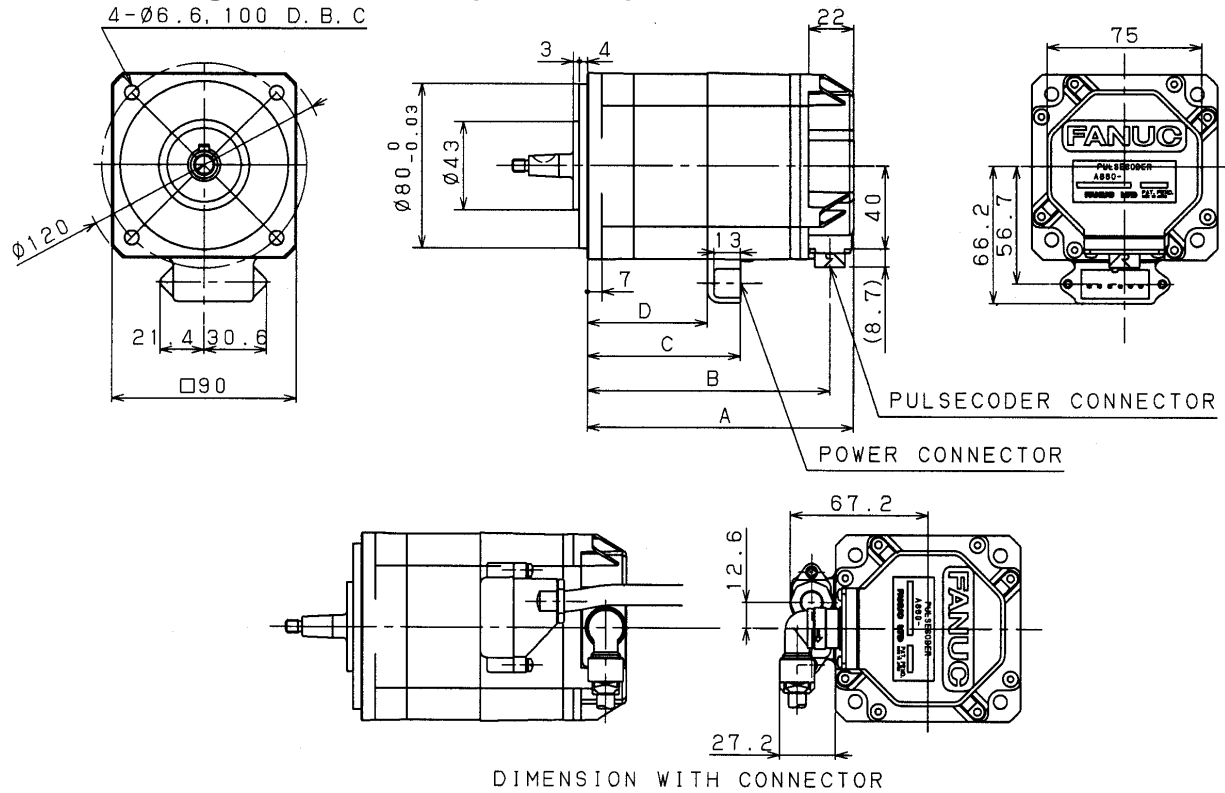
(\*) The values are the standard values at 20°C and the tolerance is  $\pm 10\%$ .

The speed-torque characteristics vary depending on the type of software, parameter setting, and input voltage of the digital servo software. (The above figures show average values.)

# 7.1 MODELS *aiS* 2 to *aiS* 4, *aiS* 2HV to *aiS* 4HV, AND *aiF* 1 to *aiF* 2

## 7.1.1 Outline Drawing of the Motors

Outline drawing of the motors (standard)



MODEL	A	B	C	D
<i>aiS</i> 2, <i>aiS</i> 2HV, <i>aiF</i> 1	130	119	75	59
<i>aiS</i> 4, <i>aiS</i> 4HV, <i>aiF</i> 2	166	155	111	95

## 7.1.2 Shaft Shape

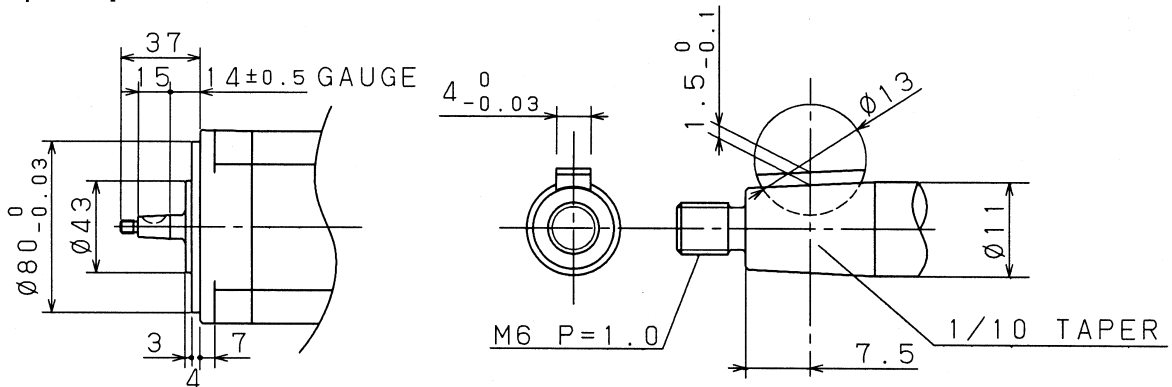
### Shaft shape types

The shafts of the motors have the following shapes:

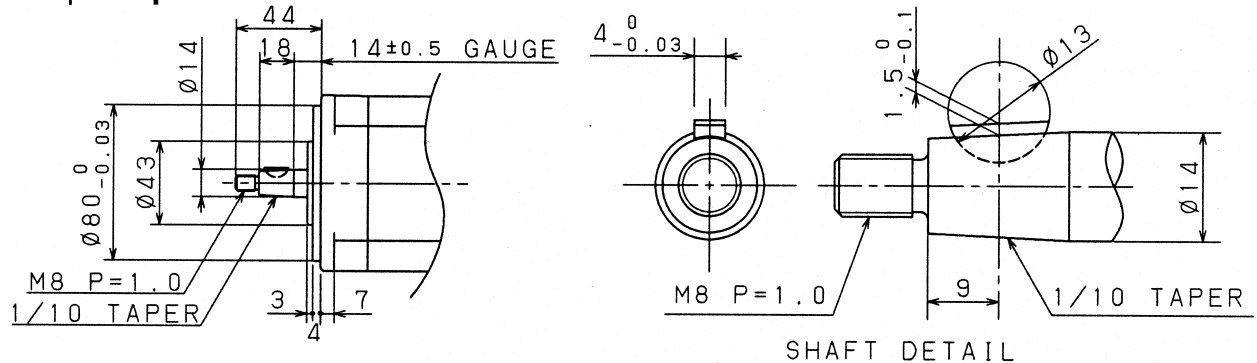
	Taper shaft	Straight shaft	Straight shaft with key way
<i>αiS</i> 2/5000	φ 11	φ 10	φ 10
<i>αiS</i> 2/6000	φ 11	φ 10	φ 10
<i>αiS</i> 4/5000	φ 14	φ 14	φ 14
<i>αiS</i> 4/6000	φ 14	φ 14	φ 14
<i>αiS</i> 2/5000 HV	φ 11	φ 10	φ 10
<i>αiS</i> 2/6000 HV	φ 11	φ 10	φ 10
<i>αiS</i> 4/5000 HV	φ 14	φ 14	φ 14
<i>αiS</i> 4/6000 HV	φ 14	φ 14	φ 14
<i>αiF</i> /5000	φ 11	φ 10	φ 10
<i>αiF</i> 2/5000	φ 11	φ 10	φ 10

### Shaft details

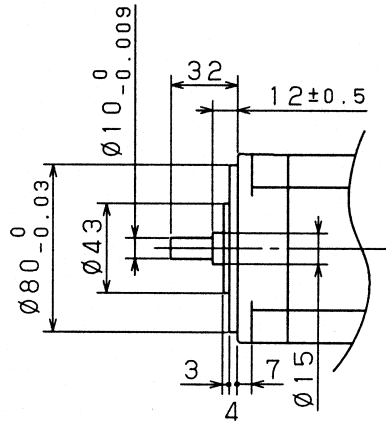
- φ11 taper shaft



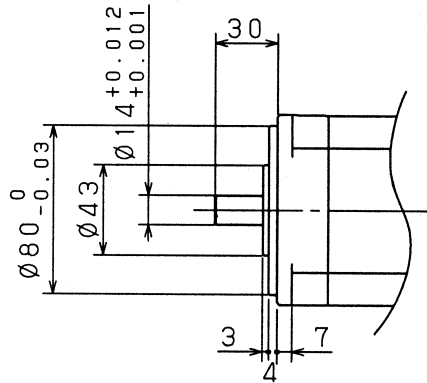
- φ14 taper shaft



- $\phi 10$  straight shaft



- $\phi 14$  straight shaft



- $\phi 10$  straight shaft with key way

