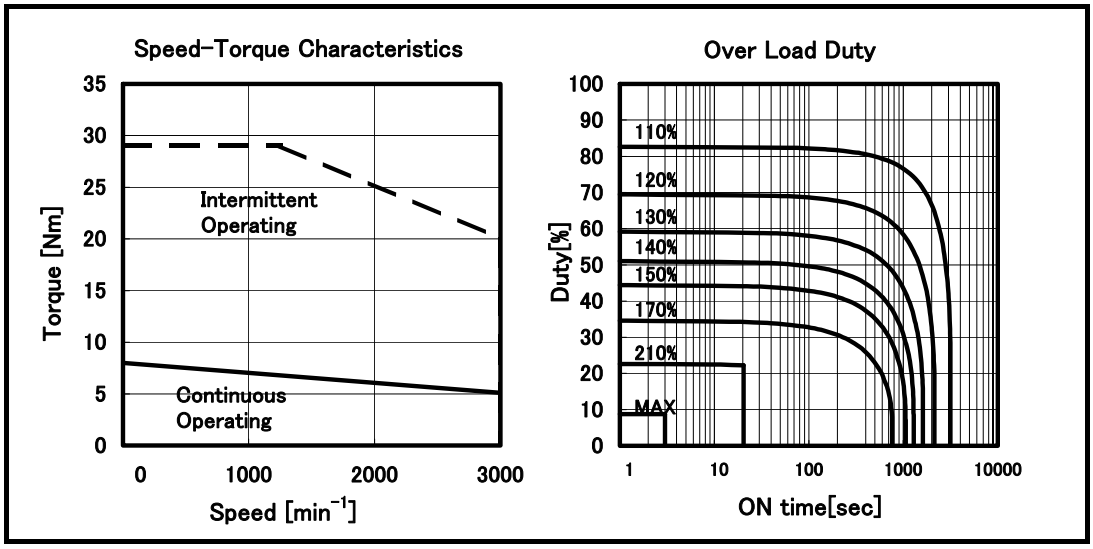
Model αi F 8/3000 Specification A06B-0227-B□0□



Data sheet

Parameter	Symbol	Value			Unit
Stall Torque (*)	Ts	8.0 82			Nm kgfcm
Stall Current (*)	Is	8.4			A (rms)
Rated Output (*)	Pr	1.6 2.1			kW HP
Rating Speed	Nr	3000			min^{-1}
Maximum Speed	Nmax	3000			min^{-1}
Maximum Torque (*)	Tmax	29 296			Nm kgfcm
Rotor Inertia	Jm	0.00257 0.0262			kgm^2 $kgfcms^2$
Rotor Inertia (with Brake)	Jm	0.00264 0.0269			kgm^2 $kgfcms^2$
Torque constant (*)	Kt	0.95 9.7			Nm/A (rms) kgfcm/A (rms)
Back EMF constant (1phase) (*)	Ke Kv	33 0.32			V (rms)/1000 min^{-1} V (rms)sec/rad
Armature Resistance (1 phase) (*)	Ra	0.51			Ω
Mechanical time constant	tm	0.004			s
Thermal time constant	tt	30			min
Static friction	Tf	0.3 3			Nm kgfcm
Weight	w	12.3			kg
Weight (with Brake)	w	14.5			kg
Max. Current of Servo Amp.	Imax	40			A (peak)

(*) The values are the standard values at 20℃ and the tolerance is ±10%.
The speed-torque characteristics very depending on the type of software, parameter setting, and input voltage of the digital servo software. (The above figures show average values.)

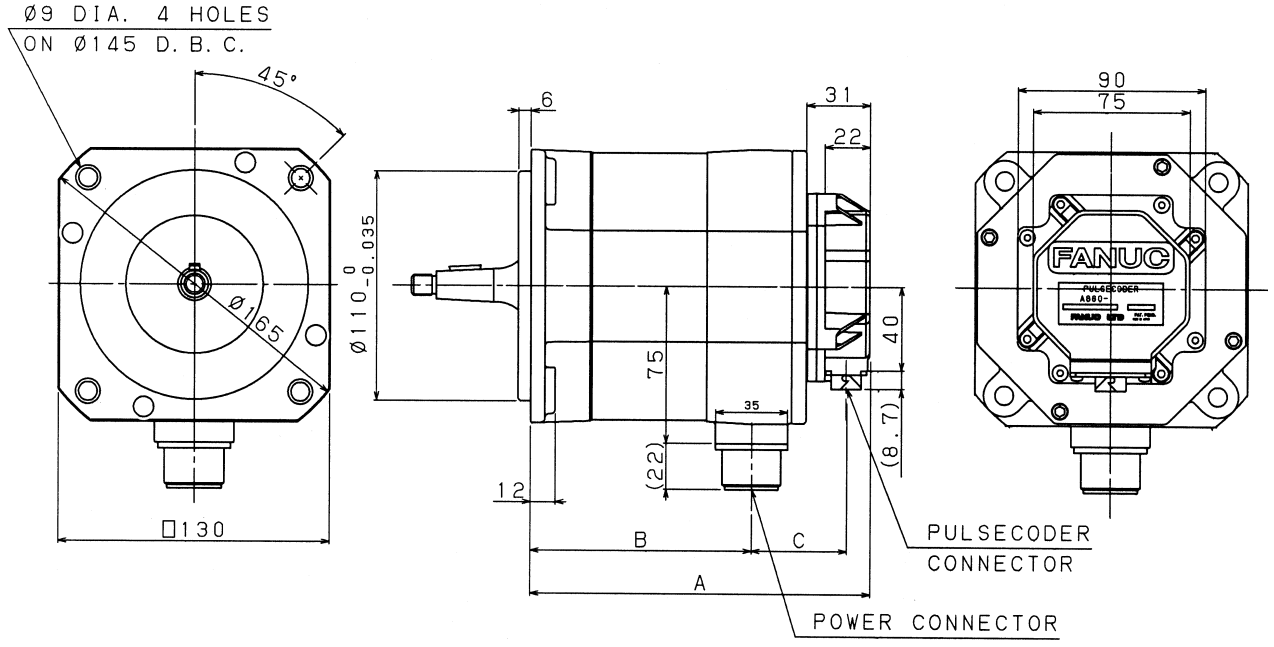
NOTE
No surge absorber for brake is contained in the motor.
Prepare a surge absorber in the power magnetics cabinet.

For the specifications, shape, and pin layout of the pulsecoder connector, see Section 8.1, "PULSECODER".

7.2 MODELS αiS 8 to αiS 12, αiS 8HV to αiS 12HV, αiF 4 to αiF 8, αiF 4HV to αiF 8HV

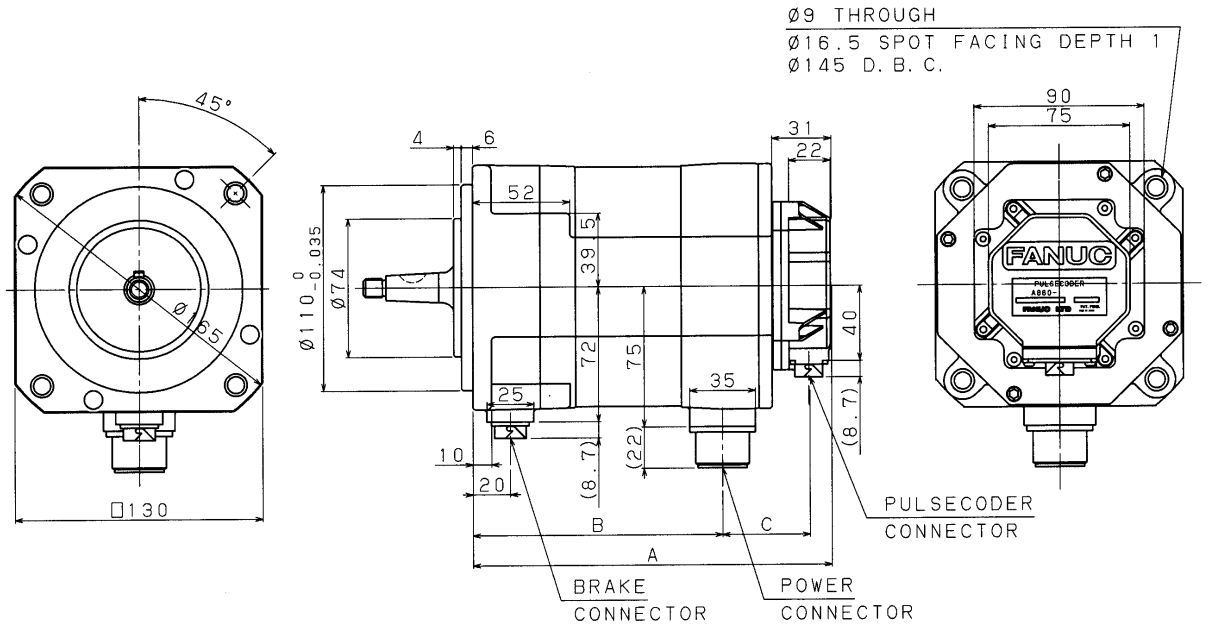
7.2.1 Outline Drawing of the Motors

Outline drawing of the motors (standard)



MODEL	A	B	C
αiS 8, αiS 8 HV, αiF 4, αiF 4HV	166	108	47
αiS 12, αiS 12 HV αiF 8, αiF 8 HV	222	164	

Outline drawing of the motors (with a brake)



MODEL	A	B	C
αiS 8, αiS 8 HV, αiF 4, αiF 4HV	191	133	47
αiS 12, αiS 12 HV αiF 8, αiF 8 HV	247	189	

7.2.2 Shaft Shape

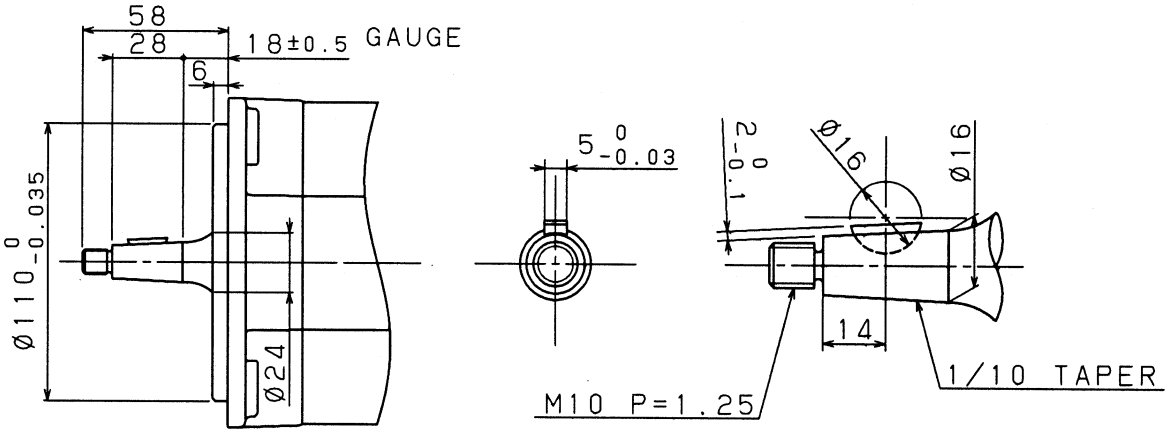
Shaft shape types

The shafts of the motors have the following shapes:

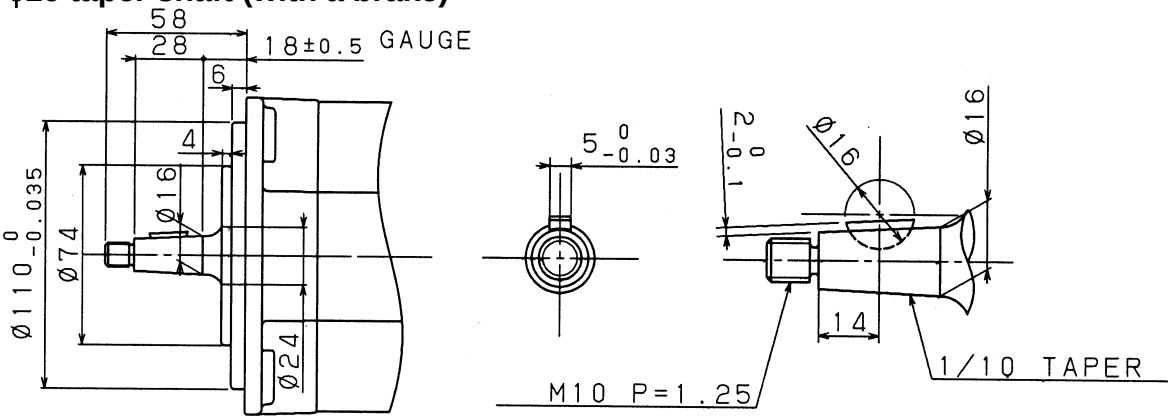
	Taper shaft	Straight shaft	Straight shaft with key way
αiS 8/4000	ϕ16	ϕ19	ϕ19
αiS 8/6000	ϕ16	ϕ19	ϕ19
αiS 12/4000	ϕ16	ϕ24	ϕ24
αiS 12/6000	ϕ16	ϕ24	ϕ24
αiS 8/4000 HV	ϕ16	ϕ19	ϕ19
αiS 8/6000 HV	ϕ16	ϕ19	ϕ19
αiS 12/4000 HV	ϕ16	ϕ24	ϕ24
αiS 12/6000 HV	ϕ16	ϕ24	ϕ24
αiF 4/4000	ϕ16	ϕ19	ϕ19
αiF 8/3000	ϕ16	ϕ19	ϕ19
αiF 4/4000 HV	ϕ16	ϕ19	ϕ19
αiF 8/3000 HV	ϕ16	ϕ19	ϕ19

Shaft details

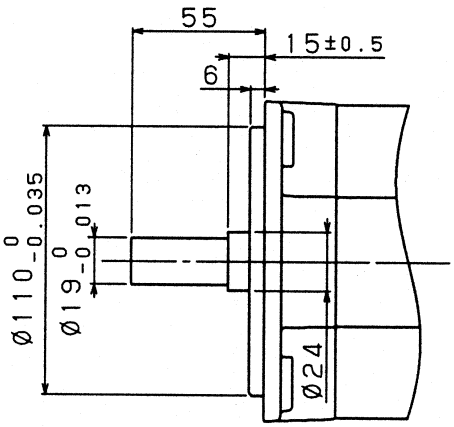
- **ϕ16 taper shaft (standard)**



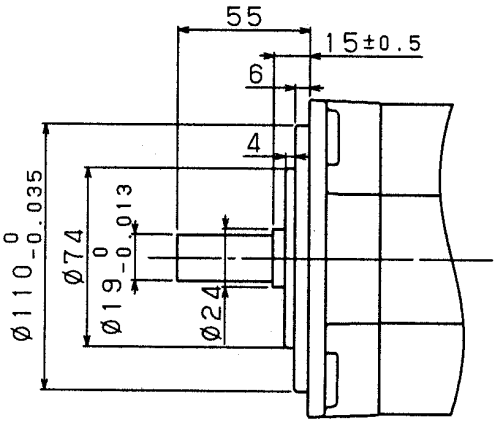
- **ϕ16 taper shaft (with a brake)**



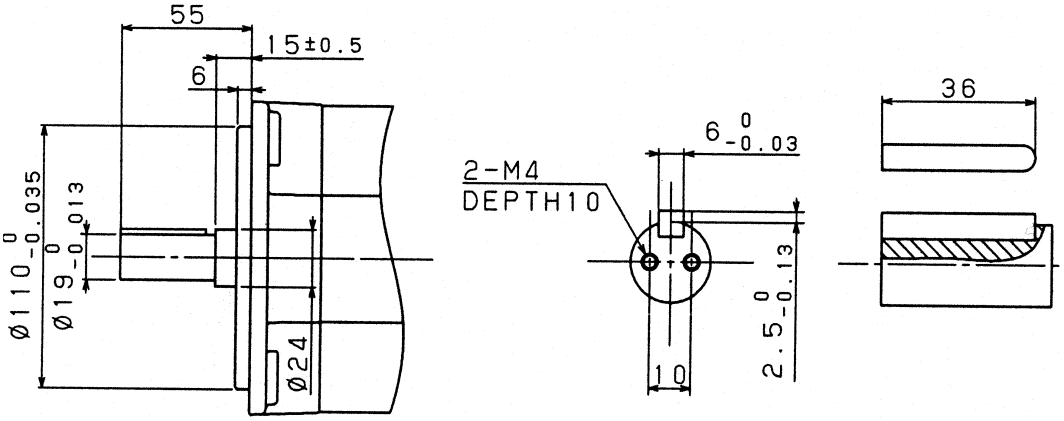
- **ϕ19 straight shaft (standard)**



- **ϕ19 straight shaft (with a brake)**



- **ϕ19 straight shaft with key way (standard)**



- **ϕ19 straight shaft with key way (with a brake)**