

TBL-i II Series

AC Servomotor / TαF-Driver

We respond to our customers with the shortest possible delivery times and the most reasonable prices.

The TBL-i series is now available with enhanced features - greater ease of operation, enhanced functionality and lighter weight.

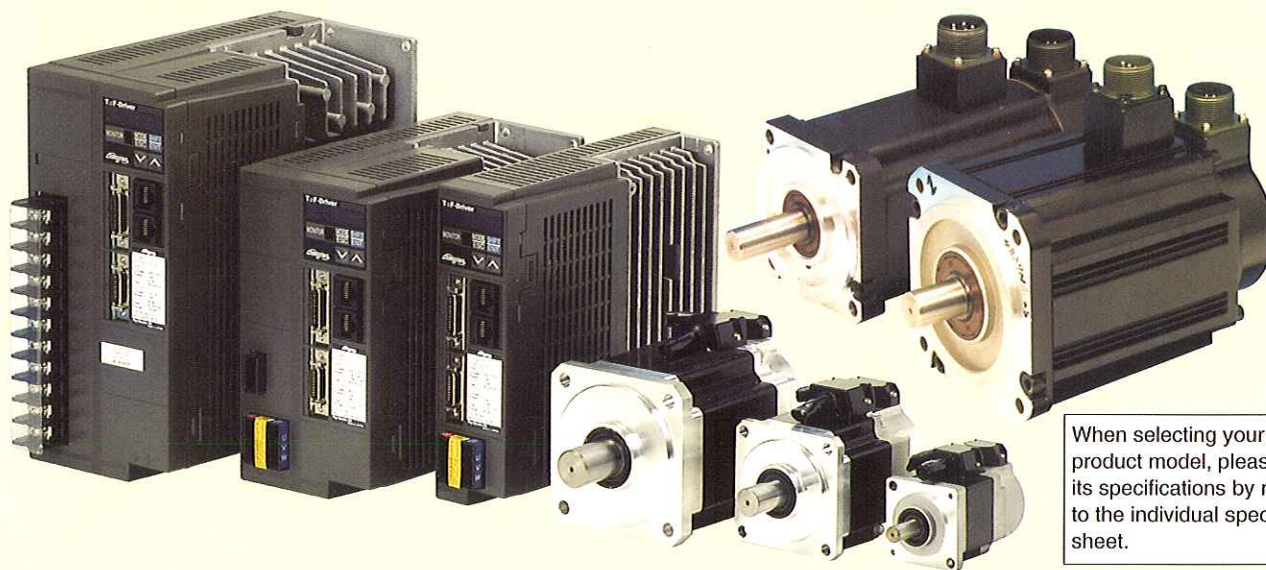
Features

High-resolution encoder: 131072 pulses (17-bit)
Ensures stable performance even at low speed.

Vibration Suppressing Control Function equipped as standard
Suppresses mechanical vibration to the limit.

Two RS-485 ports as standard
Realizes the integral control of parameters (Maximum 31-axis connection).

30W~2.1kW



When selecting your desired product model, please confirm its specifications by referring to the individual specification sheet.

Control power back-up function

Besides the main power input, a control power back-up function is equipped, which is helpful in backing up sensor positions. This system cuts off the main power supply in an emergency, so you do not need to return to the original position each time.

Easy tuning

The servo amplifier itself automatically performs auto tuning by left and right movements. Optimum tuning between the machine and servomotor is attained before positioning adjustment by the host controller.

Servo analysis function

This is a tool installed in the loader to be equipped with a personal computer, which analyzes the "resonance frequencies" inherent in each machine to make effective use of the "vibration suppressing control function," the "Notch Filter," etc.

Test operation function

Continuous reciprocation is supported in addition to JOG operation in a single direction. You can easily check the effective torque by rough actual operation before preparing the host controller.

Monitor output function

An analog monitor output function is equipped on the front of the servo amplifier. Connect a special connector to it to observe signals. Two signals can be observed from the return speed, torque command, positional deviation, etc.

Side-by-side installation

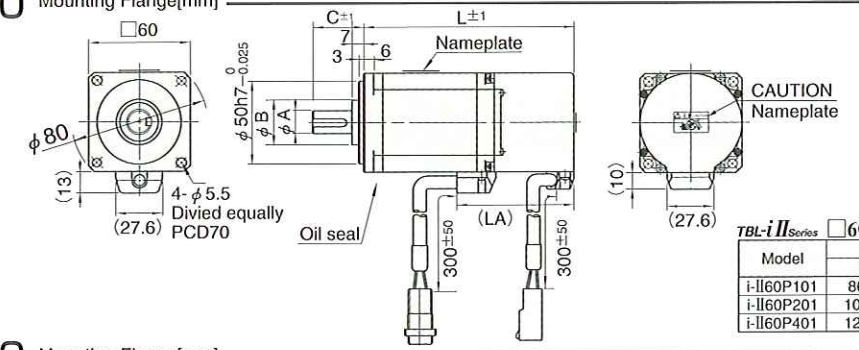
Servo amplifiers can be installed side by side, which saves space required to install them in the machine enclosure.

Global standards

The TαF-Driver adopts global specifications to support the "CE marking" and "UL/cUL" standards. *Applications for certification by these standards are being filed.

□80 [mm]			□100[mm]			□100 [mm]			□130 [mm]		
i-II 80P401 400 [W]	i-II 80P601 600 [W]	i-II 80P751 750 [W]	i-II 100P102 1.0 [kW]	i-II 100P152 1.5 [kW]	i-II 100P202 2.0 [kW]	i-II 130P801 800 [W]	i-II 130P112 1.1 [kW]	i-II 130P162 1.6 [kW]	i-II 130P212 2.1 [kW]		
TYC401D3-VVT2	TYC601D3-VVT2	TYC751D3-VVT2	TYD102D3-VVT2	TYD152D3-VVT2	TYD202D3-VVT2	TYE801D3-VVT2	TYE112D3-VVT2	TYE162D3-VVT2	TYE212D3-VVT2		
Frame 2			Frame 3			Frame 2			Frame 3		
1.5 [kg]			2.5 [kg]			1.5 [kg]			2.5 [kg]		
Single-phase, 3-phase			3-phase			Single-phase,3-phase			3-phase		

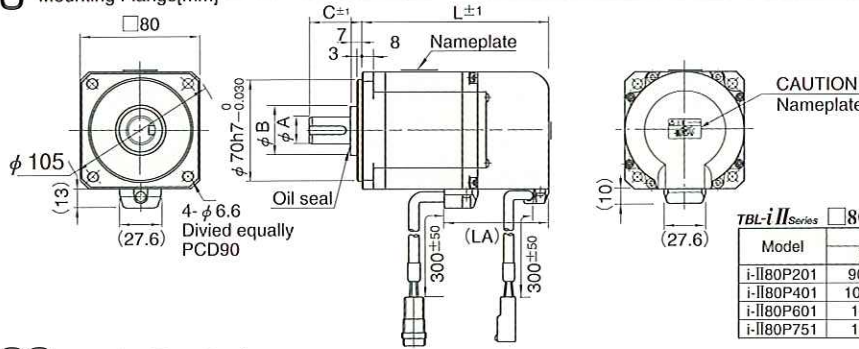
□60 Mounting Flange[mm] (unit: mm)



TBL-iII Series □60 Series

Model	Variable Dimensions (Without Brake)				
	L	LA	φA	φB	C
i-II60P101	86.1	(66.5)	8h6 (0, -0.009)	(20)	25
i-II60P201	102.4	(69.1)	14h6 (0, -0.011)	(27)	30
i-II60P401	124.4				

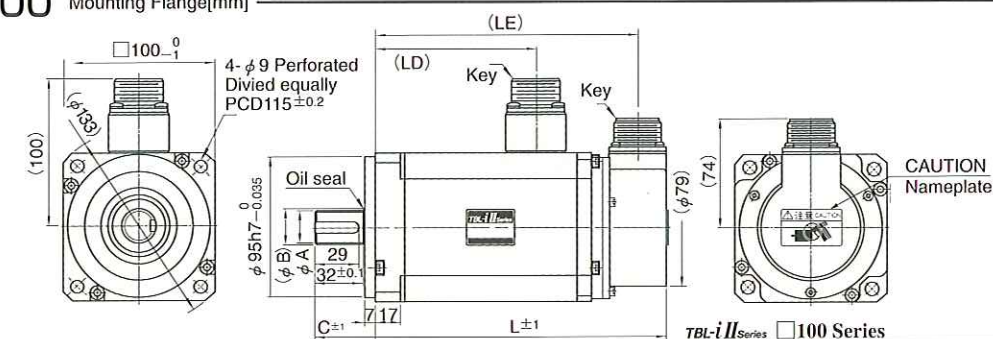
□80 Mounting Flange[mm] (unit: mm)



TBL-iII Series □80 Series

Model	Variable Dimensions (Without Brake)				
	L	LA	φA	φB	C
i-II80P201	90.6	(65.5)	14h6 (0, -0.011)	(27)	30
i-II80P401	102.6				
i-II80P601	126	(70.1)	19h6 (0, -0.013)	(34)	35
i-II80P751	135				

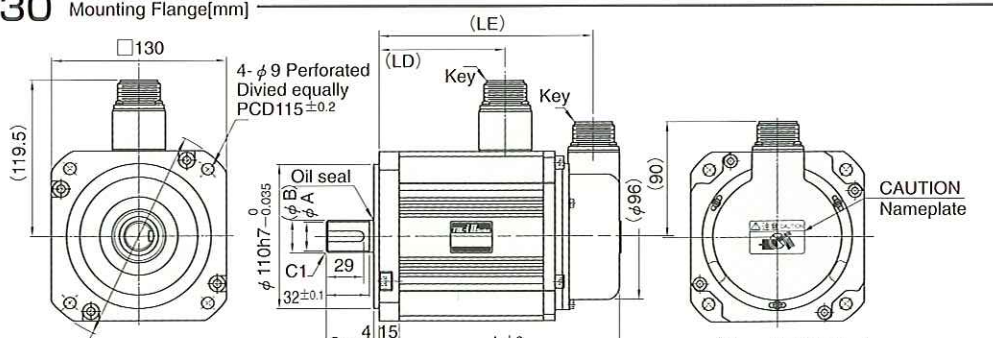
□100 Mounting Flange[mm] (unit: mm)



TBL-iII Series □100 Series

Model	Variable Dimensions (Without Brake)					
	L	LD	LE	φA	φB	C
i-II100P102	158	(70.7)	(139)	22h6 (0, -0.013)	(24)	40
i-II100P152	176	(88.7)	(157)			
i-II100P202	194	(106.7)	(175)			

□130 Mounting Flange[mm] (unit: mm)



TBL-iII Series □130 Series

Model	Variable Dimensions (Without Brake)					
	L	LD	LE	φA	φB	C
i-II130P801	128	(45.5)	(109)	22h6 (0, -0.013)	(24)	40
i-II130P112	138	(55.5)	(119)			
i-II130P162	143	(60.5)	(124)			
i-II130P212	153	(70.5)	(134)			

Specifications

□40 □60

Mounting Flange	[mm]	□40			□60		
		i-II 40P300	i-II 40P500	i-II 40P101	i-II 60P101	i-II 60P201	i-II 60P401
Model							
Voltage	[V]	200			200		
Output	[W]	30	50	100	100	200	400
Rated Torque	[N·m]	0.095	0.159	0.318	0.318	0.64	1.27
	[kgf·cm]	(0.97)	(1.62)	(3.25)	(3.25)	(6.5)	(13)
Maximum Torque	[N·m]	0.29	0.48	0.95	0.95	1.91	3.82
	[kgf·cm]	(2.9)	(4.9)	(9.7)	(9.7)	(19.5)	(39)
Rated Current	[A rms]	0.4	0.6	1.1	0.9	1.7	2.7
Instantaneous maximum current	[A rms]	0.9	1.6	30.	2.6	4.9	8.1
Rated Rotation Speed	[min ⁻¹]	3000			3000		
Maximum Rotation Speed	[min ⁻¹]	5000			5000		
Rotor Inertia (Without Brake)	[kg·m ²]	0.01×10 ⁻⁴	0.02×10 ⁻⁴	0.03×10 ⁻⁴	0.09×10 ⁻⁴	0.18×10 ⁻⁴	0.34×10 ⁻⁴
	[g·cm ⁻²]	(0.01)	(0.02)	(0.03)	(0.09)	(0.18)	(0.34)
Approximate (Without Brake)	[kg]	0.3	0.4	0.5	0.6	0.9	1.3
Sensor		17bit INC / 17bit ABS			17bit INC / 17bit ABS		

□80 □100

Mounting Flange	[mm]	□80				□100		
		i-II 80P201	i-II 80P401	i-II 80P601	i-II 80P751	i-II 100P102	i-II 100P152	i-II 100P202
Model								
Voltage	[V]	200				200		
Output	[W]	200	400	600	750	1.0	1.5	2.0
Rated Torque	[N·m]	0.64	1.27	1.91	2.39	3.3	4.8	6.4
	[kgf·cm]	(6.5)	(13)	(19.5)	(24.4)	(33.7)	(48.9)	(65.3)
Maximum Torque	[N·m]	1.91	3.82	5.73	7.16	9.9	14.4	19.2
	[kgf·cm]	(19.5)	(39)	(58.5)	(73)	(101.0)	(145.9)	(195.9)
Rated Current	[A rms]	1.5	2.8	4.4	5.0	6.8	9.5	12.7
Instantaneous maximum current	[A rms]	4.3	8.0	12.9	14.5	18.7	26.7	36.2
Rated Rotation Speed	[min ⁻¹]	3000				3000		
Maximum Rotation Speed	[min ⁻¹]	5000				4500		
Rotor Inertia (Without Brake)	[kg·m ²]	0.30×10 ⁻⁴	0.56×10 ⁻⁴	0.98×10 ⁻⁴	1.08×10 ⁻⁴	2.59×10 ⁻⁴	3.69×10 ⁻⁴	4.69×10 ⁻⁴
	[g·cm ⁻²]	(0.30)	(0.57)	(1.00)	(1.10)	(2.65)	(3.67)	(4.79)
Approximate (Without Brake)	[kg]	1.1	1.6	2.2	2.5	4.7	5.7	6.7
Sensor		17bit INC / 17bit ABS				17bit INC / 17bit ABS		

□130

Mounting Flange	[mm]	□130			
		i-II 130P801	i-II 130P112	i-II 130P162	i-II 130P212
Model					
Voltage	[V]	200			
Output	[kW]	0.8	1.1	1.6	2.1
Rated Torque	[N·m]	2.55	3.50	5.09	6.68
	[kgf·cm]	(26.0)	(35.7)	(51.93)	(68.2)
Maximum Torque	[N·m]	7.65	10.50	15.27	20.04
	[kgf·cm]	(78.1)	(107.1)	(155.8)	(204.5)
Rated Current	[A rms]	6.1	7.0	9.7	12.3
Instantaneous maximum current	[A rms]	17.1	20.0	28.1	35.8
Rated Rotation Speed	[min ⁻¹]	3000			
Maximum Rotation Speed	[min ⁻¹]	4500			
Rotor Inertia (Without Brake)	[kg·m ²]	3.23×10 ⁻⁴	5.09×10 ⁻⁴	5.98×10 ⁻⁴	7.84×10 ⁻⁴
	[g·cm ⁻²]	(3.3)	(5.2)	(6.1)	(8.0)
Approximate (Without Brake)	[kg]	3.2	4.3	4.8	5.9
Sensor		17bit INC / 17bit ABS			

Mounting Range [mm]	Output [W]	Motor Model	Driver	
			Model	Outerframe number
□40	30W	i-II 40P300	TYA300D3-VVT2	Frame1
	50W	i-II 40P500	TYA500D3-VVT2	Frame1
	100W	i-II 40P101	TYA101D3-VVT2	Frame1
□60	100W	i-II 60P101	TYB101D3-VVT2	Frame1
	200W	i-II 60P201	TYB201D3-VVT2	Frame1
	400W	i-II 60P401	TYB401D3-VVT2	Frame1
□80	200W	i-II 80P201	TYC201D3-VVT2	Frame1
	400W	i-II 80P401	TYC401D3-VVT2	Frame1
	600W	i-II 80P601	TYC601D3-VVT2	Frame2
	750W	i-II 80P751	TYC751D3-VVT2	Frame2
□100	1.0kW	i-II 100P102	TYD102D3-VVT2	Frame2
	1.5kW	i-II 100P152	TYD152D3-VVT2	Frame3
	2.0kW	i-II 100P202	TYD202D3-VVT2	Frame3
□130	800W	i-II 130P801	TYE801D3-VVT2	Frame2
	1.1kW	i-II 130P112	TYE112D3-VVT2	Frame2
	1.6kW	i-II 130P162	TYE162D3-VVT2	Frame3
	2.1kW	i-II 130P212	TYE212D3-VVT2	Frame3



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WARRANTY

Tamagawa Seiki warrants that this product is free from defects in material or workmanship under normal use and service for a period of one year from the date of shipment from the factory. This warranty, however, excludes incidental and consequential damages caused by careless use of the product by the user. Even after the warranty period, Tamagawa Seiki offers repair service, with charge, in order to maintain the quality of the product. The MTBF (mean time between failures) of our product is quite long; yet, the predictable failure rate is not zero. The user is advised, therefore, that multiple safety means be incorporated in your system or product so as to prevent any consequential problems resulting from the failure of our product.

All specifications are subject to change without notice.

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