

FV3 SERIES PRODUCT SERVO BROCHURE



Product Specifications

Drive model FV3-R1-*△△△△-***	A1R1	A1R6	A2R8	A5R5	A6R0
Continuous output current (Arms)	1.1	1.6	2.8	5.5	6.0
Maximum output current(Arms)	3.9	5.9	10.1	16.9	18.0
Rated power(W)	100	200	400	750	1000
Input voltage	Single-phase AC200V-240V , -10~10% , 50/60Hz				
Debug Port	Type -C USB				
RS485 Communication	P Type (Pulse type) support				
Encoder differential output	P Type (Pulse type) support				
Encoder Z-phase pulse oc output	P Type (Pulse type) support				
Input port	P Type (Pulse type) 6 DI, N Type (EtherCAT BusType) 4 DI				
Output port	P Type (Pulse type) 4 DO, N Type (EtherCAT BusType) 4 DO				
Brake function	External braking resistor				
Minimum external braking resistor (Ω)	40	40	40	40	40
Installation size	SIZE-A	SIZE-A	SIZE-A	SIZE-B	SIZE-B

R1 Series Rotation Servo Model

Model	Description
FV3-R1-PA1R1	100W-Universal Pulse Servo drive
FV3-R1-PA1R6	200W-Universal Pulse Servo drive
FV3-R1-PA2R8	400W-Universal Pulse Servo drive
FV3-R1-PA5R5	750W-Universal Pulse Servo drive
FV3-R1-PA6R0	1000W-Universal Pulse Servo drive
FV3-R1-NA1R1	100W-Universal EtherCAT Bus Pulse Servo drive
FV3-R1-NA1R6	200W-Universal EtherCAT Bus Pulse Servo drive
FV3-R1-NA2R8	400W-Universal EtherCAT Bus Pulse Servo drive
FV3-R1-NA5R5	750W-Universal EtherCAT Bus Pulse Servo drive
FV3-R1-NA6R0	1000W-Universal EtherCAT Bus Pulse Servo drive

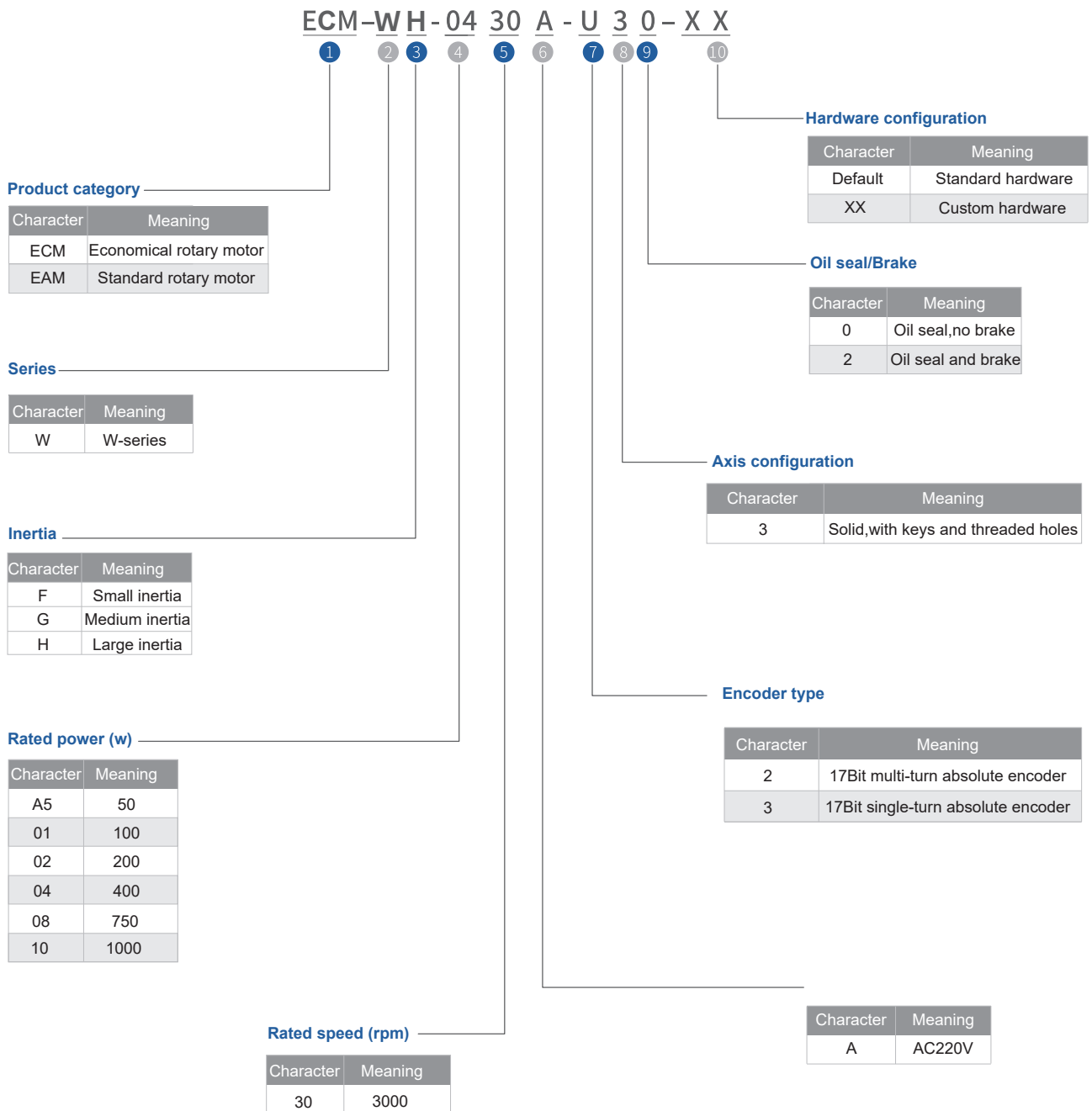
Note:

FV3-R1-***** Support motors with 17Bit magnetic encoder

FV3-R1-*A1R1 Requires a standard rotary motor

Rotary Motor

Naming convention



AC Rotary Motor Parameters

Model	Flange Dimensions	Rated Power (W)	Rated Torque (Nm)	Max. Torque (Nm)	Rated Current (Arms)	Rated Rotational Speed (rpm)	Max. Rotational Speed (rpm)	Rotational Inertia $\text{kg}\cdot\text{m}^2\times 10^{-4}$	Voltage (V)
EAM-WH-A530A-□3▲	40	50	0.16	0.48	0.6	3000	6000	0.035 (0.038)	220
EAM-WH-0130A-□3▲	40	100	0.32	0.96	1.0	3000	6000	0.053 (0.056)	220
ECM-WH-0230A-□3▲	60	200	0.64	1.92	1.4	3000	6000	0.29 (0.32)	220
ECM-WH-0430A-□3▲	60	400	1.27	3.81	2.8	3000	6000	0.53 (0.56)	220
ECM-WH-0830A-□3▲	80	750	2.4	7.2	3.8	3000	6000	1.62 (1.72)	220
ECM-WH-1030A-□3▲	80	1000	3.2	9.6	5.5	3000	6000	2.1 (2.2)	220

Note

When □ is 2 : Support 17 Bit Multi-turn magnetic encoder

When □ is 3 : Support 17 Bit Single-turn magnetic encoder

When ▲ is 0: Motor without brake

When ▲ is 2: Motor with brake

The values in brackets is the parameter of motor with holding brake.

Product Match Table

Flange	Power (W)	Motor	Servo Driver
40	50	EAM-WH-A530A-□3▲	FV3-R1-*A1R1
	100	EAM-WH-0130A-□3▲	FV3-R1-*A1R1
60	200	ECM-WH-0230A-□3▲	FV3-R1-*A1R6
	400	ECM-WH-0430A-□3▲	FV3-R1-*A2R8
80	750	ECM-WH-0830A-□3▲	FV3-R1-*A5R5
	1000	ECM-WH-1030A-□3▲	FV3-R1-*A6R0

Note

When □ is 2 : Support 17 Bit Multi-turn magnetic encoder

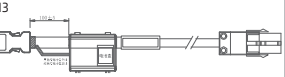
When □ is 3 : Support 17 Bit Single-turn magnetic encoder

When ▲ is 0: Motor without brake

When ▲ is 2: Motor with brake

The values in brackets is the parameter of motor with holding brake.

Cables And Other Accessories

Flange	Motor	Cables	Motor Type	Length(L)	Cable Model	Illustration
40 60 80	EAM-WH-A530A-□3▲ EAM-WH-0130A-□3▲ ECM-WH-0230A-□3▲ ECM-WH-0430A-□3▲	Power cable	Motor with brake	3m	FVL-MBA00-03-E(-T)	
				5m	FVL-MBA00-05-E(-T)	
				10m	FVL-MBA00-10-E(-T)	
			Motor without brake	3m	FVL-MMA00-03-E(-T)	
				5m	FVL-MMA00-05-E(-T)	
				10m	FVL-MMA00-10-E(-T)	
	ECM-WH-0830A-□3▲ ECM-WH-1030A-□3▲	Encoder cable	Single-turn absolute encoder	3m	FVL-PI720-03-E(-T)	
				5m	FVL-PI720-05-E(-T)	
				10m	FVL-PI720-10-E(-T)	
			Multi-turn absolute encoder (with battery)	3m	FVL-PA720-03-E(-T)	
				5m	FVL-PA720-05-E(-T)	
				10m	FVL-PA720-10-E(-T)	

Note

When □ is 2 : Support 17 Bit Multi-turn magnetic encoder

When □ is 3 : Support 17 Bit Single-turn magnetic encoder

When ▲ is 0: Motor without brake

When ▲ is 2: Motor with brake

The values in brackets is the parameter of motor with holding brake.

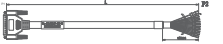
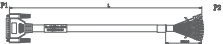
Accessories for servo cable

Flange Dimensions	Accessory Type		Accessory Model	Illustration
40/60/80	Accessory set for motor without brake	FVU-T10	FVU-M00	
			FVU-P00	
	Accessory set for motor with brake	FVU-T11	FVU-M00	
			FVU-P00	
			FVU-M01	
	Connector for power cable		FVU-M00	
	Connector for brake cable		FVU-M01	
	Connector for encoder cable AMP-9P		FVU-P00	
Connector for encoder cable 1394-6P		FVU-P03	 	

Accessories for communication cable

Model	Description	Illustration
FVL-CN702-01-E	Communication cable for connecting servo drive and PC	
FVL-CN701-A3-E	Communication cable for connecting multiple servo drives (0.3m)	

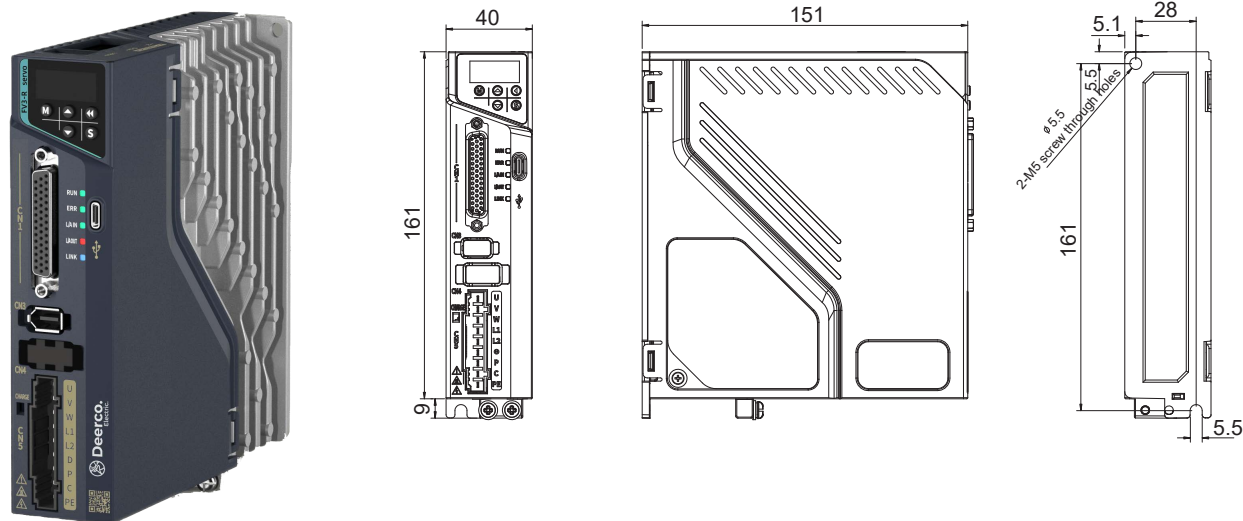
Accessories for control cable

Model	Description	Illustration
FVL-CA701P-01-E	Servo drive P(Pulse Type) CN1 input and output signal cable (1m)	
FVL-CA701N-01-E	Servo drive N(EtherCAT Bus Type) CN1 input and output signal cable (1m)	
FVU-C01	CN1 terminal accessories	

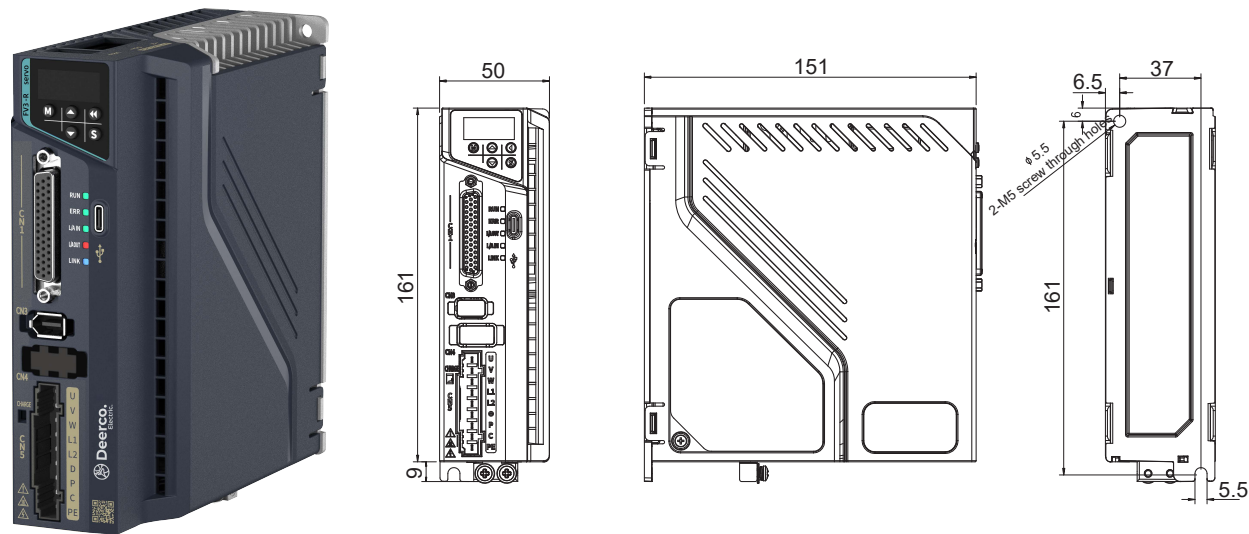
Dimensions

Unit: mm

SIZE-A

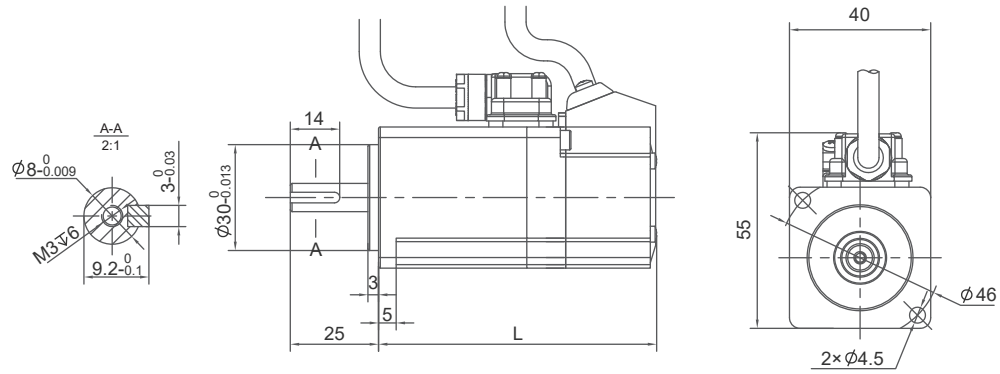


SIZE-B



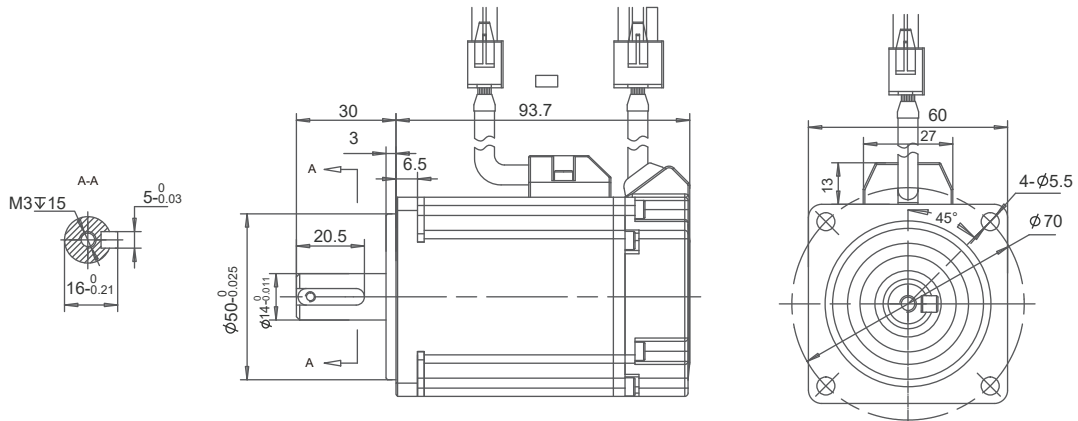
Unit: mm

40 Flange



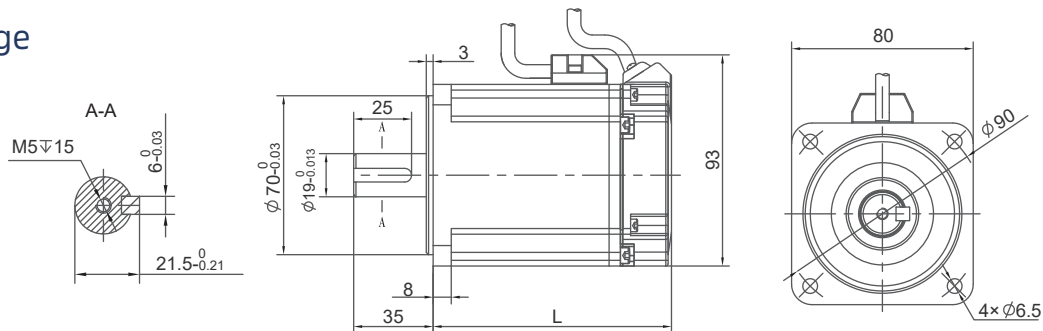
Model	Brake	L (mm)	Weight (kg)
EAM-WH-A530A-□30	None	68.5	0.4
EAM-WH-A530A-□32	Available	101.5	0.55
EAM-WH-0130A-□30	None	79.5	0.5
EAM-WH-0130A-□32	Available	112.5	1.0

60 Flange



Model	Brake	L (mm)	Weight (kg)
ECM-WH-0230A-□30	None	77.2	1.0
ECM-WH-0230A-□32	Available	109.2	1.3
ECM-WH-0430A-□30	None	93.7	1.3
ECM-WH-0430A-□32	Available	125.7	1.7

80 Flange



Model	Brake	L (mm)	Weight (kg)
ECM-WH-0830A-□30	None	105	2.5
ECM-WH-0830A-□32	Available	142	3.5
ECM-WH-1030A-□30	None	119	3.2
ECM-WH-1030A-□32	Available	156	4.2

Note:
 When □ is 2: Support 17Bit multi-turn absolute encoder
 When □ is 3: Support 17Bit single-turn absolute encoder