

12.2 Servo amplifier basic specification

12.2.1 GYS motor (3000r/min) compatible servo amplifier

Amplifier type		RYC500D3-VVT2	RYC101D3-VVT2	RYC201D3-VVT2	RYC401D3-VVT2	RYC751D3-VVT2
Applicable motor output [kW]		0.05	0.1	0.2	0.4	0.75
External frame No.		Frame 1				Frame 2
Power supply	Main power	No. of phases	Single phase			Single phase/3 phase
		Voltage	AC200 to 230V, -15 to +10% (Single phase: -10 to +10%)			
	Frequency	50/60Hz				
	Control power	No. of phases	Single phase			
Voltage		AC200 to 230V -15 to +10%				
	Frequency	50/60Hz				
Control type		IGBT PWM sine wave operation				
Carrier frequency		10kHz				
Feedback		17 bit serial encoder (incremental)				
Speed fluctuation rate		±1 r/min or less: Load fluctuation 0 to 100%				
		±1 r/min or less: Load fluctuation -10 to +10%				
		±0.2% or less: Temperature fluctuation 25°C ±10%, Rated rotation speed standard (input of analog voltage)				
Speed control accuracy		1:5000 (rated load)				
Recommended load inertia moment		100 times or less for speed control of the servomotor and 30 times or less for position control.				
Overload resistance		300%/about 3 seconds				
Control function	Control type	Position control, speed control and torque control (switched with sequence input signal)				
	Position control	Pulse string				
	Speed control	Analog voltage command or internal multistep (3 step) command				
	Torque control	Analog voltage command				
	Accessory function	Brake timing output, Z phase offset, speed command zero clamp function, vibration control, command follow-up control, notch filter, etc.				
Position management	17 bit serial encoder	Incremental only. The current position is lost when the power is shut off.				
Accessory function	Braking	Regenerative braking and regenerative resistance can be externally added to the DC link circuit.				
	Protection	Overcurrent (OC1, OC2), overspeed (OS), overvoltage (HV), encoder error (Et), control power error (Ct), memory error (dE), regenerative transistor overheating (rH2), encoder communication error (EC), CONT duplication (Cnt), overload (OL), undervoltage (Lv), regenerative resistor overheating (rH1), deviation limit (OF), amplifier overheating (AH)				
	Display and setting	CHARGE - Power supplied (red), 7-segment LED 4 digits and 4 operation keys				
Operating environment	Installation	Indoors, altitude of 1000 m or less, without dust, corrosive gas or direct sunlight Compatibility with European standard : Pollution Degree=2 Over Voltage Category = III				
	Ambient temperature and humidity	-10 to +55°C, 10 to 90%RH (no condensation)				
	Resistance to vibration and impact	4.9m/s ² {0.5G} · 19.6m/s ² {2G}				
Applicable standards		In accordance with UL/cUL (UL508c), in accordance with CE marking (low voltage directive EN50178)				
Weight [kg]		1.0				1.5