

Sigma III SGDS SERIES SynqNet Amplifier



Model Designation

SGDS - 02 A 72 A

Sigma III Series SGDS
SERVOPACK

Rated Output of Applicable Motor	
Code	Rated Output
A5	50 W
01	100 W
02	200 W
04	400 W
05	450 W
08	750 W
10	1 kW
15	1.5 kW
20	2.0 kW
30	3.0 kW

Design Revision (A, B, ...)

Interface Specification	
Code	Specification
72	SynqNet Drive for Rotary Motors
75	SynqNet Drive for Linear Motors

Power Supply Voltage

Code	Voltage
A	200 V
F	100 V (100V Input, 200 V Output : Doubled Voltage)

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Yaskawa Electric Corporation
New Pier Takeshiba
South Tower, 1-16-1 Kaigan
Minatoku, Tokyo 105 Japan
81-3-5402-4511
<http://www.yaskawa.co.jp>

Yaskawa Electric America, Inc.
Chicago-Corporate Headquarters
2121 Norman Drive South
Waukegan, Illinois 60085
1-800-YASKAWA
<http://www.yaskawa.com>

Yaskawa Electric America, Inc.
Yaskawa Development Center
4101 Burton Drive
Santa Clara, CA 95054
1-408-748-4400
<http://www.ybad.com>

Preliminary Data Sheet



Σ – III SGDS SynqNet™ Amplifier

Model xxx72A Specification

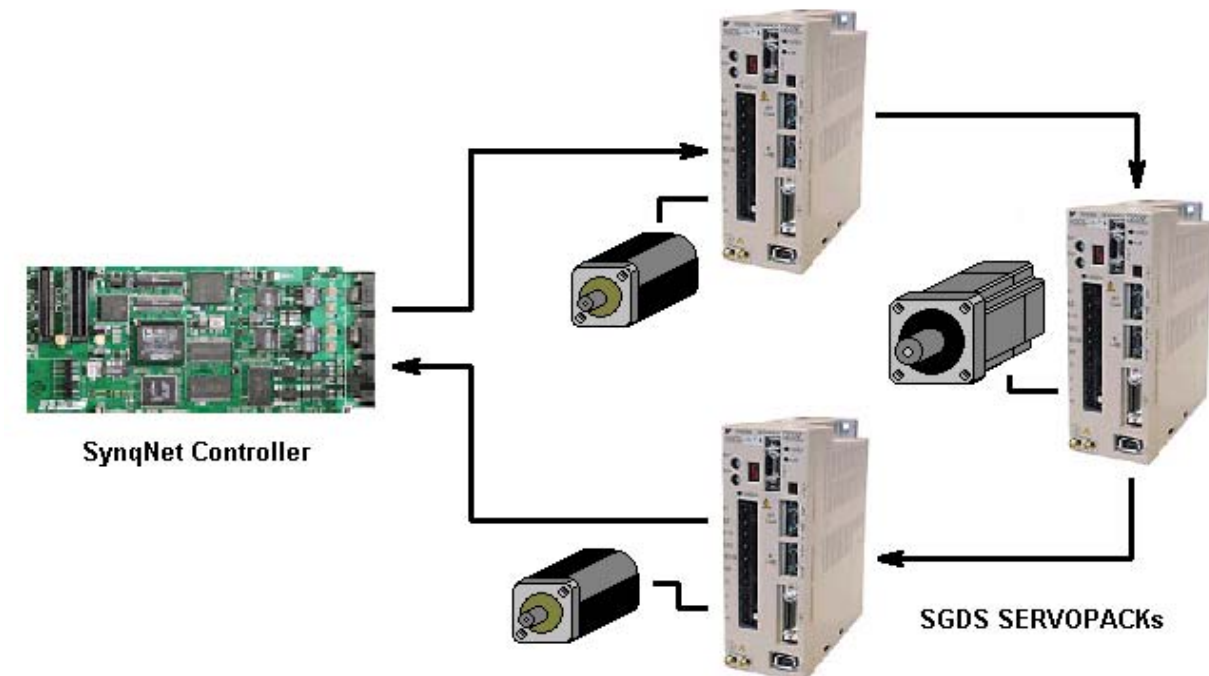
Key Features

Yaskawa SGDS SynqNet amplifiers -
Leading edge single-axis solution

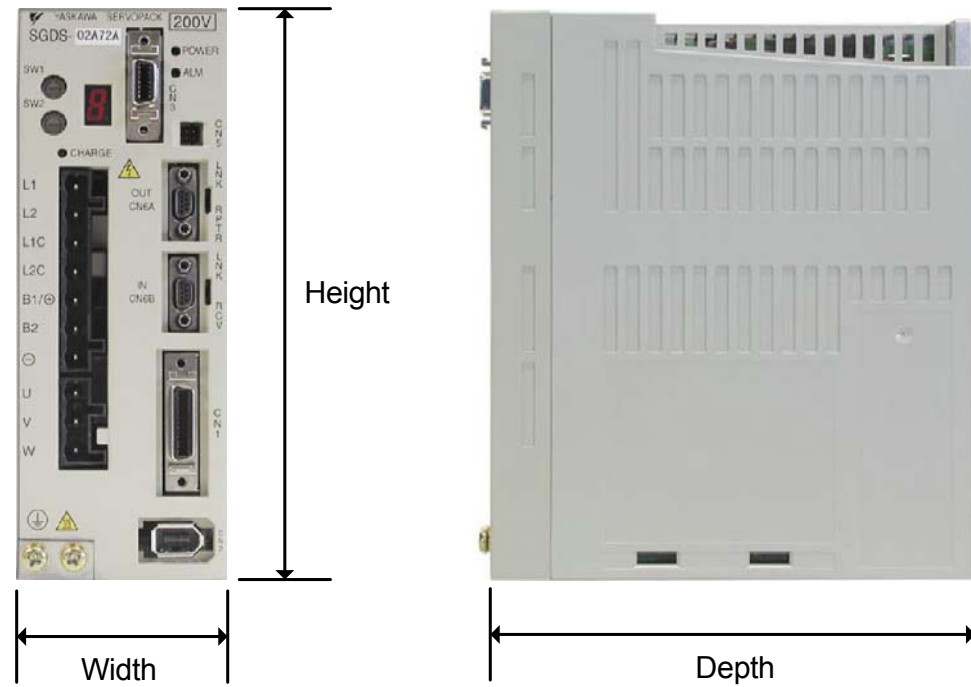
- **Ease of Use** *Automatic network configuration, remote drive setup and remote diagnostics simplify system configuration*
- **Performance** *64 kHz PWM frequency and up to 17-bit encoder feedback support enable high performance system implementation*
- **Flexible** *Wide range of 100 VAC and 200 VAC motor capacities and up to 32 coordinated axes support allow flexible system integration*
- **Compact** *Multiple I/O functionalities in a small compact form factor*
- **Reliable** *High MTBF improves overall system up-time*



SGDS SynqNet Example Topology



SGDS-xxx72A Dimensions and Capacities

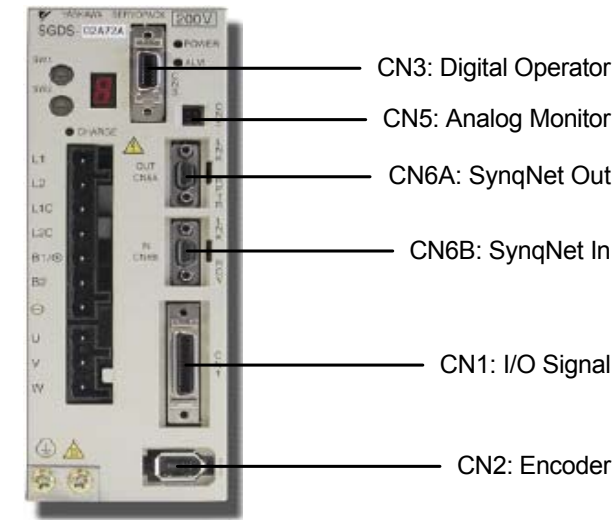


Single Phase 100V	Size		Capacity (W)			
	Output Current [A _{rms}]	Continuous	50	100	200	400
		Peak	2.1	2.8	6.5	8.5
	Width (mm / inch)		55 / 2.17			75 / 2.95
	Height (mm / inch)		150 / 5.91			
	Depth (mm / inch)		130 / 5.12			

Single Phase 200V	Size		Capacity (W)				
	Output Current [A _{rms}]	Continuous	50	100	200	400	750
		Peak	2.1	2.8	6.5	8.5	16.9
	Width (mm / inch)		55 / 2.17			75 / 2.95	70 / 2.76
	Height (mm / inch)		150 / 5.91				150 / 5.91
	Depth (mm / inch)		130 / 5.12				180 / 7.09

Three Phase 200V	Size		Capacity (W)				
	Output Current [A _{rms}]	Continuous	450	1000	1500	2000	3000
		Peak	11.0	17.0	34.8	55.5	56.7
	Width (mm / inch)		70 / 2.76		90 / 3.54	100 / 3.94	
	Height (mm / inch)		150 / 5.91				180 / 7.09
	Depth (mm / inch)		180 / 7.09				

SGDS-xxx72A Connector Information



CN1			
1	+24V IN	14	ALM-
2	CCW-OT	15	MS-G
3	CW-OT	16	MS-R
4	HOME	17	MS-COM
5	EXSTOP+	18	NS-G
6	EXSTOP-	19	AuxEnc:GND
7	USERIN-0	20	NS-COM
8	USERIN-1	21	AuxEnc: A+
9	USEROUT+	22	AuxEnc: A-
10	USEROUT-	23	AuxEnc: B+
11	BRK+	24	AuxEnc: B-
12	BRK-	25	AuxEnc: C+
13	ALM+	26	AuxEnc: C-

CN2	
1	PGSV
2	GND
3	(PGBAT+)
4	(PGBAT-)
5	PS
6	PS*

CN6A			
1	CONN_RD1+	6	CONN_RD1-
2	RD1_COMM	7	RD1_COMM
3	EARTHGND_OUT	8	TD1_COMM
4	TD1_COMM	9	CONN_TD1-
5	CONN_TD1+		

CN3			
1	TXD	8	TXD
2	TXD*	9	TXD*
3	RXD	10	RXD
4	RXD*	11	VFP
5	OP-GND	12	EXRES*
6	RXD*	13	5VPP
7	RT	14	GND

CN6B			
1	CONN_TD0+	6	CONN_TD0-
2	TD0_COMM	7	TD0_COMM
3	EARTHGND_IN	8	RD0_COMM
4	RD0_COMM	9	CONN_RD0-
5	CONN_RD0+		

CN5	
1	VTG
2	TMON
3	GND
4	GND

SGDS-xxx72A Specifications

Encoder Feedback	Serial: 13-bit incremental or 16-bit,17-bit absolute	
Control Mode	Torque control	
Operating Conditions	Temperature	Ambient: 0 to +55 °C; Storage: -20 to +85 °C
	Humidity	90% RH or less (with no condensation)
	Vibration Resistance	4.9 m/s ² or less
	Shock Resistance	19.6 m/s ² or less
Insulation Resistance	1MΩ or more <between power supply terminal, power terminal, and FG>	
	Configuration	Base-mounted
Standards	UL/cUL EN standard (EMC and low voltage instruction)	