

Sigma II/Mini SGDZ SERIES SynqNet Amplifier



Model Designation

SGDZ - MD20 E N7 A

Multi-shaft Amplifier Series
SGDZ SERVOPACK

Rated Outputs Specification	
Code	Specification
20	2 x 300 W
40	4 x 100 W

Design Revision (A, B, ...)

Interface Specification	
Code	Specification
N7	SynqNet

Power Supply Voltage

Code	Voltage
E	48 V

Preliminary Data Sheet



SGDZ SynqNet™ Multi-Axis Amplifier

Model MDxxEN7A Specification

Key Features

Yaskawa SGDZ SynqNet amplifiers -
Leading edge multi-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 48 VDC motor capacities and up to 32 coordinated axes support allow flexible system integration*
- **Compact** *Multi-axis capability in a small compact form factor*
- **Reliable** *High MTBF improves overall system up-time*



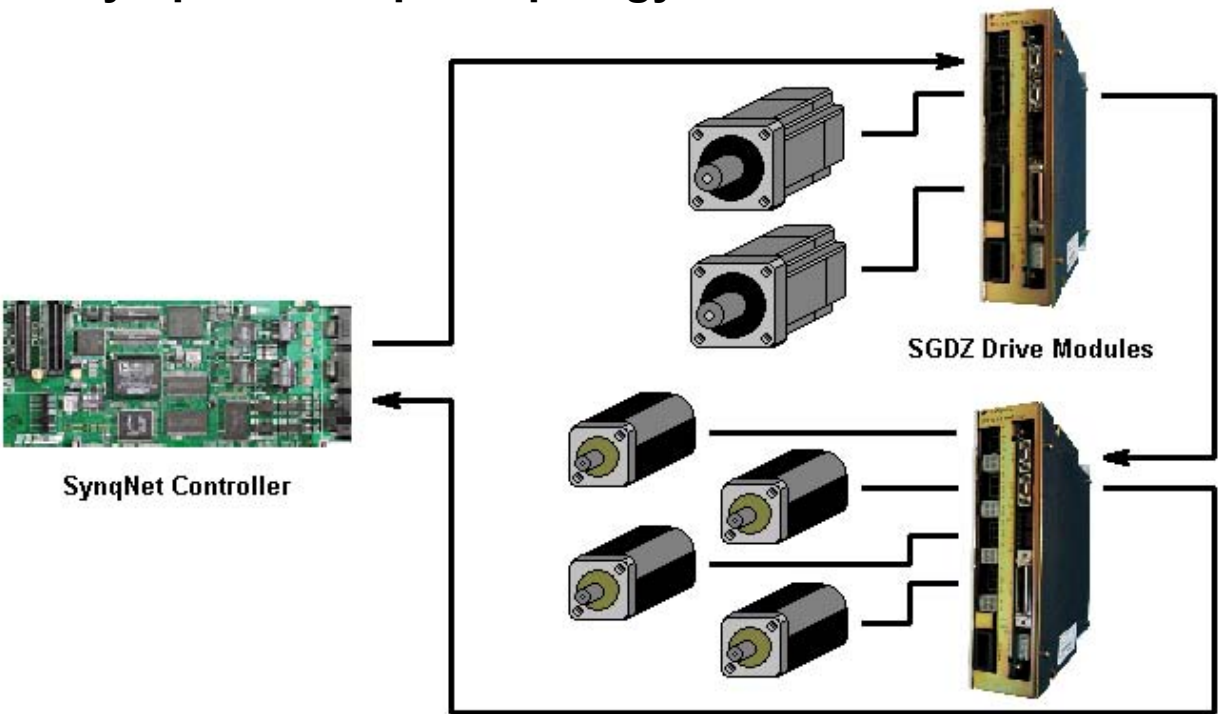
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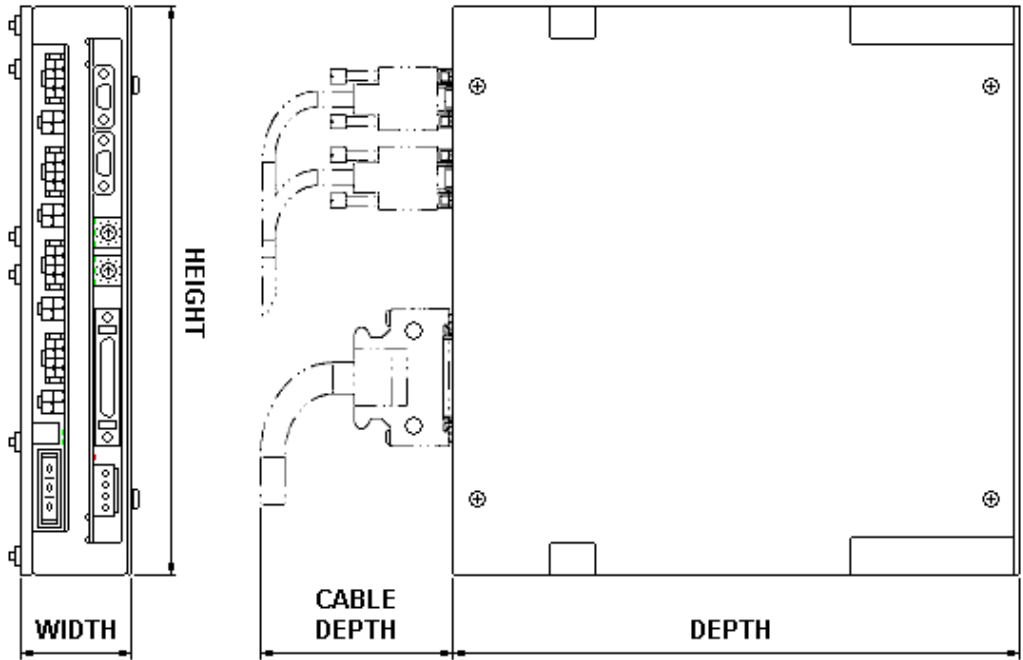
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SGDZ SynqNet Example Topology

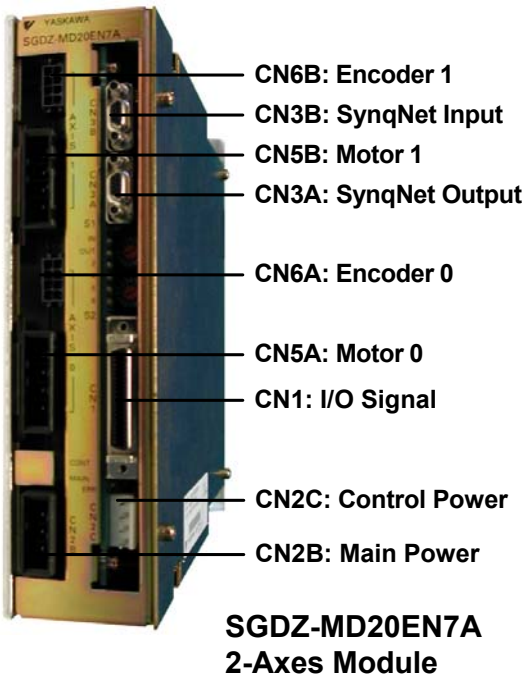


SGDZ-MDxxEN7A Specifications

SERVOPACK Model SGDZ-			MD20EN7A	MD40EN7A
Basic Specifications	Number of Axes		2	4
	Motors	SGMMJ (Σ Mini)	-	10, 20, 30 W @ 24 V DC
		SGMAJ (Σ II)	200, 300 W @ 48 V DC	50, 100 W @ 48 V DC
	Maximum Current (per motor)		17 Amps	8 Amps
	Encoder Feedback		Serial: 13-bit incremental or 16-bit, 17-bit absolute	
	Input Power Supply	Main Circuit	+48 V DC $\pm$ 5%	
		Control Circuit	+24 V DC $\pm$ 5%	
	Control Mode		Torque control	
	Operating Conditions	Temperature	Ambient: 0 to +45 °C; Storage: -20 to +85 °C	
		Humidity	90% RH or less (with no condensation)	
		Vibration Resistance	9.8 m/s ² or less	
		Shock Resistance	58.8 m/s ² or less	
Others	Configuration		Base-mounted	
	Standards		UL/cUL EN standard (EMC and low voltage instruction)	
	Dimensions	Width	45 mm (1.77 in.)	
		Height	180 mm (7.09 in.)	
		Depth	180 mm (7.09 in.)	
	Cable Depth		75 mm (2.95 in.) or greater	



SGDZ-MDxxEN7A Connector Information



CN2B		P/N: AMP 1-178293-2
1	+48 V	
2	GND	
3	FG	

CN2C		P/N: JST B4PS-VH
1	+24 V	
2	+24 V	
3	GND	
4	GND	

CN5x (MD20)		P/N: AMP 1-178294-2
1	U_3	
2	V_3	
3	W_3	
4	FG	

CN5x (MD40)		P/N: Molex 39-30-1040
1	U_3	
2	V_3	
3	W_3	
4	FG	

CN6x		P/N: Molex 43045-0822
1	PGSV	
2	NC	
3	PS	
4	FG	
5	GND	
6	NC	
7	PS*	
8	FG	

CN1		P/N: Hirose DX20-40S		
1	+24V_IN		21	NODE_ALARM_C
2	NODE_DISABLE		22	NODE_ALARM_E
3	HOME_0		23	OPTO_OUT_0C
4	OPTO_I0		24	OPTO_OUT_0E
5	P-OT_0		25	OPTO_OUT_1C
6	N-OT_0		26	OPTO_OUT_1E
7	HOME_1		27	OPTO_OUT_2C
8	OPTO_I1		28	OPTO_OUT_2E
9	P-OT_1		29	OPTO_OUT_3C
10	N-OT_1		30	OPTO_OUT_3E
11	HOME_2		31	RS422GND
12	OPTO_I2		32	TX0_00+
13	P-OT_2		33	TX0_00-
14	N-OT_2		34	TX1_00+
15	HOME_3		35	TX1_00-
16	OPTO_I3		36	RX2_00+
17	P-OT_3		37	RX2_00-
18	N-OT_3		38	RX3_00+
19	NC		39	RX3_00-
20	NC		40	RS422GND

CN3A		P/N: Molex 83611-9006			
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+				

CN3B		P/N: Molex 83611-9006		
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+			

