



Sensorless Vector Drives

SG SERIES

VARIABLE TORQUE / STANDARD DUTY / HEAVY DUTY

RATINGS

Variable Torque:

7.5 to 700HP @ 460V
7.5 to 40HP @ 230V

Standard Duty:

7.5 to 600HP @ 460V
7.5 to 40HP @ 230V

Heavy Duty:

5 to 500HP @ 460V
5 to 30HP @ 230V



Standard Features:

- ◆ Standard I/O:
8 digital inputs, 2 analog inputs,
2 analog outputs, 5 relay outputs
- ◆ Digital metering:
Output current, output frequency,
DC link voltage, motor RPM
- ◆ Protection:
Over current, ground fault, over
voltage, current limit, motor overload,
phase loss, over heat, loss of signal,
and more
- ◆ Communications:
ModBus standard, optional DeviceNet,
Profibus and other fieldbus available
- ◆ Voltage tolerance:
+/- 10%
- ◆ Control method:
Open loop V/Hz
- ◆ V/Hz patterns:
Linear, quadratic, sensorless vector
- ◆ Analog output functions:
2 analog outputs 0-10VDC
configurable to motor speed, output
current, output voltage, DC link
voltage, PID follower
- ◆ Analog inputs:
4-20mA, 0-10VDC -10 - +10VDC
- ◆ Relay outputs:
1 Form C relay output, 4 Form A
relay outputs configurable to running,
faulted, ready, at speed, high or low
frequency levels, loss of signal,
ready, and more
- ◆ Digital inputs:
8 digital inputs configurable to
forward run, reverse run, jog, preset
speeds, motorized pot function,
emergency stop, alternate ramp
selections, HOA, and more
- ◆ User interface:
2 line, 16 character per line
LCD display
- ◆ Braking functions:
Coast, decel, DC injection
braking, flux braking and optional
dynamic braking

RSI SG Series Product Highlights:

The SG series is a compact, economical drive designed for the most demanding applications. The flexible power stack allows the user to apply it to heavy duty loads (150% for 60 secs), standard duty loads (120% for 60 secs), or variable torque loads (110% for 60 secs).

With over 250 programmable parameters, Beshaw's SG series drives are configurable to meet the needs of almost any industrial application, yet remain simple and easy to use.

Key Advantages:

- ◆ Standard and heavy duty ratings
- ◆ Integral PID Control
- ◆ Sensorless vector control or V/Hz control
- ◆ Integral multiple motor control for pumping applications
- ◆ Uploadable / downloadable keypad
- ◆ Flexible, programmable I/O
- ◆ Economical, compact design
- ◆ Simple, easy to use LCD interface
- ◆ Standard ModBus port
- ◆ Windows-based software

Guaranteed ... for two full years.

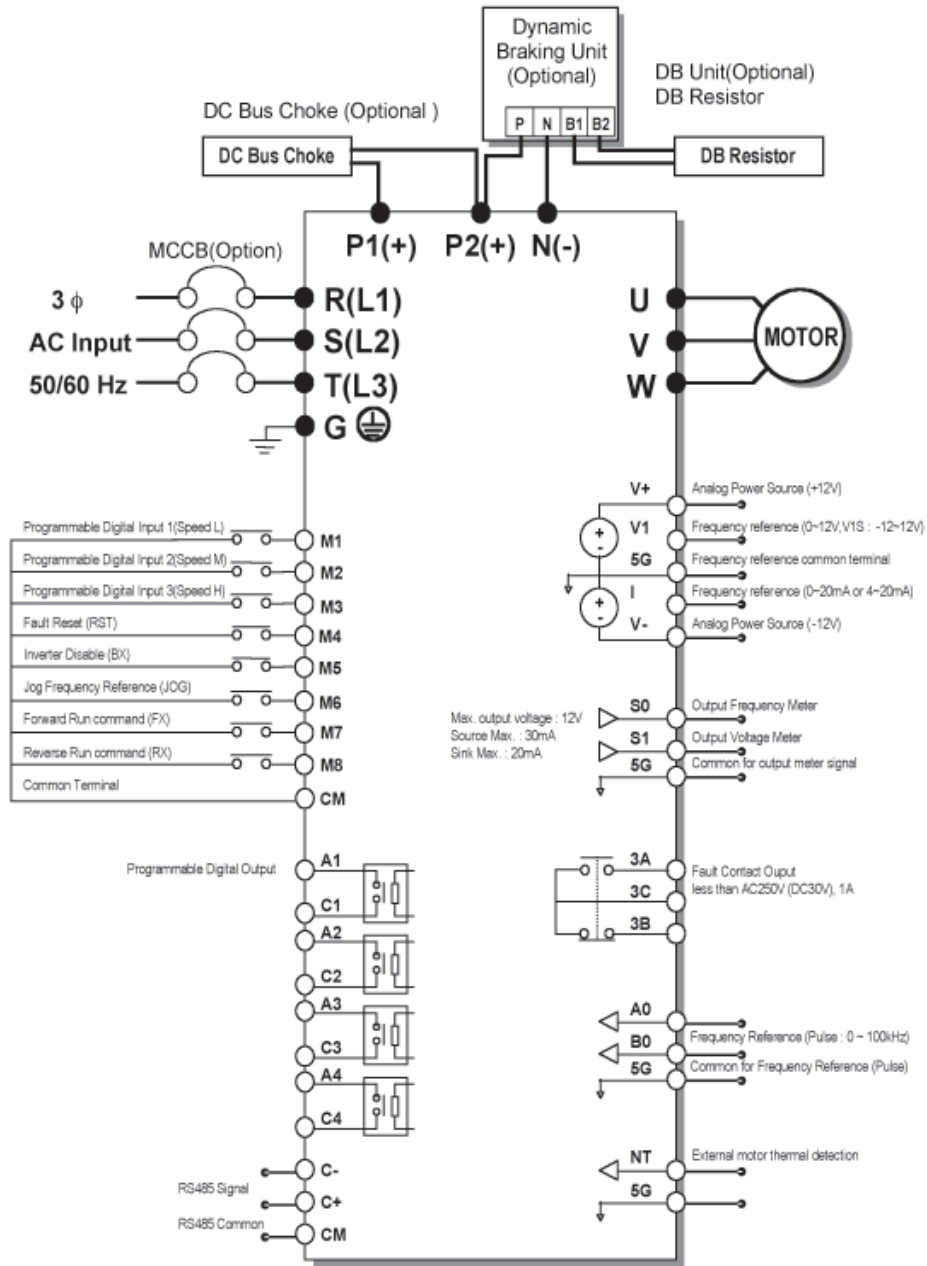
Only Beshaw has a two year guarantee.

Every Beshaw variable frequency drive is guaranteed for two full years. Other manufacturers limit their warranties to just one year. But at Beshaw, we believe that, because we build them better, we can guarantee them longer. We call that "the Beshaw Promise."



SG Series Wiring Diagram








BASIC WIRING DIAGRAM





Sensorless Vector Drives 230V

SG SERIES / NEMA 1

MODEL NUMBER	VARIABLE TORQUE		STANDARD DUTY		HEAVY DUTY		DIMENSIONS (IN)			WGT (LBS)	LIST PRICE
	HP	AMPS	HP	AMPS	HP	AMPS	H	W	D		
 RSI-007-SG-2-B	7.5	24	7.5	22	5	17	11.2	5.9	6.2	8	CF
 RSI-010-SG-2-B	10	32	10	29	7.5	23	11.2	7.9	7.2	11	CF
 RSI-015-SG-2-B	15	46	15	42	10	33	11.2	7.9	7.2	17	CF
 RSI-020-SG-2-B	20	60	20	55	15	44	17.9	9.8	7.9	22	CF
 RSI-025-SG-2-B	25	74	25	67	20	54	17.9	9.8	7.9	28	CF
 RSI-030-SG-2-B	30	88	30	80	25	68	23.6	12	9.2	34	CF
 RSI-040-SG-2-B	40	115	40	105	30	84	23.6	12	9.2	44	CF

VARIABLE TORQUE = 110% current for 1 minute

STANDARD DUTY = 120% current for 1 minute

HEAVY DUTY = 150% current for 1 minute

For standard drive accessories refer to pages 2-22 - 2-30.

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Sensorless Vector Drives 460V

SG SERIES

NEMA 1 / PROTECTED CHASSIS

MODEL NUMBER	VARIABLE TORQUE		STANDARD DUTY		HEAVY DUTY		DIMENSIONS (IN)			WGT (LBS)	LIST PRICE
	HP	AMPS	HP	AMPS	HP	AMPS	H	W	D		
☞ RSI-007-SG-4-B	7.5	12	7.5	11	5	8	11.2	5.9	6.2	8	CF
☞ RSI-010-SG-4-B	10	16	10	14	7.5	11	11.2	7.9	7.2	11	CF
☞ RSI-015-SG-4-B	15	24	15	22	10	17	11.2	7.9	7.2	17	CF
☞ RSI-020-SG-4-B	20	30	20	27	15	22	17.9	9.8	7.9	22	CF
☞ RSI-025-SG-4-B	25	39	25	35	20	28	17.9	9.8	7.9	28	CF
☞ RSI-030-SG-4-B	30	45	30	41	25	34	23.6	12	9.2	34	CF
☞ RSI-040-SG-4-B	40	61	40	55	30	44	23.6	12	9.2	44	CF
☞ RSI-050-SG-4-B	50	75	50	68	40	55	25.3	12.1	10.5	60	CF
☞ RSI-060-SG-4-B	60	91	60	83	50	66	25.3	12.1	10.5	60	CF
☞ RSI-075-SG-4-B	75	110	75	100	60	80	25.3	12.1	11.2	64	CF
☞ RSI-100-SG-4-B	100	152	100	139	75	111	30.2	14.5	12.1	95	CF
☞ RSI-125-SG-4-B	125	183	125	167	100	134	30.2	14.5	12.1	95	CF
☞ RSI-150-SG-4 •	150	223	150	204	125	164	30.3	20.1	16.6	225	CF
☞ RSI-200-SG-4 •	200	264	200	242	150	194	30.3	20.1	16.6	225	CF
☞ RSI-250-SG-4 •	250	325	250	302	200	240	32.3	20.1	16.6	255	CF
☞ RSI-350-SG-4 •	350	432	300	396	250	317	40.5	27.2	17.3	450	CF
☞ RSI-400-SG-4 •	400	547	400	501	300	401	40.5	27.2	17.3	450	CF
☞ RSI-500-SG-4 •	500	613	450	562	350	450	43.7	30.8	17.4	540	CF
☞ RSI-600-SG-4 •	600	731	500	670	400	536	51.3	36.3	19.5	840	CF
☞ RSI-700-SG-4 •	700	877	600	804	500	643	51.3	36.3	19.5	840	CF

VARIABLE TORQUE = 110% current for 1 minute

STANDARD DUTY = 120% Current for 1 Minute

HEAVY DUTY = 150% Current for 1 Minute

For Standard Drive Accessories refer to pages 2-22 - 2-30.

Units ending in a "B" designate NEMA 1. Units not ending in a "B" are protected chassis units.

- Protected chassis only (no cover on control or power terminals).

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RediStart™ SG Series Dimensions

	DRIVE HP	NO OPTIONS	WITH CIRCUIT BREAKER OR LINE REACTOR	WITH (BREAKER AND 2 CONTACTOR BYPASS) OR (2 REACTORS) OR (3 CONTACTOR BYPASS)	WITH (BREAKER AND 3 CONTACTOR BYPASS) OR (LINE REACTOR AND 3 CONTACTOR BYPASS)
230 VOLT	7.5	30x24x16	30x24x16	30x24x16	30x24x16
	10	30x24x16	30x24x16	30x24x16	30x24x16
	15	30x24x16	30x24x16	30x24x16	30x24x16
	20	30x24x16	30x24x16	30x24x16	30x24x16
	25	30x24x16	30x24x16	30x24x16	30x24x16
	30	30x24x16	30x24x16	36x30x16	36x30x16
	40	36x30x16	36x30x16	36x30x16	36x30x16
	460 VOLT	7.5	30x24x16	30x24x16	30x24x16
10		30x24x16	30x24x16	30x24x16	30x24x16
15		30x24x16	30x24x16	30x24x16	30x24x16
20		30x24x16	30x24x16	30x24x16	30x24x16
25		30x24x16	30x24x16	30x24x16	30x24x16
30		30x24x16	30x24x16	30x24x16	30x24x16
40		36x30x16	36x30x16	36x30x16	36x30x16
50		36x30x16	36x30x16	36x30x16	36x30x16
60		36x30x16	36x30x16	36x30x16	36x30x16
75		36x30x16	36x30x16	36x30x16	36x30x16
100		36x30x16	36x30x16	70x30x24	70x30x24
125		46x30x16	46x30x16	70x30x24	70x30x24
150		90x31x30	87x31x24	90x48x30	90x48x30
200		90x31x30	87x31x24	90x48x30	90x48x30
250		90x31x30	87x37x24	90x48x30	90x48x30
300		90x31x30	87x37x24	90x48x30	90x48x30
350		90x48x30	87x48x24	90x48x30	90x48x30
400		90x48x30	87x48x24	90x48x30	90x48x30
500		90x48x30	87x48x24	90x60x30	90x60x30
600		90x48x30	87x72x24	90x60x30	90x60x30
700	90x48x30	87x72x24	☎	☎	

- Dimensions shown are NEMA 1 or NEMA 12 ventilated enclosures.
 - Dimensions are for reference only. Actual dimensions may vary. Please contact Benschaw for actual dimensions on your specific package.
- ☎ Consult factory