

Sensorless Vector Drives

SG Series

RATINGS

Variable Torque:

7.5–40 HP @ 230 V
 7.5–700 HP @ 460 V
 7.5–400 HP @ 600 V

Standard Duty:

7.5–40 HP @ 230 V
 7.5–600 HP @ 460 V
 7.5–400 HP @ 600 V

Heavy Duty:

5–30 HP @ 230 V
 5–500 HP @ 460 V
 5–300 HP @ 600 V



Variable Torque / Standard Duty / Heavy Duty

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, Benschaw'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 RTU port
- Windows-based software

Standard Features:

- **Standard I/O:** 8 digital inputs, 2 analog inputs, 2 analog outputs, 5 relay outputs
- **Optional I/O:** Isolated analog output board (adds 2 additional analog outputs, 0/4–20 mA)
- **Digital metering:** Output currents, ground current, output frequency, DC link voltage, motor RPM, output motor voltage, run time and more
- **Protection:** Over current, ground fault, over voltage, current limit, motor overload, phase loss, over heat, loss of signal and more
- **Analog inputs:** 1 at 0/4–20 mA, 1 at 0–10 VDC (or -10 to 10 VDC)








- **Communications:** Modbus RTU (standard); Optional Fieldbus includes DeviceNet, Profibus, BacNet, LonWorks, Modbus TCP
- **Voltage tolerance:** -15%, +10%
- **Control methods:** V/Hz, sensorless vector, slip compensation
- **V/Hz patterns:** Linear, squared, user programmable V/Hz
- **Analog outputs:** 2 at 0–10 VDC (standard), 2 at 0/4–20 mA (with option board). Configurable to motor speed, output current, output voltage, DC link voltage, power, PID follower
- **Relay outputs:** 1 Form C fault 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, 3 wire start / stop, reset, jog, preset speeds, motorized pot function, external trip, alternate ramp selections, HOA and more
- **User interface:** 2 line LCD display, 16 characters per line
- **Stop methods:** Coast, decel, DC injection braking, Flux braking and optional dynamic braking

Sensorless Vector Drives





















SG Series

NEMA 1

230 V

Model Number	Variable Torque		Standard Duty		Heavy Duty		Dimensions (in.)			Weight (lbs.)	List Price
	HP	Amps	HP	Amps	HP	Amps	H	W	D		
 RSI-007-SG-2B	7.5	24	7.5	22	5	17	11.2	5.9	6.2	11	\$1,400.00
 RSI-010-SG-2B	10	32	10	29	7.5	23	11.2	7.9	7.2	14	\$1,600.00
 RSI-015-SG-2B	15	46	15	42	10	33	11.2	7.9	7.2	14	\$1,750.00
 RSI-020-SG-2B	20	60	20	55	15	44	17.9	9.8	7.9	28	\$2,285.00
 RSI-025-SG-2B	25	74	25	67	20	54	17.9	9.8	7.9	29	\$2,985.00
 RSI-030-SG-2B	30	88	30	80	25	68	23.6	12	9.2	44	\$3,500.00
 RSI-040-SG-2B	40	115	40	105	30	84	23.6	12	9.2	44	\$4,125.00

460 V


Model Number	Variable Torque		Standard Duty		Heavy Duty		Dimensions (in.)			Weight (lbs.)	List Price
	HP	Amps	HP	Amps	HP	Amps	H	W	D		
 RSI-007-SG-4B	7.5	12	7.5	11	5	8	11.2	5.9	6.2	11	\$1,425.00
 RSI-010-SG-4B	10	16	10	14	7.5	11	11.2	7.9	7.2	14	\$1,725.00
 RSI-015-SG-4B	15	24	15	22	10	17	11.2	7.9	7.2	14	\$1,885.00
 RSI-020-SG-4B	20	30	20	27	15	22	17.9	9.8	7.9	28	\$2,450.00
 RSI-025-SG-4B	25	39	25	35	20	28	17.9	9.8	7.9	29	\$2,800.00
 RSI-030-SG-4B	30	45	30	41	25	34	23.6	12	9.2	44	\$3,545.00
 RSI-040-SG-4B	40	61	40	55	30	44	23.6	12	9.2	44	\$4,250.00
 RSI-050-SG-4B	50	75	50	68	40	55	25.3	12.1	10.5	60	\$5,225.00
 RSI-060-SG-4B	60	91	60	83	50	66	25.3	12.1	10.5	60	\$6,500.00
 RSI-075-SG-4B	75	110	75	100	60	80	25.3	12.1	11.2	64	\$7,500.00
 RSI-100-SG-4B	100	152	100	139	75	111	30.2	14.5	12.1	95	\$9,000.00
 RSI-125-SG-4B	125	183	125	167	100	134	30.2	14.5	12.1	95	\$11,000.00
 RSI-150-SG-4 • *	150	223	150	204	125	164	30.9	20.1	16.6	225	\$13,000.00
 RSI-200-SG-4 • *	200	264	200	242	150	194	30.9	20.1	16.6	225	\$15,500.00
 RSI-250-SG-4 • *	250	325	250	302	200	240	33.9	20.1	16.6	255	\$18,000.00
 RSI-350-SG-4 • *	350	432	300	396	250	317	42.5	27.2	17.3	450	\$23,000.00
 RSI-400-SG-4 • *	400	547	400	501	300	401	42.5	27.2	17.3	450	\$32,000.00
 RSI-500-SG-4 •	500	613	450	562	350	450	44.9	30.8	17.4	540	\$40,000.00
 RSI-600-SG-4 •	600	731	500	670	400	536	51.3	36.3	19.5	840	\$48,000.00
 RSI-700-SG-4 •	700	877	600	804	500	643	51.3	36.3	19.5	840	\$57,750.00

Variable Torque = 110% current for 1 minute / Standard Duty = 120% current for 1 minute / Heavy Duty = 150% current for 1 minute

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

• Protected chassis only (power terminal covers do not meet NEMA 1).

* DC Link Reactor (internal)

 Web stocked

Available for same day shipping.

