



BBG-RSSS-90-400-1

Redundant Serial to Synchro System



Description

The Redundant Serial to Synchro System (RSSS) is a stand-alone system, which provides conversion of serial signals into high power synchro signals. The RSSS provides two redundant channels (four total) of serial to synchro conversion.

The RSSS is factory configurable to customer requirements for easy field installation.

Applications

- Radar Systems (antenna azimuth)
- Navigation Systems (gyrocompass, speedlog, course, pitch, and roll)
- Industrial Processes (position, velocity)
- Meteorology Instruments (wind speed and direction)
- Many Others

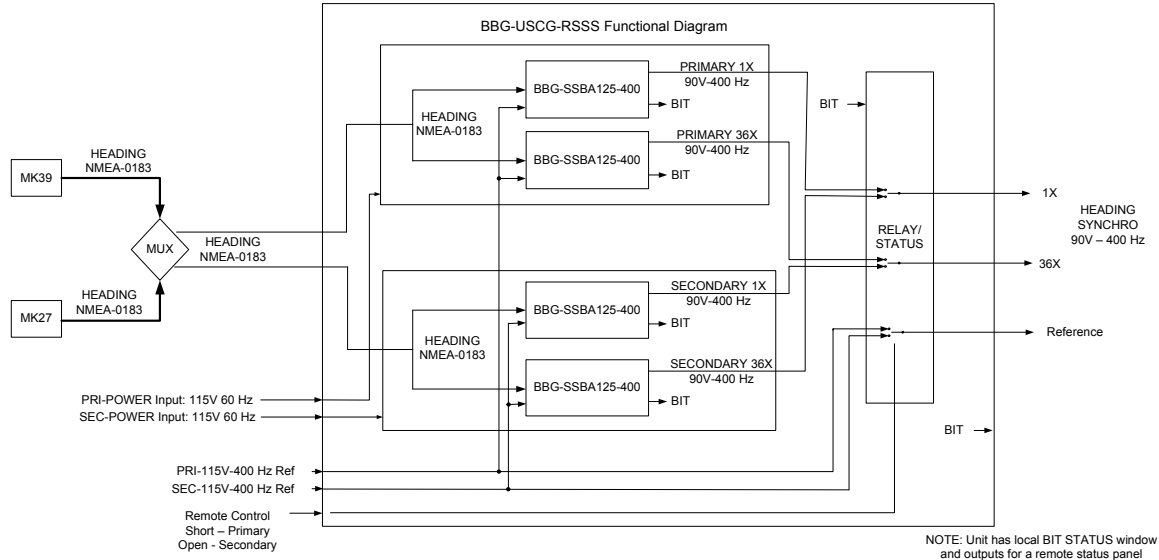
Features

- 6.81Vrms Resolver
- 11.8 or 90 Vrms Synchro
- High Efficiency
- 125 VA (Peak), 30VA (Continuous) Output
- Short Circuit and Transient Protected
- Temperature Protected
- Enable, BIT and Kick Circuitry

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Chart

The BBG-RSSS-90-400-1 operates on 115 Volt, 60 Hz AC power to convert serial inputs into high power synchro outputs. The RSSS accepts serial data in RS-232, RS-422, RS-423, RS-485, or MIL-STD-188C protocols. Serial baud rates are switch selectable at: 2400, 4800, 9600, 19,200, and 38,400 bits per second. Default serial input is 4800, 8 bits, no parity, and one stop bit (4800, 8, N, 1).

The RSSS provides two dual redundant channels of serial to high power synchro conversion. Each channel has its own power supplies and is fault protected against over current and over temperature faults. In addition, the RSSS provides remote control of outputs, local and remote BIT status and internal kick circuitry for added control and protection. An onboard microcontroller configures the card from power up or reset and provides all signals and control to read the serial input information and output the synchro/resolver information. Health monitoring of each 1X/36X channel for over-current, over-temperature and loss of reference is provided via a contact closure status signal. Serial data formats, power outputs, synchro and resolver voltages and frequencies are factory configured to user requirements.



Technical Specifications

Parameter	Value	Units
Power Input	115	Volts AC
	60	Hertz
	6.3	Amps
Temperature Range		
Operating	-25 to +85	°C
Storage	-65 to +125	°C
Inputs		
Serial message	NMEA-0183 \$HEHDT	
Serial Protocol	RS-232/RS-422	
Reference Input	115	Volts AC
	400	Hertz
	1	Amps
Outputs		
Synchro (PRIMARY 1X)	90	Volts
	400	Hertz
	125	VA (Peak)
	30	VA (Continuous)
Synchro (PRIMARY 36X)	90	Volts
	400	Hertz
	125	VA (Peak)
	30	VA (Continuous)
Synchro (SECONDARY 1X)	90	Volts
	400	Hertz
	125	VA (Peak)
	30	VA (Continuous)
Synchro (SECONDARY 36X)	90	Volts
	400	Hertz
	125	VA (Peak)
	30	VA (Continuous)
Status (PRIMARY 1X/36X)	Open	Good
	Closed	Fail
Status (SECONDARY 1X/36X)	Open	Good
	Closed	Fail
Status (Input Select)	Open	Good
	Closed	Fail
Status (Reference)	Open	Good



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Parameter	Value	Units
	Closed	Fail
Accuracy	+/-30	arc minutes
Dimensions	30.0 W x 12.0 H x 12.0 D	In
	76.2 x 30.48 x 30.48	Cm

INPUTS/OUTPUTS

Inputs and outputs are available on DIN rail terminal blocks provided with the RSSS. Inputs and outputs are listed below:

I/O CONNECTOR TYPE: DIN Terminal Blocks

CONNECTOR MATE: Ferrules

Signal	Connector
Chassis Ground (E1)	TB1
PRIMARY POWER 115/220V AC NEUTRAL (FUSED INPUT) (6.3 Amp)	TB2
PRIMARY POWER 115/220V AC LINE (FUSED INPUT) (6.3 Amp)	TB3
Chassis Ground (E1)	TB4
SECONDARY POWER 115/220V AC NEUTRAL (FUSED INPUT) (6.3 Amp)	TB5
SECONDARY POWER 115/220V AC LINE (FUSED INPUT) (6.3 Amp)	TB6
PRIMARY RXD422+/RXD232 (Input)	TB7
PRIMARY RXD422- (Input)	TB8
PRIMARY Ground	TB9
SECONDARY RXD422+/RXD232 (Input)	TB10
SECONDARY RXD422- (Input)	TB11
SECONDARY Ground	TB12
PRIMARY R1 IN (FUSED INPUT) (6.3 Amp)	TB13
PRIMARY R2 IN (FUSED INPUT) (6.3 Amp)	TB14
SECONDARY R1 IN (FUSED INPUT) (6.3 Amp)	TB15
SECONDARY R2 IN (FUSED INPUT) (6.3 Amp)	TB16
R1 OUT (FUSED OUTPUT) (6.3 Amp)	TB17



Signal	Connector
R2 OUT (FUSED OUTPUT) (6.3 Amp)	TB18
S1 OUT 1X (FUSED OUTPUT) (3.15 Amp)	TB19
S2 OUT 1X (FUSED OUTPUT) (3.15 Amp)	TB20
S3 OUT 1X (FUSED OUTPUT) (3.15 Amp)	TB21
S1 OUT 36X (FUSED OUTPUT) (3.15 Amp)	TB22
S2 OUT 36X (FUSED OUTPUT) (3.15 Amp)	TB23
S3 OUT 36X (FUSED OUTPUT) (3.15 Amp)	TB24
PRIMARY STATUS 1X/36X+ (Contact Closure)	TB25
PRIMARY STATUS 1X/36X- (Contact Closure)	TB26
SECONDARY STATUS 1X/36X + (Contact Closure)	TB27
SECONDARY STATUS 1X/36X- (Contact Closure)	TB28
PRIMARY POWER STATUS + (Contact Closure)	TB29
PRIMARY POWER STATUS - (Contact Closure)	TB30
SECONDARY POWER STATUS + (Contact Closure)	TB31
SECONDARY POWER STATUS - (Contact Closure)	TB32
INPUT SELECTOR + (Input)	TB33
INPUT SELECTOR - (Input)	TB34
INPUT STATUS + (Contact Closure)	TB35
INPUT STATUS - (Contact Closure)	TB36
REFERENCE STATUS + (Contact Closure)	TB37
REFERENCE STATUS - (Contact Closure)	TB38

