

BBG-SIU-SRC2

Synchro Interface Unit

Description

The BBG-SIU-SRC2 Synchro Interface Unit (SIU) is a stand-alone system, which provides amplification of three synchro input channels into four medium power synchro outputs.

The SIU is factory configurable to customer requirements for easy field installation and is available in rack mount or bulkhead mount enclosures.



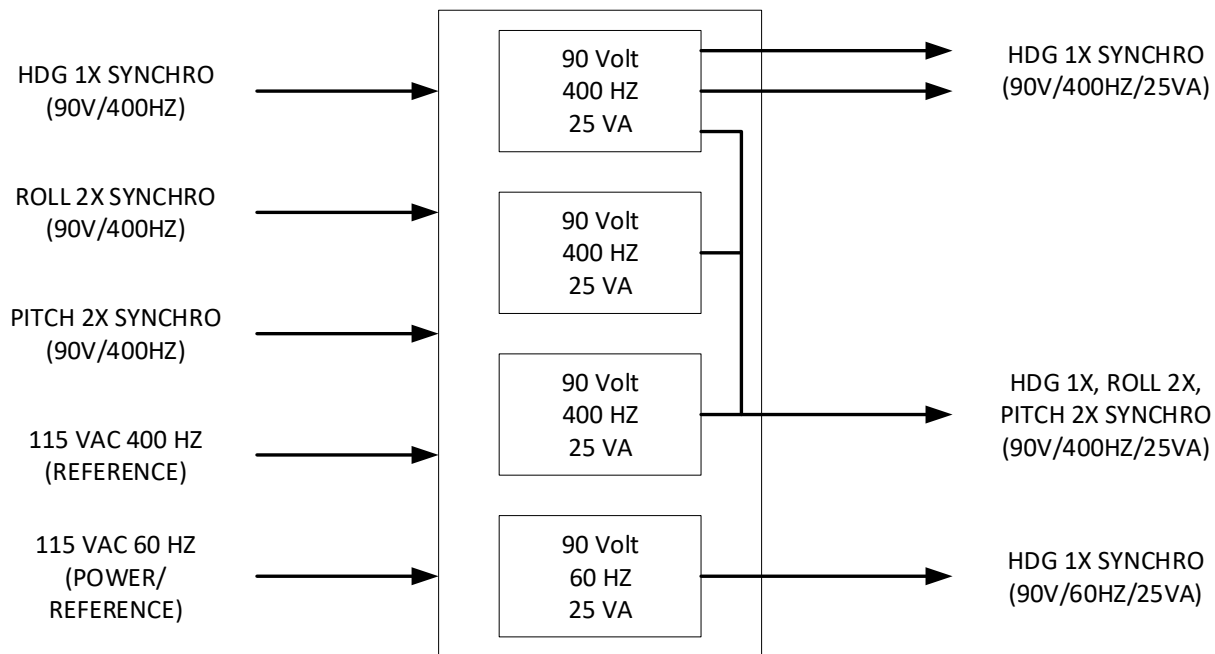
Applications

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

Features

- Three Synchro Input Channels
- Four Medium Power Synchro Outputs
- 90Volt, 60Hz, 25VA Synchro Output
- 90Volt, 400Hz, 25VA Synchro Output
- Custom Formats and Frequencies are available upon Request

Chart



The SIU operates on 115/230 VAC 60 Hz power/reference input, 115 VAC 400 Hz reference input and is capable of interfacing to three synchro input channels and four medium power synchro outputs. Additional channels are available upon request.

Technical Specifications

Parameter	Value	Units
Power Supply	115	Volts
	60	Hertz
	3.15	Amps
Temperature Range		
Operating	0 to +50	C°
	-65 to +150	C°
Inputs		
Synchro (HDG, ROLL, PITCH)	90	Volts
	400	Hertz
	Greater than 500K	Ohms
Reference	115	Volts
	400 & 60	Hertz



BBG-SIU-SRC2**Product Specifications**

	Greater than 500K	Ohms
Outputs		
Synchro (3 Channels)	90	Volts
	400	Hertz
	25	VA
Synchro (1 Channel)	90	Volts
	60	Hertz
	25	VA
Accuracy	+/-4	arc minutes
Weight	25	LBS
Dimensions	19(W) x 7(H) x 17.8(D)	IN
	48.26(W) x 17.78(H) x 45.2(D)	CM

OVERVIEW

The BBG-SIU-SRC2 (SIU) is a standalone system which interfaces between three low power synchro input channels and four medium power synchro output channels. The SIU operates on 115 Volt, 60 Hz AC power and 115 Volt, 60Hz and 400Hz AC reference. The SIU accepts a 1X Heading, 90 Volt, 400Hz, 2X Roll, 90 Volt, 400Hz and 2X Pitch, 90 Volt, 400Hz synchro input and outputs one 1X Heading, 90 Volt, 400 Hz, 25 VA, one 2X Roll, 90 Volt, 400 Hz, 25 VA, one 2X Pitch, 90 Volt, 400 Hz, 25 VA and one 1X Heading, 90 Volt, 60 Hz, 25 VA of synchro data. Custom inputs and outputs are available upon request.

Each output channel of the SIU is fault protected against over current and over temperature faults. In addition, the SIU provides internal kick circuitry for added control and protection. Synchro data formats, power outputs, synchro and resolver voltages and frequencies are factory configured to user requirements.

Examples of uses include radar systems (antenna azimuth), navigation systems (gyrocompass, speed log, course, pitch, and roll), industrial processes (position, velocity), and meteorology instruments (wind speed and direction).



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INPUTS/OUTPUTS

Power Interface

Power Input:

The SIU operates on 115 VAC, 60 Hertz power fused at 3.15 Amps.

Reference Interface

Reference Input(s):

Reference input is 115 VAC, 60 and 400 Hertz fused at 1 Amp.

Synchro Interface

Synchro Input:

Synchro inputs are available on DIN rail terminal blocks and listed in the connector list.

Synchro Output:

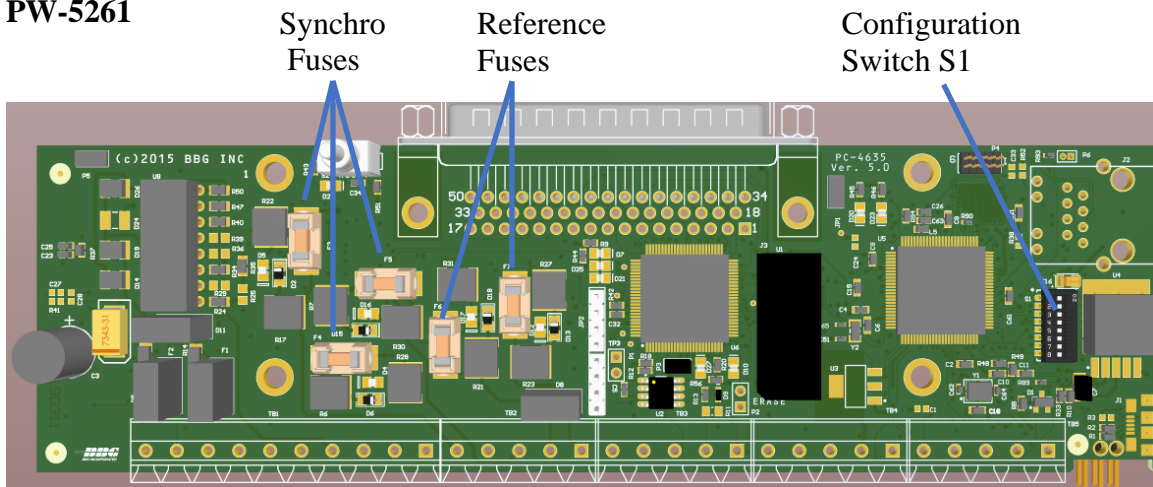
Synchro outputs are available on DIN rail terminal blocks and listed in the connector list. Outputs are factory configured for one 1X Heading, 90 Volt, 400 Hz, 25 VA, one 2X Roll, 90 Volt, 400 Hz, 25 VA, one 2X Pitch, 90 Volt, 400 Hz, 25 Volt Amps and one 1X Heading, 90 Volt, 60 Hz, 25 VA synchro data. Custom synchro outputs are available upon request. The synchro scaling is determined from the configuration of the PW-5261 Synchro converter module switch (S1) at power up or reset. Table 3 defines the switch position for the available baud rates and output scaling for the serial to parallel converters (PCB1, PCB2, and PCB3 and PCB4).

BAUD RATE AND SCALING SELECTION								
	Configuration Switch S1							
	8	7	6	5	4	3	2	1
HEADING 1X (PCB1, PCB4)	0	0	0	0	0	1	X	X
ROLL 2X (PCB2)	0	0	1	0	0	1	X	X
PITCH 2X (PCB3)	0	1	0	0	0	1	X	X
1 = off, 0 = on, X = Don't Care								

Table 3. PCB1, PCB2, PCB3 and PCB4 Configuration Switch



PW-5261



PW-5261 Synchro Converter Module

Fuses:

Designator	Description	Indicator	Designator	Description	Indicator
F3	Synchro S3, 0.5A	D5	F6:	Reference RH, 1.0A	D17
F4	Synchro S2, 0.5A	D4	F7:	Reference RL, 1.0A	D12
F5	Synchro S1, 0.5A	D16			

Indicators D5, D4, D16, D17, and D12 provide a visual indication of when a fuse is open. The intensity of the indicator’s illumination is dependent upon the “S” lead output at an associated angle. At certain angles the “S” lead indicator may be dim or not illuminated at all due to the voltage level being transmitted to that particular “S” lead. If an open fuse is suspected but the indicator is not illuminated, step through different cardinal angles to evaluate the indicator status.



CONNECTOR LIST

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

Connector	Signal
TB1-1	115 VAC 60HZ Power/Reference (3.15 Amp)
TB1-2	115 VAC 60HZ Power/Reference (3.15 Amp)
TB1-3	GND
TB1-4	R1 Reference 400HZ (Input) (1 Amp)
TB1-5	R2 Reference 400HZ (Input) (1 Amp)
TB1-6	S1 1X Heading 400HZ (Input)
TB1-7	S2 1X Heading 400HZ (Input)
TB1-8	S3 1X Heading 400HZ (Input)
TB1-9	S1 2X ROLL 400HZ (Input)
TB1-10	S2 2X ROLL 400HZ (Input)
TB1-11	S3 2X ROLL 400HZ (Input)
TB1-12	S1 2X PITCH 400HZ (Input)
TB1-13	S2 2X PITCH 400HZ (Input)
TB1-14	S3 2X PITCH 400HZ (Input)
TB1-15	GND
TB1-16	R1 Reference 400HZ (Output) (1 Amp)
TB1-17	R2 Reference 400HZ (Output) (1 Amp)
TB1-18	S1 1X Heading 400HZ (CH1 Output)
TB1-19	S2 1X Heading 400HZ (CH1 Output)
TB1-20	S3 1X Heading 400HZ (CH1 Output)
TB1-21	S1 2X ROLL 400HZ (CH1 Output)
TB1-22	S2 2X ROLL 400HZ (CH1 Output)
TB1-23	S3 2X ROLL 400HZ (CH1 Output)
TB1-24	S1 2X PITCH 400HZ (CH1 Output)
TB1-25	S2 2X PITCH 400HZ (CH1 Output)
TB1-26	S3 2X PITCH 400HZ (CH1 Output)
TB1-27	GND
TB1-28	R1 1X Heading 400HZ (CH2 Output) (1 Amp)
TB1-29	R2 1X Heading 400HZ (CH2 Output) (1 Amp)
TB1-30	S1 1X Heading 400HZ (CH2 Output)
TB1-31	S2 1X Heading 400HZ (CH2 Output)
TB1-32	S3 1X Heading 400HZ (CH2 Output)
TB1-33	GND
TB1-34	R1 1X Heading 400HZ (CH3 Output) (1 Amp)



BBG-SIU-SRC2**Product Specifications**

TB1-35	R2 1X Heading 400HZ (CH3 Output) (1 Amp)
TB1-36	S1 1X Heading 400HZ (CH3 Output)
TB1-37	S2 1X Heading 400HZ (CH3 Output)
TB1-38	S3 1X Heading 400HZ (CH3 Output)
TB1-39	GND
TB1-40	R1 1X Heading 60HZ (CH4 Output) (1 Amp)
TB1-41	R2 1X Heading 60HZ (CH4 Output) (1 Amp)
TB1-42	S1 1X Heading 60HZ (CH4 Output)
TB1-43	S2 1X Heading 60HZ (CH4 Output)
TB1-44	S3 1X Heading 60HZ (CH4 Output)
TB1-45	GND



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