

## BBG-SSC-BIW1



## Synchro Signal Converter

### *Description*

The BBG-SSC-BIW1 (SSC) is a stand-alone network interface system that converts Ethernet data into a high-power synchro output. The SSC operates on 115 Volt, 400 Hz AC power and reference. The SSC accepts one channel of multicast ethernet data and outputs one channel 90 Volt, 400 Hz, 25 Volt Amps synchro data. Custom protocol inputs and synchro output configurations are available upon request.

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

### *Applications*

- Stabilized Glide Slope Indicator (SGSI)
- Radar Systems (antenna azimuth)
- Navigation Systems (gyrocompass, speedlog, course, pitch, and roll)
- Meteorology Instruments (wind speed and direction)
- Many Others

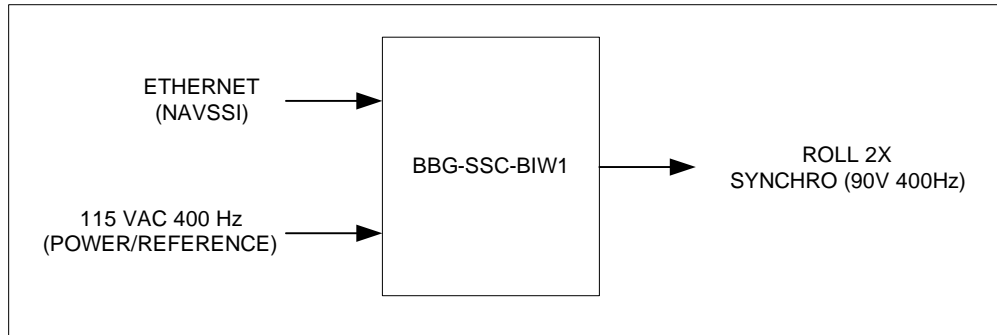
### *Features*

- Multicast Ethernet I/O
- 90V Synchro Output
- 25VA Synchro Power Output
- 400 Hertz Output (Optional 60 Hertz)
- Custom Ethernet protocol conversion available upon request

### **BBG Incorporated**

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*Chart**Technical Specifications*

Parameter	Value	Units
<b>Inputs</b>		
Power	115	Volts AC
	400	Hertz
	3.15	Amp
Ethernet	10BaseT/100BaseTX	
Message Protocol	NAVSSI	GFCS
<b>Outputs</b>		
Reference	115	Volts
	400	Hertz
	1	Amp
Synchro	90	Volts
	400	Hertz
	25	VA
<b>Accuracy</b>	+/-4	arc minutes
<b>Temperature Range</b>		
Operating	-27.8 to +65.6	C°
Storage	-65 to +150	C°
<b>Dimensions</b>	17.5 H x 15 W x 7.4 D	In
	44.5 H x 38.1 W x 18.8 D	Cm

## OVERVIEW

The BBG-SSC-BIW1 (SSC) is a stand-alone network interface system that converts Ethernet data into a high-power synchro output. The SSC operates on 115 Volt, 400 Hz AC power and reference. The SSC accepts one multicast ethernet data input and outputs one channel 90 Volt, 400Hz, 25 Volt Amps of synchro data. Custom inputs and outputs are available upon request.

The output channel of the SSC is fault protected against over current and over temperature faults. In addition, the SSC 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 stabilized glide slope indicators (SGSI), radar systems, (antenna azimuth), navigation systems (gyrocompass, speedlog, course, pitch, and roll), industrial processes (position, velocity), and meteorology instruments (wind speed and direction).

## INPUTS/OUTPUTS

### Ethernet Input

The SSC provides one channel of a network based 10BaseT/100BaseTX ethernet protocol input. The input is factory configured to accept specific message structures as provided by the customer.

### Synchro Interface

Synchro Output:

The output is factory configured for 90 Volt Line to Line, 400 Hertz synchro at 25 Volt Amps. Default synchro format is single channel (2x) output. The synchro output signals are fused at 0.5 Amps each.

### Reference Interface

Power/Reference Input:

The power/reference input is 115 Volt, 400 Hertz and is fused at 3.15 Amps.

Reference Output:

The reference output is 115 Volt, 400 Hertz and is fused at 1 Amp.



## CONNECTOR LIST

Inputs and outputs are available on circular MIL connectors provided with the BBG-SSC-BIW1. Inputs and outputs are listed below:

### J1 AC POWER

I/O CONNECTOR TYPE: MS3474L14-04P

CONNECTOR MATE: MS3475L14-04S

BACKSHELL: STRAIGHT – M85049/10-116N, OPTIONAL: 90 DEGREE - M85049/8-9N, or 45 DEGREE - M85049/6-9N

Signal	Pin Number
ACN 115V AC 400 Hz NEUTRAL (FUSED INPUT) (3.15 Amp)	A
ACL 115V AC 400 Hz LINE (FUSED INPUT) (3.15 Amp)	B
Chassis Ground (E1)	C
Spare	D

### J2 SYNCHRO

I/O CONNECTOR TYPE: MS3474L14-05S

CONNECTOR MATE: MS3475L14-05P

BACKSHELL: STRAIGHT – M85049/10-19N, OPTIONAL: 90 DEGREE - M85049/8-50N, or 45 DEGREE - M85049/6-50N

Signal	Pin Number
R1 115V AC 400 Hz NEUTRAL (OUTPUT) (1 Amp)	A
R2 115V AC 400 Hz LINE (OUTPUT) (1 Amp)	B
HEADING S1 OUT 1X 400 Hz (OUTPUT) (0.5 Amp)	C
HEADING S2 OUT 1X 400 Hz (OUTPUT) (0.5 Amp)	D
HEADING S3 OUT 1X 400 Hz (OUTPUT) (0.5 Amp)	E

**J3    ETHERNET**

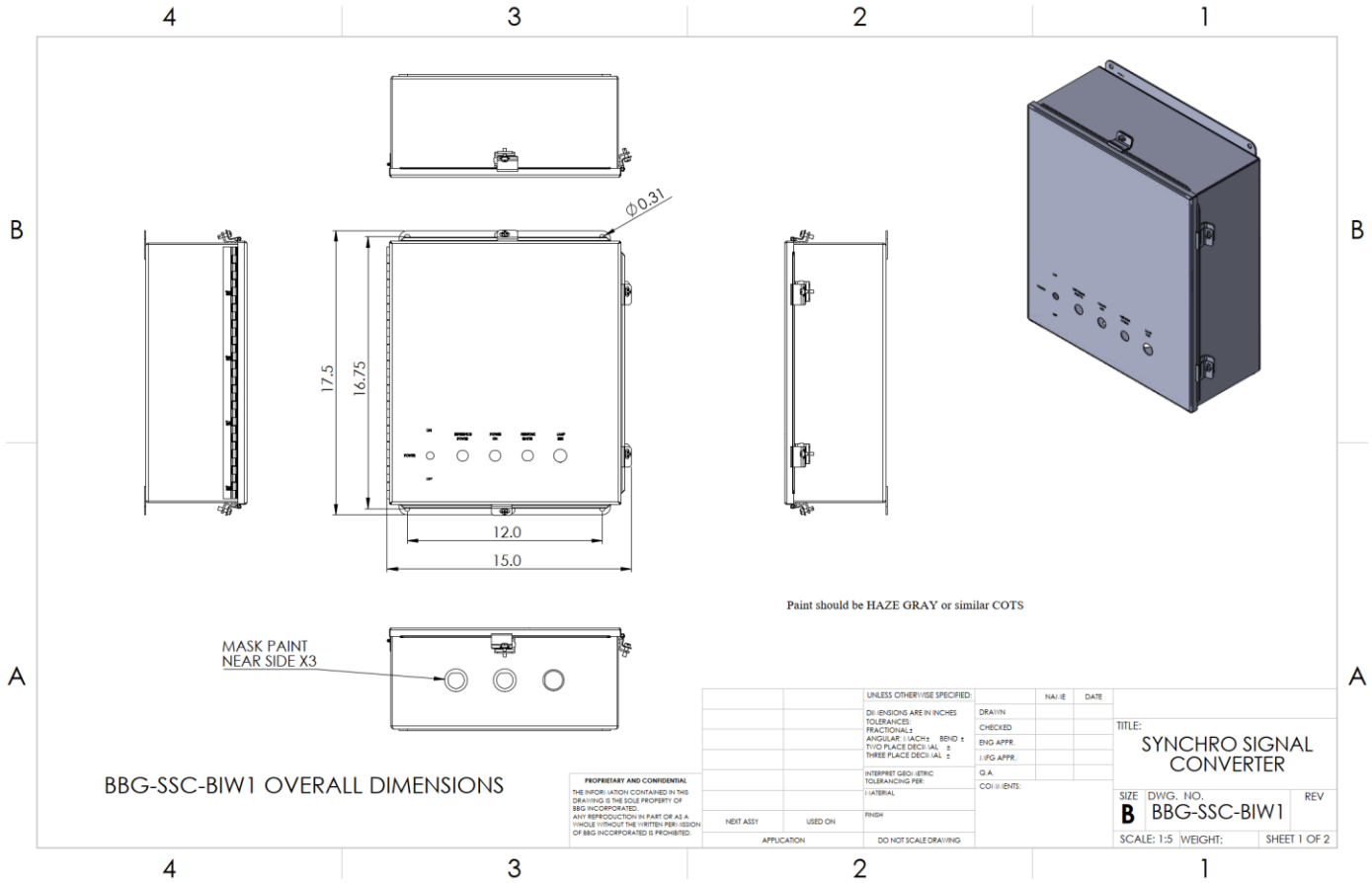
I/O CONNECTOR TYPE: JTRJ45F-16NJCFPS

CONNECTOR MATE: JTRJ45-16NXL

<b>Signal</b>	<b>Pin</b>
TX+ (OUTPUT)	1
TX- (OUTPUT)	2
RX+ (INPUT)	3
Terminated	4
Terminated	5
RX- Serial (INPUT)	6
Terminated	7
Terminated	8
Shield	CGND

\* Terminated per TIA/EIA -T568B

**Mechanicals**



\*Note: Dimensions do not include shock mounting equipment. Additional mounting space may be required.



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