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## Bristol Babcock Serial Slave Module MVI46-BSAPS

The Bristol Babcock Synchronous/Asynchronous Communication Protocol (BSAP) is used process control applications in the energy, water, and wastewater industries.

Typical industrial sectors include:

- Security monitoring
- Pump and lift station control for water & wastewater market
- Flow measurement and metering station control for the natural gas market.

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## Bristol Babcock Serial Slave Module

### MVI46-BSAPS

The MVI46 Bristol Babcock Serial Slave Module allows Rockwell Automation SLC I/O compatible processors to interface easily with Bristol Babcock Serial communication devices.

### Features and Benefits

The MVI46-BSAPS module acts as an input/output module between the BSAP network and the Rockwell Automation backplane. The module acts as a slave receiving commands from a BSAP master device. The data transfer from the SLC processor is asynchronous from the actions on the BSAP network. An internal database in the module exchanges data between the processor and the BSAP network.

BSAP operates in a polled environment. Each link in the network supports a different poll rate. The rate selected depends on a variety of application-dependent factors.

BSAP has been designed and implemented according to the functional layers of the International Standards Organization (ISO) model. Because each layer is independent of its adjacent layers, both synchronous and asynchronous transmission modes can be supported.

### General Specifications

- Single Slot – 1746 backplane compatible (Local or extended I/O rack only. Remote rack not supported)
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module using M0/M1 files
- Ladder Logic is used for data transfer between module and processor. Sample ladder file included
- Configuration data obtained from configuration text file downloaded to module. Sample configuration file included

### Hardware Specifications

Specification	Description
Backplane Current Load	800 ma @ 5V (from backplane)
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Shock	30g operational, 50g non-operational
Relative Humidity	5 to 95% (non-condensing)

Specification	Description
Vibration	5 g from 10150 Hz
LED indicators	Module status, Backplane transfer status, Application status, Serial activity and error LED status
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only
Configuration Connector	RJ45 RS-232 Connector (RJ45 to DB-9 cable shipped with unit)
Application Ports	
Application Serial port (PRT1, PRT2) (Serial Modules)	(2) RJ45 RS-232/422/485 Application ports

## Functional Specifications

The Bristol Babcock Synchronous/Asynchronous Communication Protocol (BSAP) is the foundation for a proprietary network that has a tree structured topology. This open-ended topology supports a variety of configurations which may include one or more nodes at each of up to six levels. Messages can be sent between nodes (local message only). Each message is uniquely identified and has an error checking code associated with it.

Some of the general specifications include:

- Slave implementation
- Support for the storage and transfer of internal database registers to/from the SLC processor's M0 and M1 files
- Two ports to emulate a BSAP slave RTU
- Peer-to-Peer communication for Local BSAP formatted messages – slave to master only.

Configurable parameters include:

Parameter	Value
Analog Input Count	0 to 255
Logical Input Count	0 to 255
String Count	0 to 30
Slave Address	1 to 255
Baud Rate	110 to 115,200
Parity	None, Odd, Even
Data Bits	5 to 8
Stop Bits	1 or 2
RTS On and Off Timing	0 to 65535 milliseconds
Minimum Response Delay	0 to 65535 milliseconds
Use of CTS Modem Line	Yes or No

## Additional Products

ProSoft Technology offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

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## Ordering Information

To order this product, please use the following:

**MVI46-BSAPS** Bristol Babcock Serial Slave Module

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