Bristol Babcock Serial Slave Module
MVI56-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

MVI56-BSAPS

The MVI56 Bristol Babcock Serial Slave Module allows Rockwell Automation ControlLogix I/O compatible processors to interface easily with Bristol Babcock Serial communication devices.

Features and Benefits

The MVI56-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 ControlLogix 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 – 1756 backplane compatible
- The module is recognized as an Input/Output module and has access to processor memory for data transfer between processor and module
- 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
- Local or remote rack

Hardware Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 V
Operating Temperature	0 to 60°C (32 to 140°F)
Storage Temperature	–40 to 85°C (–40 to 185°F)

Specification	Description
Shock:	30g Operational 50g non-operational Vibration: 5 g from 10 to 150 Hz
Relative Humidity	5 to 95% (non-condensing)
LED Indicators:	Module Status Backplane Transfer Status Application Status Serial Activity
Debug/Configuration port (CFG)	
CFG Port (CFG)	RJ45 (DB-9M with supplied cable) RS-232 only
Application ports (PRT1 & PRT2) Full hardware handshaking control, providing radio, modem and Multi-drop support	
Software configurable communication parameters	Baud rate: 110 to 115,200 baud, depending on protocol RS-232, 485 and 422 Parity: none, odd or even Data bits: 5, 6, 7, or 8 Stop bits: 1 or 2 RTS on/off delay: 0 to 65535 ms
App Ports (P1,P2) (Serial modules)	RJ45 (DB-9M with supplied cable) RS-232 handshaking configurable 500V Optical isolation from backplane
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot RS-232 configuration cable

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 on the same level or on different 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 ControlLogix processor's controller tags
- 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.

Visit our web site at http://www.prosoft-technology.com for a complete list of products.

Ordering Information

To order this product, please use the following:

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