FlexSAM
Serial Bus System

Section L

Features ................................................................. 2-3
Ordering Information
Communications Module .................................. 4
Manifold Assembly ........................................... 5
Module Kits ....................................................... 6
Technical Information
DeviceNet ....................................................... 7
Remote I/O ....................................................... 8
DeviceNet & Remote I/O ....................................... 9
Pin Out Information ........................................ 10-12
Dimensions
Stand Alone .................................................... 13
With F3, F5, or H1 Valve Manifold .................... 14
With H2 Valve Manifold .................................... 15
With H3 Valve Manifold .................................... 16

Bold text part numbers are standard.
Standard text part numbers may have longer lead times.
### Features, Advantages, Benefits

<table>
<thead>
<tr>
<th>Features</th>
<th>Advantages</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capable of handling 32 Inputs and 32 Outputs.</td>
<td>Control 32 sensors, limit switches or photo eyes (PNP or NPN type) and 32 solenoids or external actuating devices.</td>
<td>One complete integrated package. Saves space for machine design.</td>
</tr>
<tr>
<td>Node Addressing and Baud Rate setting through DIP Switches.</td>
<td>Eliminates the use of software to set node addresses and baud rates. Transparent switch cover allows easy conformation of settings.</td>
<td>Reduces on site node commissioning time and eases troubleshooting.</td>
</tr>
<tr>
<td>Built-in emergency stop feature on external power connector.</td>
<td>Standard safety feature at no extra cost.</td>
<td>Ability to quickly turn off all outputs while keeping communications and inputs active.</td>
</tr>
<tr>
<td>Compatible with PNP and NPN Inputs.</td>
<td>Standard input feature.</td>
<td>Allows ability to simultaneously connect PNP and NPN sensors without any additional wiring considerations.</td>
</tr>
<tr>
<td>Modular design.</td>
<td>Allows field expandability.</td>
<td>Enables field retrofits and design flexibility.</td>
</tr>
<tr>
<td>Multi-pin connector modules.</td>
<td>Utilizes 25-Pin D-Sub, industrial 19-Pin and M23 European 19-Pin connectivity.</td>
<td>One cable connection eliminates discrete wiring of remote operating valve manifolds.</td>
</tr>
<tr>
<td>Nema 4 protection.</td>
<td>Meets requirements for industrial environment.</td>
<td>Can be directly mounted on the machine, thus eliminating enclosure costs and space.</td>
</tr>
</tbody>
</table>
Features

- 8 Output Module
- 8 Input (PNP or NPN Sensors) Module
- Communication & Diagnostic LEDs
- Transparent DIP Switch Access Cover
- D-Sub, 25-Pin Connector Modules used to connect to other remotely operating Valve Manifolds
- Label with I/O Pin-Out Details
- Label for DIP Switch Setting
- BUS & Power Connectors

**Flexible Serial Addressable Module**
### Ordering Information

#### FlexSAM Serial Bus System

**Communications Module**

<table>
<thead>
<tr>
<th>Basic Series</th>
<th>Protocol $^1$</th>
<th>Addressed Solenoids</th>
<th>External Inputs</th>
<th>External Outputs $^2$</th>
<th>Connector Modules $^2$</th>
<th>Engineering Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF</td>
<td>D</td>
<td>04</td>
<td>1</td>
<td>X</td>
<td>A</td>
<td>C</td>
</tr>
</tbody>
</table>

#### Notes:

1. Maximum 32 Inputs and 32 Outputs.
2. Solenoid outputs are addressed first (based on selection from 'Addressed Solenoids' option), then the leftover output addresses are for external outputs and then connector modules.
4. Each connector has a maximum of 16 outputs. A Stand Alone Option has to be selected when ordering two connectors module.
5. Maximum 16 outputs.
6. For 28 or 32 addressed solenoids all bases are hardwired, select valve bases with Terminal Block option.
**Ordering Information**

**FlexSAM Serial Bus System**

**Manifold Assembly**

### Basic Series

- **AA**

### Valve Series

- **F3**
  - F3 Series
  - F5 Series
  - F6 Series
  - F7 Series
  - H1 Series
  - H2 Series
  - H3 Series

### End Plate Type

- **C**
  - Blank Interface Plate
  - Ported Interface Plate

### End Plate Thread Type

- **N**
  - BSPP “G”
  - NPT

### Number of Stations

1. **01**
2. **32** Number of valve manifolds in assembly

### Transition Plate

1. **Blank**
2. **No Transition Plate**
   - A - F3 to F5
   - B - F3 to F6
   - C - H1 to H2 (F5 to F6)
   - D - H1 to H3 (F5 to F7)
   - E - H2 to H3 (F6 to F7)

### Solenoid Wiring

1. **Blank**
2. **Circuit Board**
   - V - Each Station Hardwired Individually with Terminal Block
   - W - Each Station Hardwired for Double Solenoid with Terminal Block

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**Notes:**

1. Include Blanking Stations here. All Blanking Stations are wired for double solenoid.
2. When choosing Transition Plate Option, the AA# should be for the largest valves size. Example: AAF5CN05A
3. Maximum number of valve solenoids through circuit board is 26. For 27 or more valve solenoids select the Hardwiring option “V” or “W”.
4. Standard items in **Bold**.

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**How to Order**

**F3, F5, F6 and F7 Valves**

1. Specify valves with Enclosure / Lead Length option “J” or “M” – Circuit Board.
2. Manifold assembly number includes the End Plates.

**Example:**

Application requires DeviceNet Compatibility with 8 - F5 Single Solenoid valves with Blank Interface Plate 16 - Input (Sensors)

<table>
<thead>
<tr>
<th>Qty</th>
<th>Port Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SFD082XXC</td>
<td>Communication Module w/ 08 addressed solenoids &amp; 16 Inputs</td>
</tr>
<tr>
<td>1</td>
<td>AAF5CN08</td>
<td>Manifold Assembly for F5 Valves</td>
</tr>
<tr>
<td>8</td>
<td>F5165BGM19A</td>
<td>F5 Valves, 24VDC, Station 1 thru 8</td>
</tr>
</tbody>
</table>

**B2, B3, B4, B5, B6, B7 and B8 Valves**

1. Specify valves with Enclosure / Lead Length option “5” – 15mm 3-Pin DIN 43650C (male only).
2. Order a Stand Alone FlexSAM unit with external outputs.
3. Connect a cable with female 15mm 3-Pin DIN 43650C on one side and a micro (M12) male connector on the other side between the B series valves and FlexSAM external output modules.

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**Interface 2000, Solstar, PVLB10 and PVLC10 Valves**

1. Specify valves with 25-Pin D-Sub connector module.
2. Order a Stand Alone FlexSAM unit with D-Sub connector modules.
3. Since the pinouts on the FlexSAM are different from that of the PVL series, Interface 2000 and Solstar valves, use a cable to connect between the two D-Sub connectors.

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**H Series Valves / ISO Valves 5599-2**

**Size 1, 2, 3**

1. Specify valves with Enclosure / Lead Length option “J” or “M” – Circuit Board.
2. Manifold assembly number includes the End Plates.

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**ADEX Valves**

1. Specify valves with 25-Pin D-Sub connector module.
2. Order a Stand Alone FlexSAM unit with D-Sub connector modules.
### Input and Output Module Kits*

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Discrete Input Module</td>
<td>SEA00A</td>
</tr>
<tr>
<td>8 Discrete Output Module</td>
<td>SEC00A</td>
</tr>
</tbody>
</table>

*Kit includes: I/O expansion ribbon cables and tie rods.

### Connector Module Kits*

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single D-Sub, 25-Pin Connector Module</td>
<td>SCD251SB</td>
</tr>
<tr>
<td>Dual D-Sub, 25-Pin Connector Module</td>
<td>SCD252SB</td>
</tr>
<tr>
<td>Single 19-Pin Connector Module</td>
<td>SCC191SB</td>
</tr>
<tr>
<td>Dual 19-Pin Connector Module</td>
<td>SCC192SB</td>
</tr>
<tr>
<td>Single M23 Connector Module</td>
<td>SCM231SB</td>
</tr>
<tr>
<td>Dual M23 Connector Module</td>
<td>SCM232SB</td>
</tr>
</tbody>
</table>

*Kit includes: I/O expansion ribbon cables and tie rods.

### Communication Module Kit for Stand Alone Unit*

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeviceNet™ Communication Module</td>
<td>SMD00C</td>
</tr>
<tr>
<td>Remote I/O™ Communication Module</td>
<td>SMR00C</td>
</tr>
</tbody>
</table>

*Kit includes: Mounting brackets.

* These Kits can be used for field retrofits and expansion