ONLINE-HELP

Flexi Soft Ethernet IP: Implicit Messaging with Rockwell RSLogix5000



Flexi Soft Gateways





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1 About this Online Help

This Online Help describes the integration from FXO-GENT into a Rockwell PLC by Implicit Messaging

1.1 Software used:

Rockwell RSLogix 5000

1.2 Hardware Used

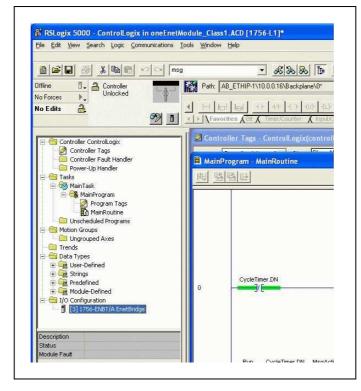
- Rockwell PLC ControlLogix 1756 System
- FX0-GENT as of version V2.00.0 (SICK number 1044072)

1.2.1 Notes

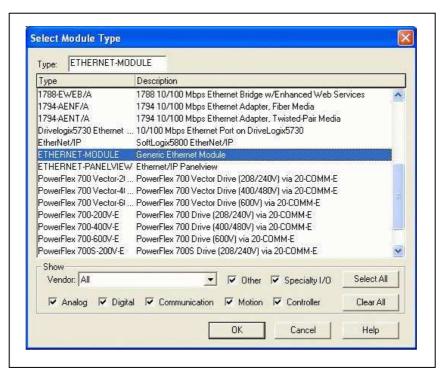
- RSLogix 5000 only allows one Class 1 connection to an EtherNet/IP device
- For integration with RSLogix no EDS file is needed

2 Configuration

- Right click on the Ethernet Interface module
- In the context menu, select **New Module**



• Select ETHERNET-MODULE Generic Ethernet Module from the selection list



• Click on OK. The Module Properties dialog box opens (see e.g. page 10)

RSLogix 5000 module type selection

Adding a new module

in RSLogix 5000

- Enter a Name for the module
- Enter a **Description** for the module
- Select a Comm Format to define the data type

For cyclic two-way connections, valid settings are:

- o- Data DINT: 32 bit (long words)
- o- Data INT: 16 bit (words)
- o- Data SINT: 8 bit (bytes)

For cyclic input only connections, valid settings are:

- o Input Data DINT: 32 bit (long words)
- o- Input Data INT: 16 bit (words)
- o Input Data SINT: 8 bit (bytes)
- Enter the IP Address of the Flexi Soft EtherNet/IP gateway
- Enter the Connection Parameters:
 - o- Enter the Input Assembly Instance.
 - o Enter the Input Size (input data length). Words contain two bytes and long words contain four bytes. Adjust the size according to the required number of bytes
 - o- Enter the Output Assembly Instance.
 - o- Enter the **Output Size** (output data length). Words contain two bytes and long words contain four bytes. Adjust the size according to the required number of bytes
 - o The Configuration Assembly Instance is not supported. Set this parameter to any value
 - o Set the Configuration Size to zero (there are no configuration parameters).

For connection parameter example configurations please see section "Class 1 connection parameter examples" on page 10

Requested-Packet-Intervall in RSLogix 5000

Flexi Soft Gateway

- Click on OK.
- Enter the Requested Packet Interval

| Requested Packet Interval (RPI): | 40.0 🛟 ms | (1.0 - 3200.0 m | 5) | |
|----------------------------------|---------------------|-----------------|----|--|
| 🗖 Inhibit Module | | | | |
| Major Fault On Controller If Con | nection Fails While | e in Run Mode | | |
| Module Fault | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Enter a value that conforms to the requirements of your system. Please refer to the sections 2.1"Packet update interval" and 2.2"Bandwidth limitations" on page 9
Click on Next >. The Module Information dialog opens

NOTE: The Module Information dialog will not be updated until the program is downloaded to the PLC and the PLC is running.

• Click on **Finish**. The Flexi Soft gateway and the input and output controller tags are now displayed in the main window of RSLogix 5000

| Path: AB_ETHIP-1\10.0.016\Backplane\0* | → 器 | | |
|---|---|---|---|
| | | | |
| | | | |
| | tere I Commerce I Commercestation | 1 110001 00000 1 | LANDA CLARKER CARACTER |
| | our X compare X comparement | Y movements X | leiMisc. 🕻 FleiShift 🔏 Sequencer , |
| 🇳 Controller Tags - Controll.ogix(controller) | | | |
| Scope: ControlLogix(controll - Show All | ▼ Sort Tag Name ▼ | | |
| Tag Name 스 | Force Mask Style | Type | Description |
| + FlexiSoft:C | {} | AB:ETHERNET | |
| - FlexiSolt:1 | () | AB:ETHERNET | FlexiSoft Input Data - to PLC |
| + FlexiSolt1.Data | {} Decimal | SINT[202] | FlexiSoft Input Data - to PLC |
| - FlexiSolt:0 | () | AB:ETHERNET | FlexiSoft Output Data - to gateway |
| + FlexiSolt:0.Data | () Decimal | SINT(50) | FlexSoft Output Data - to gateway |
| | | | |
| | | | |
| | | | |
| | | | |
| | Controller Tage - Controll cept (controller) Score Controllogis(controller) Score Contr | I I | I I |

- Save the RSLogix 5000 program
- Download the program to the PLC
- Start the PLC

The Flexi Soft EtherNet/IP gateway in the RSLogix 5000 main window while offline

ſ

Flexi Soft Gateway

• Click on Controller Tags and observe the RSLogix 5000 screen

The Flexi Soft EtherNet/IP gateway in the RSLogix 5000 main window in Run mode

| Ben Bun D Bun Mada | IN PARA | | | | | |
|---|-------------------------------------|--------------------------------------|---------------------|--------------------|-----------------------|-----|
| | Park AB_ETHIP-1\10.0.0.16\8 | ackplane/0" 🚽 💑 | | | | |
| | | a last and a | | | al. | |
| No Edits 🔒 🖬 Battery UK | 0 + + Afavorites (Bt (Timer/Cou | nter & Input/Output & Compare & Co | in tablah I lined o | goal & Flemes & Fl | Court Consummer | |
| | | A A A | A | A A | Variance 1 | |
| 🕞 🔄 Controller ControlLogix | 🖉 Controller Tags - ControlLogix | (controller) | | | | |
| Controller Tags | Scope: ControlLogis(controll • Show | Show All V Sort Tag Na | me 💌 | | | |
| Controller Fault Handler | Tag Name | Value + Force Ma | | Type | Description | |
| - Carlo Power-Up Handler | - FlexSoltJ | () | () | AB:ETHERNET | FlexiSoft Input Dat. | |
| - ManTask | - FlexSolt1.Date | () | () Decinal | SINT[10] | FlexSoft Input Dat. | |
| 🕂 🕞 MainProgram | + FlexSolt1.Data(0) | 8 | Decinal | SINT | FlexiSoft Input Dat | |
| - El Unscheduled Programs | + FlexSolt1.Data[1] | 0 | Decinal | SINT | FiexSoft Input Dat. | |
| E G Motion Groups | + FlexSolt1.Data[2] | 0 | Decinal | SINT | FlexSoft Input Dat. | |
| Trends | + FlexSolt1.Data[3] | 0 | Decinal | SINT | FlexSolt Input Dat. | |
| E 🔂 Data Types | + FlexSolt1.Data[4] | 8 | Decinal | SINT | FireiSoft Input Dat. | |
| User-Defined | + FlexSolt1.Data(5) | 0 | Decinal | SINT | FlexiSoft Input Dat. | |
| Control Strings Control Strings Control Strings | + FlexSolt1.Data[6] | 0 | Decinal | SINT | FlexiSoft Input Dat | |
| Gg Produce Defined | + FleeSoft1.Data(7) | 0 | Decinal | SINT | Files/Soft Input Diat | |
| E Configuration | + FlexiSoft1.Data(8) | 0 | Decinal | SINT | FieseSoft Input Dist | |
| 🖃 🖞 [3] 1756-ENBT/A EnetBridge | + FlexSoft1.Data(9) | 0 | Decinal | SINT | FlexiSoft Input Dat. | |
| 7 4 chiencer saves a classes | FlexiSolt 0. Data | | () Decinal | SINTI10 | PlexiSoft Durpur D. | |
| | + FlexSolt 0.Data[0] | () | () Decinal | SINT | FeeSoft Dutput D., | |
| | + FlexSolt 0.Data[1] | 0 | Decinal | SINT | FlexiSoft Dutput D., | |
| | + FlexSolt 0.Data[2] | 0 | Decinal | SINT | RevSolt Output D. | |
| | + FlexiSoft 0.Data[3] | 0 | Decinal | SINT | FlexSoft Dubput D. | |
| | + FlexSoft 0.Data[4] | 0 | Decinal | SINT | FlexSoft Output D. | |
| | + FlexiSoft 0.Deta[5] | 0 | Decinal | SINT | FlexiSoft Output D. | |
| | + FlexiSoft 0.Deta(6) | 0 | Decinal | SINT | FlexiSoft Dutput D | |
| | + FlexSoft 0.Data[7] | 0 | Decinal | SINT | FlexSoft Dulput D | |
| 1 | + FlexSoft 0.Data(8) | 0 | Decinal | SINT | FlewSoft Dutput D. | |
| | + FlexSolt0.Data(9) | 0 | Decinal | SINT | | |
| | Culture has been | | Decinet | 500 | | 1.1 |
| | | | 1 | | | , |
| | Monitor Tags (Edit Tags / | | | | | |
| | <u> </u> | | | | | |

• Right click on the **ETHERNET-MODULE Flexi Soft** in the device tree on the right side of the screen and select the context item **Module Properties** to open the corresponding dialog. Then select the **Module Info** tab

| Identification Vendor: | | Status Major Fault | None |
|---------------------------|----------------|-----------------------|----------------------|
| Product Type: | Generic Device | Minor Fault | None |
| Product Code: | (9985) Unknown | Internal State: | (16#0074) unknown |
| Revision: | 2.1 | Configured: | Yes |
| erial Number: | 00000013 | Owned: | No |
| Product Name: | FX0-GENT | Module Identity: | Mismatch |
| | | Refresh | <u>R</u> eset Module |

Module Info for the Flexi Soft EtherNet/IP gateway in RSLogix 5000

2.1 Packet update interval

The packet update interval for Class 1 connections that will be returned to the EtherNet/IP PLC in the Forward Open response depends on the following factors:

- the value for the **Requested Packet Interval** received from the EtherNet/IP PLC in the Forward Open message
- the **Maximum PLC Update Rate** as configured in the **Gateway configuration** dialog of the Flexi Soft Designer
- the 10 ms system clock that the EtherNet/IP gateway operates on

If the Requested Packet Interval is less than the Maximum PLC Update Rate, the packet

update interval will be set to the Maximum PLC Update Rate. Otherwise, it will be set to theRequested Packet Interval. If the packet update interval is not a multiple of 10 ms (10, 20, 30, 40, etc.), then the packet update interval will be adjusted up to the next multiple of 10 ms.

| Requested | Maximum PLC | Actual packet | Description |
|-----------------|-------------|-----------------|---|
| Packet Interval | Update Rate | update interval | |
| 5 ms | 10 ms | 10 ms | Set to Maximum PLC Update Rate |
| 10 ms | 10 ms | 10 ms | Requested Packet Interval accepted |
| 15 ms | 20 ms | 20 ms | Set to Maximum PLC Update Rate |
| 15 ms | 10 ms | 20 ms | Requested Packet Interval adjusted upward to 20 ms |
| 20 ms | 25 ms | 30 ms | Maximum PLC Update Rate adjusted upward to 30 ms |
| 40 ms | 30 ms | 40 ms | Requested Packet Interval accepted |
| 32 ms | 30 ms | 40 ms | Requested Packet Interval adjusted upward to 40 ms |
| 48 ms | 40 ms | 50 ms | Requested Packet Interval adjusted upward to 50 ms |
| 50 ms | 40 ms | 50 ms | Requested Packet Interval accepted |

Examples for the packet update interval

2.2 Bandwidth limitations

The maximum number of Class 1 messages per second is limited by the Flexi Soft CPU. At 50% of available CPU bandwidth, this is approximately 200 messages per second or one Class 1 connection at 10 ms I/O update rate (the system clock frequency of the FXO-GENT is 10 ms).

| Recommended | |
|----------------------|---|
| bandwidths for Class | 1 |
| messages | |

| PLC update rate (ms) | Cyclic two-way I/O connections | Cyclic input-only multicast connections |
|----------------------|-----------------------------------|--|
| 10 | 1 | 2 |
| 20 | 2 | 4 |
| 40 | Up to 4 | Up to 8 |

NOTE: The gateway will not enforce these bandwidth recommendations. However, if the bandwidth used for Class 1 communication exceeds 200 messages per second, the RS-232 interface and the Ethernet TCP/IP interface will slow down.

Get all input data sets and set all

3

output data sets

Class 1 connection parameter examples

This section shows examples for the required **Connection Parameters** on the **General** tab

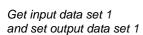
of the **Module Properties** dialog in RSLogix 5000 in order to get different input data sets and set different output data sets.

| Type: Vendor: Parent: | ETHERNET-MODULE Generic Ethern Allen-Bradley EnetBridge | et Module | | |
|-----------------------------|---|------------------|-----------------------|------------|
| Na <u>m</u> e: | FlexiSoft | Connection Para | ameters Assembly | |
| Description: | FlexiSoft Gateway | | Assembly Instance: | Size: |
| | T. | Input | 1 | 202 🕂 (8-ы |
| | 2 | O <u>u</u> tput: | 5 | 50 ÷ (8-bi |
| 77.5 | t Data - SINT 🚽 | Configuration: | 10 | 0 ÷ (8-bi |
| -Address / H | | Status Input: | | |
| • IP <u>A</u> ddr | ess: 10 . 0 . 0 . 120 | Drams Whor. | | |
| C Host N | ame: | Status Output | | |
| | · · · | | 17 | |

This example shows how to select all four input data sets (50 + 32 + 60 + 60 = 202) bytes, starting at the beginning of input data set 1 = Assembly Instance 1) and all five output data sets (10 + 10 + 10 + 10 + 10 = 50) bytes, starting at the beginning of output data set 1 = Assembly Instance 5). The unit for the size depends on the previously chosen Comm Format (SINT = 8 bit = 1 byte in this case).

| ieneral* Co | nnection Module Info | | | | |
|---|---|------------------------|-----------|-------|-----------|
| Type: Vendor: Parent: | ETHERNET-MODULE Generic Ethern Allen-Bradley EnetBridge | et Module | | | |
| Na <u>m</u> e: | FlexiSoft | Connection Par | Assembly | | |
| Description: | FlexiSoft Gateway | Input: | Instance: | Size: | 🕂 (8-bit) |
| | <u></u> | O <u>u</u> tput: | 5 | 10 | ÷ (8-bit) |
| Comm <u>F</u> orma - Address / I | t Data - SINT 🔄 | <u>Configuration</u> : | 10 | 0 | ÷ (8-bit) |
| General P Add Gen | | <u>S</u> tatus Input: | | | Ī |
| C Host N | ame: | Status Output | | | |

This example shows how to select only input data set 1 (= 50 bytes, starting at the beginning of input data set 1 = Assembly Instance 1) and only output data set 1 (= 10) bytes, starting at the beginning of output data set 1 = Assembly Instance 5). The unit for the size depends on the previously chosen Comm Format (SINT = 8 bit = 1 byte in this case).



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Flexi Soft Gateway

Get input data set 2 and set output data set 3

| ieneral* Cor | nection Module Info | | | |
|------------------------------------|---|--------------------------------------|----------------------------------|-------------|
| Type: Vendor: Parent: | ETHERNET-MODULE Generic Ethern Allen-Bradley EnetBridge | et Module | | |
| Na <u>m</u> e: Description: | FlexiSoft | Connection Para | ameters Assembly Instance: | Size: |
| Descri <u>b</u> tion: | FlexiSoft Gateway | Input: | 2 | 32 ÷ (8-bit |
| | | O <u>u</u> tput: | 7 | 10 🕂 (8-bit |
| Comm <u>F</u> ormat Address / H | Data - SINT 🔄 | <u>Configuration</u> : | 10 | 0 🔅 (8-bit |
| IP <u>A</u> ddn C Host Na | | <u>Status Input</u> Status Output | | |
| | ОК | Cancel | Apply | Help |

This example shows how to select only input data set 2 (= 32 bytes, starting at the beginning of input data set 2 = Assembly Instance 2) and only output data set 3 (= 10 bytes, starting at the beginning of output data set 3 = Assembly Instance 7). The unit for the size depends on the previously chosen Comm Format (SINT = 8 bit = 1 byte in this case).

| eneral* Co [ype: /endor: ^p arent: | nnection Module Info ETHERNET-MODULE Generic Ethem Allen-Bradley EnetBridge | et Module | | | |
|---|--|------------------|-----------|-------|-----------|
| Na <u>m</u> e: | FlexiSoft | Connection Para | Assembly | | |
| Descri <u>p</u> tion: | FlexiSoft Gateway | Input | Instance: | Size: | ÷ (8-bit) |
| | | O <u>u</u> tput: | 5 | 20 | |
| Comm <u>F</u> ormal - Address / H | t Data - SINT 🗾 | Configuration: | 10 | 0 | ÷ (8-bit) |
| IP Address / F | | Status Input: | | | 1 |
| C Host Na | ame: | Status Output: | | | |

This example shows how to select input data sets 1 and 2 (50 + 32 = 82 bytes, starting at the beginning of input data set 1 = Assembly Instance 1) and output data sets 1 and 2 (10 + 10 = 20 bytes, starting at the beginning of output data set 1 = Assembly Instance 5). The unit for the size depends on the previously chosen Comm Format (SINT = 8 bit = 1 byte in this case).

Get input data sets 1 and 2 and set output data sets 1 and 2

Get input data set 1 and the first 20 bytes of input data set 2 and set output data set 3

| Type: Vendor: | ETHERNET-MODULE Generic Ethern Allen-Bradley | et Module | | |
|--|---|--|--|---------------------------------------|
| Parent: Na <u>m</u> e: Descrigtion: | EnetBridge FlexiSoft FlexiSoft Gateway | Connection Par- | ameters Assembly Instance: 1 7 | Size: 70 ÷ (8-bit) 10 ÷ (8-bit) |
| Comm <u>F</u> orma Address / F IP <u>A</u> ddr C <u>H</u> ost N | ress: 10 . 0 . 0 . 120 | Configuration: Status Input: Status Output | | 0 (8-bit) |

This example shows how to select input data set 1 and the first 20 bytes of input data set 2 (50 + 20 = 70 bytes, starting at the beginning of input data set 1 = Assembly Instance 1) and only output data set 3 (= 10 bytes, starting at the beginning of output data set 3 =

Assembly Instance 7). The unit for the size depends on the previously chosen Comm Format (SINT = 8 bit = 1 byte in this case).

| ieneral* Co Type: Vendor: Parent: | nnection Module Info ETHERNET-MODULE Generic Ethem Allen-Bradley EnetBridge | et Module | | | |
|--|--|---|---|-------|------------------------|
| Na <u>m</u> e: Descri <u>p</u> tion: | FlexiSoft FlexiSoft Gateway | Connection Para | meters Assembly Instance: 1 8 | Size: | 수 (8-bit) 수 (8-bit) |
| Comm <u>F</u> orma Address / F IP <u>A</u> ddr | ess: 10 . 0 . 0 . 120 | O <u>u</u> tput: <u>C</u> onfiguration: <u>S</u> tatus Input: Status Output: | 10 | | ~ (8-bit) |

This example shows how to select the first 25 bytes of input data set 1 (= 25 bytes, starting at the beginning of input data set 1 = Assembly Instance 1) and output data sets 4 and 5 (10 + 10 = 20 bytes, starting at the beginning of output data set 4 = Assembly Instance 8). The unit for the size depends on the previously chosen Comm Format (SINT = 8 bit = 1 byte in this case).

Get the first 25 bytes of input data set 1 and set output data sets 4 and 5

Get input only data set 1

| ype: | nnection Module Info ETHERNET-MODULE Generic Ethern | et Module | | | |
|--|--|---------------------|----------------------------------|-------|------------|
| /endor: ^P arent: | Allen-Bradley EnetBridge | | | | |
| la <u>m</u> e: | FlexiSoft | Connection Para | ameters Assembly Instance: | Size: | |
| escription: | FlexiSoft Gateway | [nput: | 1 | 25 | ÷ (16-bit) |
| | | O <u>u</u> tput: | 7 | 0 | |
| Comm <u>F</u> orma Address / H | t Input Deta - INT | Configuration: | 10 | 0 | ÷ (8-bit) |
| 2011 C C C C C C C C C C C C C C C C C C | ess: 10 . 0 . 0 . 120 | <u>Status Input</u> | | | |
| C Host N | 1 | Status Output: | | | |

This example shows how to select only input data set 1 (50 bytes = 25 words, starting at the beginning of input data set 1 = Assembly Instance 1). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

| Type: | ETHERNET-MODULE Generic Ethern | et Module | | | |
|-------------------------|--------------------------------|---------------------|-----------------------|-------|------------|
| Vendor: Parent: | Allen-Bradley EnetBridge | | | | |
| Name: | FlexiSoft | Connection Para | ameters | | |
| Description: | | | Assembly Instance: | Size: | |
| oreacin <u>p</u> uorit. | FlexiSoft Gateway | <u>I</u> nput: | 2 | 16 | ÷ (16-bit) |
| | | 0 <u>u</u> tput: | 7 | 0 | - |
| | t Input Data - INT 🔄 | Configuration: | 10 | 0 | ÷ (8-bit) |
| Address / H | | | | - | - |
| • IP <u>A</u> ddr | ess: 10 . 0 . 0 . 120 | <u>Status Input</u> | 1 | | |
| C Host N | ame: | Status Output: | | | |
| | | | | 1 | |

This example shows how to select only input data set 2 (32 bytes = 16 words, starting at the beginning of input data set 2 = Assembly Instance 2). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

Get input only data set 2

Get input only data

set 3

Class 1 connection parameter examples

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| Type: Vendor: Parent: | nnection Module Info ETHERNET-MODULE Generic Ethern Allen-Bradley EnetBridge | et Module | | |
|---|---|---|---------------------------------|------------|
| Na <u>m</u> e: Descri <u>p</u> tion: | FlexiSoft FlexiSoft Gateway | Connection Para | Assembly Instance: 3 7 | Size: |
| Address / H | ess: 10 . 0 . 0 . 120 | Configuration: Status Input Status Output | | 0 🕂 (8-ыі) |

This example shows how to select only input data set 3 (60 bytes = 30 words, starting at the beginning of input data set 3 = Assembly Instance 3). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

| 15 | nection Module Info | | | | |
|--------------------|--------------------------------|------------------------|-----------|-------|-----------|
| Туре: | ETHERNET-MODULE Generic Ethern | et Module | | | |
| Vendor: | Allen-Bradley | | | | |
| Parent: | EnetBridge | - Connection Par | motoro | | |
| Na <u>m</u> e: | FlexiSoft | Connection Par | Assembly | | |
| Description: | FlexiSoft Gateway | | Instance: | Size: | |
| - | I lonio in a dating | Input | 4 | 30 | ÷ (16-bit |
| | 8 | O <u>u</u> tput: | 7 | 0 | |
| Comm <u>F</u> orma | t Input Data - INT 🔄 | Configuration: | 10 | 0 | ÷ (8-bit) |
| Address / H | łost Name | <u>c</u> oringaration. | | - | |
| | ess: 10 . 0 . 0 . 120 | <u>Status Input:</u> | | | |
| | | Status Dutput | ' | | |
| C Host N | ame: | ajarus purpur | 1 | | |
| | | (i | | | |

This example shows how to select only input data set 4 (60 bytes = 30 words, starting at the beginning of input data set 4 = Assembly Instance 4). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

Get input only data set 4

Get input only data sets 1 and 2

| eneral* _{Col} [ype: /endor: ^p arent: | nnection Module Info ETHERNET-MODULE Generic Ethern Allen-Bradley EnetBridge | | | | |
|---|---|------------------|--------------------|-------|-----------|
| Na <u>m</u> e: | FlexiSoft | Connection Para | meters Assembly | | |
| Description: | FlexiSoft Gateway | | Instance: | Size: | |
| | | <u>I</u> nput: | 1 | 41 | 16-bit) |
| | <u>×</u> | O <u>u</u> tput: | 7 | 0 | |
| | nput Data + INT | Configuration: | 10 | 0 | ÷ (8-bit) |
| Address / H | | Status Input: | | | |
| | | Status Output: | | , | |

This example shows how to select input data sets 1 and 2 (50 + 32 = 82 bytes = 41 words, starting at the beginning of input data set 1 = Assembly Instance 1). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

| Type: ETHERNET-MODULE Generic Ethernet M Vendor: Allen-Bradley Parent: EnetBridge Name: FlexiSoft | odule Connection Param | | | |
|--|---------------------------|--------------------------------------|-------|------------|
| Name: FlexiSoft | onnection Param | | | |
| Description: FlexiSoft Gateway | A Ir Input: | ieters Assembly Instance: 2 | Size: |] (16-bit) |
| | ogipui. I | 10 | |] (8-bit) |

This example shows how to select input data sets 2 and 3 (32 + 60 = 92 bytes = 46 words, starting at the beginning of input data set 2 = Assembly Instance 2). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

Get input only data sets 2 and 3

Get input only data set 1, 2 and 3

Class 1 connection parameter examples

Online Help Flexi Soft Gateway

| General [*] Co Type: Vendor: Parent: | nnection Module Info ETHERNET-MODULE Generic Etheme Allen-Bradley | et Module | | |
|---|---|--|---------------------------------------|--------------------------------------|
| Na <u>m</u> e: Description: Comm <u>F</u> orma Address / H | ess: 10 . 0 . 0 . 120 | Connection Para Input: Output: Configuration: Status Input Status Output: | Assembly Instance: 1 7 10 | Size: 71 ÷ (16-bit 0 • (8-bit) |

This example shows how to select input data sets 1, 2 and 3 (50 + 32 + 60 = 142 bytes = 71 words, starting at the beginning of input data set 1 = Assembly Instance 1). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

| Type: Vendor: Parent: | ETHERNET-MODULE Generic Ethern Allen-Bradley EnetBridge | et Module | | | |
|-----------------------------|---|----------------------|-----------|-------|-----------|
| Na <u>m</u> e: | FlexiSoft | Connection Para | Assembly | Cine | |
| Description: | FlexiSoft Gateway | Input: | Instance: | Size: | 🛨 (16-bit |
| | | O <u>u</u> tput: | 7 | 0 | |
| Comm <u>F</u> ormal | t Input Data - INT | Configuration: | 10 | 0 | ÷ (8-bit) |
| ● IP <u>A</u> ddr | protection and the second second second | <u>S</u> tatus Input | | | Ī |
| C Host Na | ame: | Status Output: | | | |

This example shows how to select all four input data sets (50 + 32 + 60 + 60 = 202) bytes

= 101 words, starting at the beginning of input data set 1 = Assembly Instance 1). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

Get input only data sets 1 to 4

Online Help

Class 1 connection parameter examples

Flexi Soft Gateway

Get the first 30 bytes of input data set 1

| General* Cor | nnection Module Info | | | | |
|--------------------------------|--------------------------------|------------------------|-----------------------|-------|------------|
| Type: | ETHERNET-MODULE Generic Ethern | iet Module | | | |
| Vendor: | Allen-Bradley | | | | |
| Parent: | EnetBridge | - Connection Par | ameters | | |
| Na <u>m</u> e: Description: | FlexiSoft Gateway | Connectorri an | Assembly Instance: | Size: | |
| Dosenguon. | | <u>I</u> nput: | 1 | 15 | ÷ (16-bit) |
| | | O <u>u</u> tput: | 7 | 0 | - |
| 137 | nput Data - INT 📃 💌 | <u>C</u> onfiguration: | 10 | 0 | ÷ (8-bit) |
| Address / H | ess: 10.0.0.120 | Status Input: | | | - |
| | | | | | |
| C Host Na | ame: | Status Output | 1 | | |
| | | * | | | |

This example shows how to select the first 30 bytes of input data set 1 (30 bytes = 15 words, starting at the beginning of input data set 1 = Assembly Instance 1). The unit for the size depends on the previously chosen Comm Format (INT = 16 bit = 2 bytes or 1 word in this case).

Troubleshooting for the FX0-GENT

4

Flexi Soft Gateway

Diagnostics and troubleshooting

For information how to perform diagnostics on the Flexi Soft system please refer to theoperating instructions for the Flexi Soft Designer software (SICK part no. 8012998).

| Error | Possible cause | Possible remedy |
|---|---|---|
| The Flexi Soft Designer tool | FXO-GENT has no power supply. | Establish the power supply. |
| does not connect to the Flexi Soft gateway module | FXO-GENT is not in the same physical network as the PC. The PC is configured to another subnet mask in the TCP/IP settings. FXO-GENT has already been config- ured once and has a fixed set IP address or an IP address assigned by a DHCP server that is not recognised. | Check the Ethernet wiring and network settings on the PC and correct if necessary. Set the subnet mask on the PC to 255.255.0.0 (factory setting of the FXO-GENT). Check the communication settings in the Flexi Soft Designer. |
| FXO-GENT does not supply any data. LED PWR ● Green LED LINK/ACT ●/●: Green LED STATUS [®] :●: Red/green | FXO-GENT is configured for data transfer to PLC, but Ethernet communication is not yet established or faulty. Duplicate IP address detected. Another device on the network has the same IP address. | Minimum one Ethernet connection needs to be established. Set up Ethernet connection on PLC side, check Ethernet cabling, check Ethernet connection settings on PLC and in the Flexi Soft Designer. If no Ethernet communication is required, disable the Ethernet connections/PLC interfaces on the FX0-GENT. Adjust IP address and power cycle device. |
| FXO-GENT does not supply any data. LED PWR ● Green LED LINK/ACT ●/ ● : Green LED STATUS [®] ● : Red (1 Hz) | Configuration required. Configuration download is not completed. | Configure the FX0-GENT and download the configuration to the device. Wait until the configuration download has been completed. |
| FXO-GENT does not supply any data. LED PWR ● Green LED LINK/ACT ●/ ·●· Green LED STATUS ⁸ [,] ● Green | No data set is activated. No Ethernet communication interface is enabled. | Activate at least one data set. |
| FXO-GENT does not supply any data. LED PWR ● Green LED LINK/ACT ●/:●: Green LED STATUS ⁸ : ●: Green (1 Hz) | FX0-GENT is in Idle mode. | CPU/application is stopped. Start CPU (change into Run mode). |
| FXO-GENT functioned correctly after configuration, but suddenly no longer supplies data. LED PWR ● Green LED LINK/ACT ●/.●: Green LED STATUS [®] :●: Red/green | FX0-GENT is operated in slave mode, the IP address is assigned from a DHCP server. After the FX0-GENT or the DHCP server has been restarted, a different IP address that is unknown to the PLC has been assigned to the FX0-GENT. | Either assign a fixed IP address to the FXO-GENT, or reserve a fixed IP address for the FXO-GENT in the DHCP server (manual assignment by means of the MAC address of the FXO-GENT). |
| FXO-GENT/Flexi Soft system is in Critical fault mode. LED PWR ● Green LED LINK/ACT . Green LED STATUS [®] ● Red | FXO-GENT is not plugged properly into the other Flexi Soft module. Module connecting plug is soiled or damaged. Other Flexi Soft module has internal critical error. | Plug the FXO-GENT in correctly. Clean the connecting socket/plug. Repower the system. Check the other Flexi Soft modules. |
| FXO-GENT is in Critical fault mode. LED PWR ● Green LED LINK/ACT ●/:●: Green LED STATUS [®] : ●: Red (2 Hz) | FXO-GENT internal device error CPU firmware version does not support Flexi Soft gateways. | Switch off the power supply of the Flexi Soft system and switch it on again. Check the diagnostics messages with the Flexi Soft Designer. Use a CPU with the required firmware version (see section 2.2 "Correct use" on page 9). If the error remains, replace the gateway. |

Symbol description:

O: LED is off. Green: LED lights up green. Red: LED flashes red.

8) On older versions of the FXO-GENT, the STATUS LED is called MS LED.