Kepware Technologies

Reconciling KEPServerEX Logical Addresses with ROCLINK's Point Numbers

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1. Overview

This document intends to discuss how to reconcile the Point Number addressing syntax used in the Emerson Process Management configuration's ROCLINK 800 software with KEPServerEX's addressing syntax. It will only describe the most common Point Types: users should be able to extrapolate to other Point Types.

1.1 Resources

It is recommended that this document be used in conjunction with the following:

- Fisher ROC Serial Driver Help
- ROC Protocol Specifications Manual

2. Referencing Physical I/O Points

In the ROCLINK 800 software, physical I/O points are referenced using a Point Number. This number is equivalent to KEPServerEX's Logical Address, except in syntax: ROCLINK 800 Point Numbers use an alphanumeric code, whereas KEPServerEX Logical Addresses use a number. For more information, refer to the table below.

ROCLINK Point Number	KEPServerEX Logical Address
A1-A16	0-15
B1-B16	16-31
C1-C16	32-47
D1-D16	48-63
E1-E16	64-79
…	…

As shown in the table above, Point Number A5 would be Logical Address 4. Point Number C5 would be Logical Address 36, by the function A+B+C5 (or 15+16+5) to equal 36.

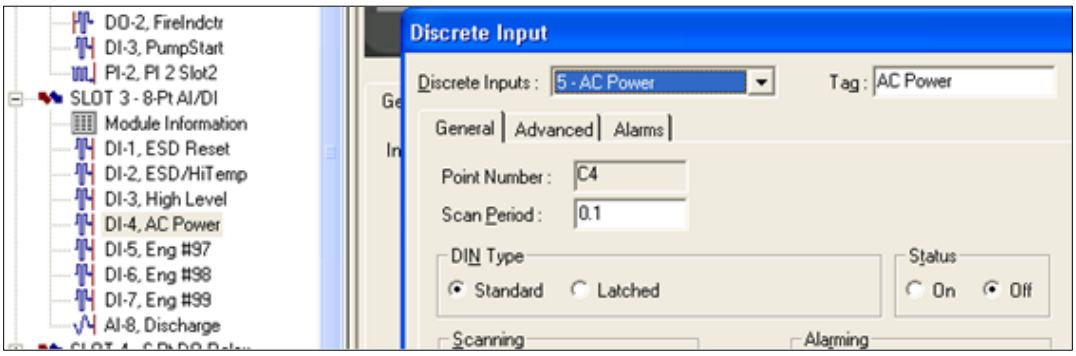
2.1 Discrete Inputs

Discrete Inputs are Point Type #1.

Note: The status parameter "2" is generally used to represent the state of the Discrete Input.

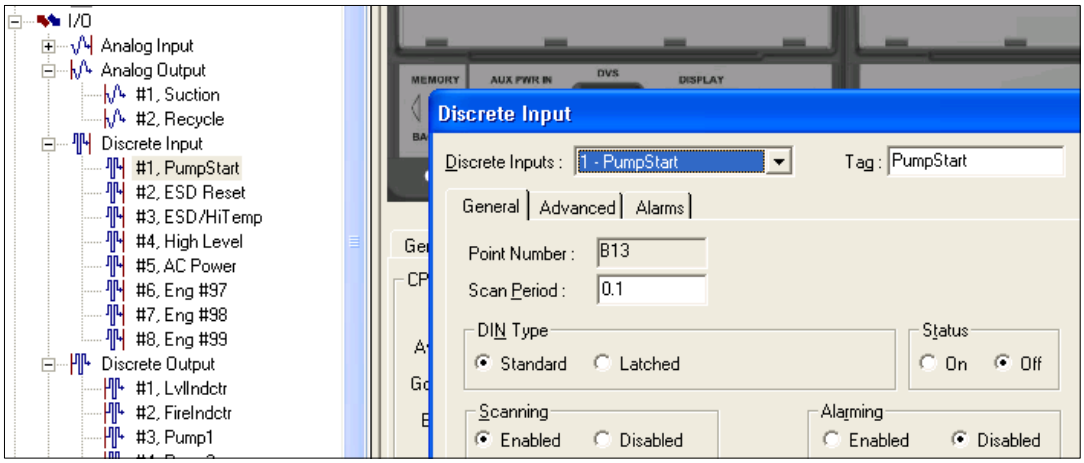
2.1.1 Example 1: 5-AC Power

The Discrete Input 5-AC Power has a Point Number of C4. The Logical Point may be calculated as A+B+4 (or 15+16+4) to equal 35. As such, the desired point syntax in KEPServerEX is 1-35.#, where # is the desired parameter.

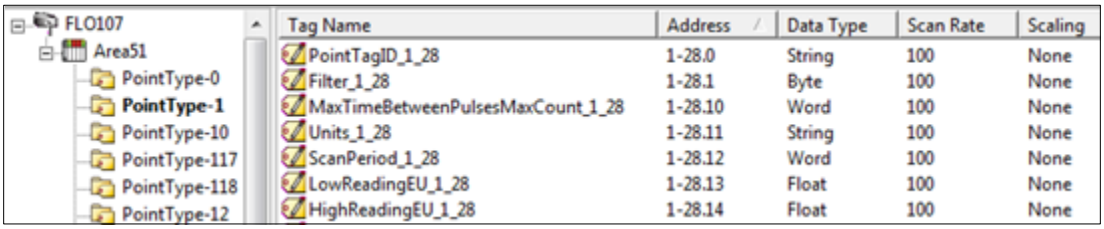


2.1.2 Example 2: 1-PumpStart

The Discrete Input 1-PumpStart has a Point Number of B13. The Logical Point may be calculated as A+13 (or 15+13) to equal 28. As such, the desired point syntax in KEPServerEX is 1-28.#, where # is the desired parameter.



Note: The I/O configuration tree indicates that the first Discrete Input #1, PumpStart, has a Logical Address of 28. Therefore, it should appear as the lowest Logical Address in the Discrete Input, Point Type (as displayed in the KEPServerEX image below).

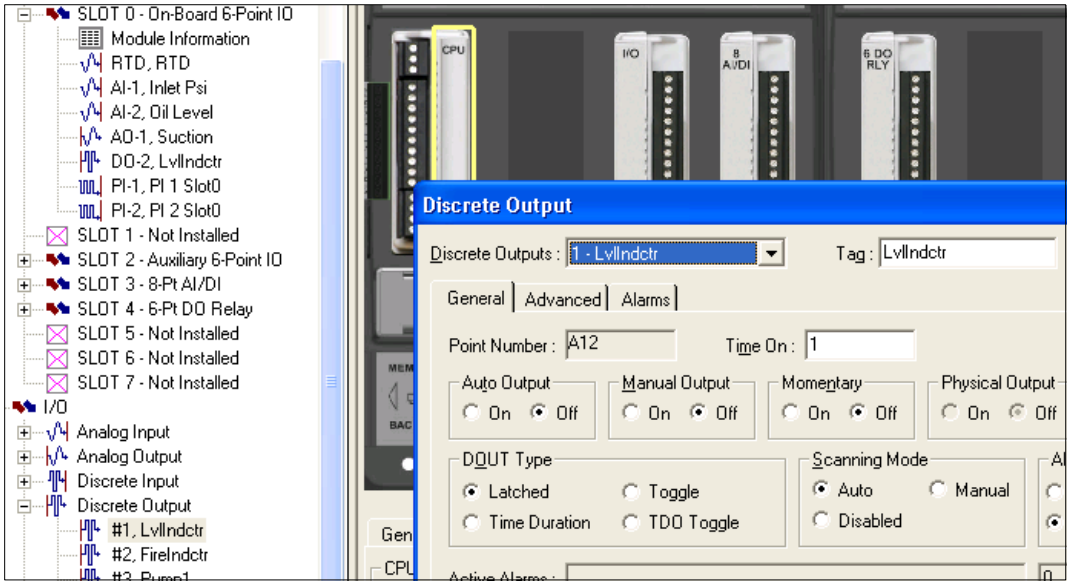


2.2 Discrete Outputs

Discrete Outputs are Point Type #2.

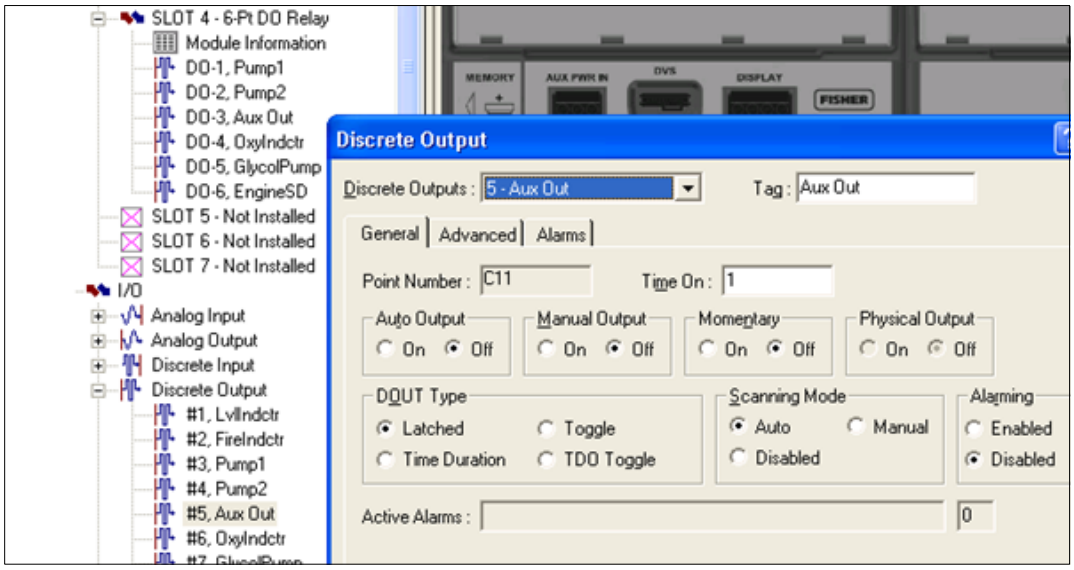
2.2.1 Example 1: 1-LvlIndctr

The Discrete Output 1-LvlIndctr has a Point Number of A12. The Logical Point is 11, because KEPServerEX's Logical Addressing is zero-based, whereas ROCLINK 800 Point Numbers are not.



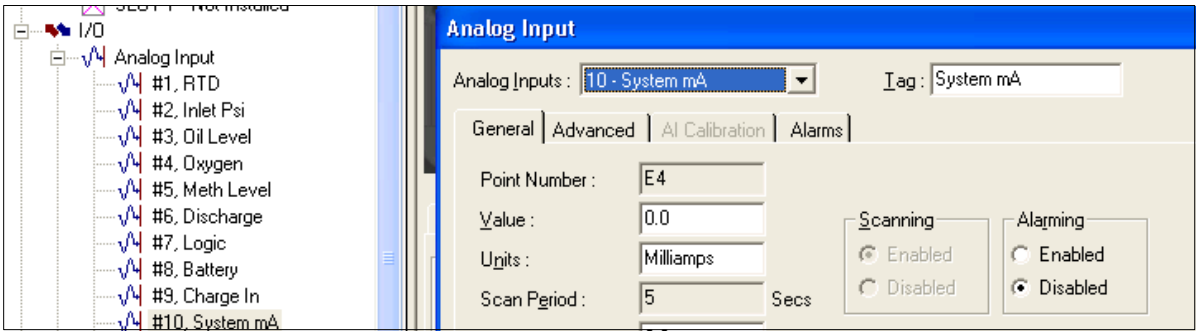
2.2.2 Example 2: 5-Aux Out

The Discrete Output 5-Aux Out has a Point Number of C11. The Logical Point is A+B+C11 (or 15+16+11) to equal 42.



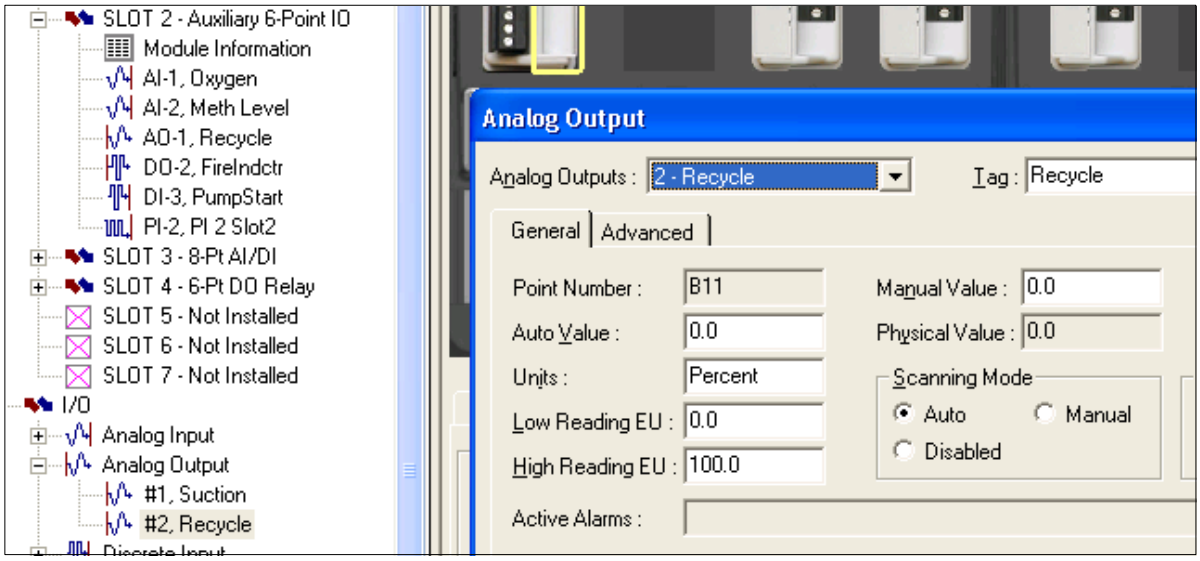
2.3 Analog Inputs

Analog Inputs are Point Type #3. For example, the Analog Input 10-System mA has a Point Number of E4. The Logical Point is A+B+C+D+4 (or 15+16+16+16+4) to equal 67.



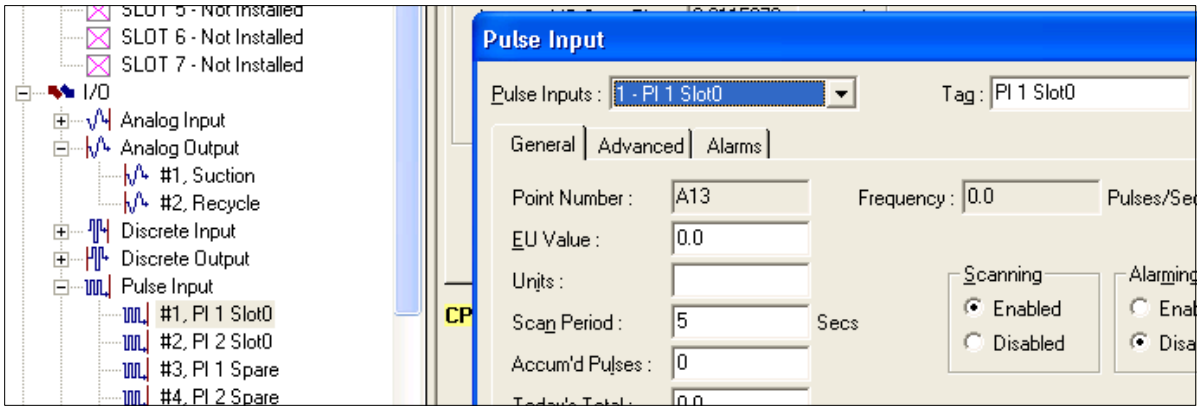
2.4 Analog Outputs

Analog Outputs are Point Type #4. For example, the Analog Output 2-Recycle has a Point Number of B11. The Logical Point is A+11 (or 15+11) to equal 26.



2.5 Pulse Input

Pulse Inputs are Point Type #5. For example, the Pulse Input 1-PI 1 Slot0 has a Point Number of A13. The Logical Point is 12, because Logical Addressing is zero-based whereas ROCLINK 800 Point Numbers are not.



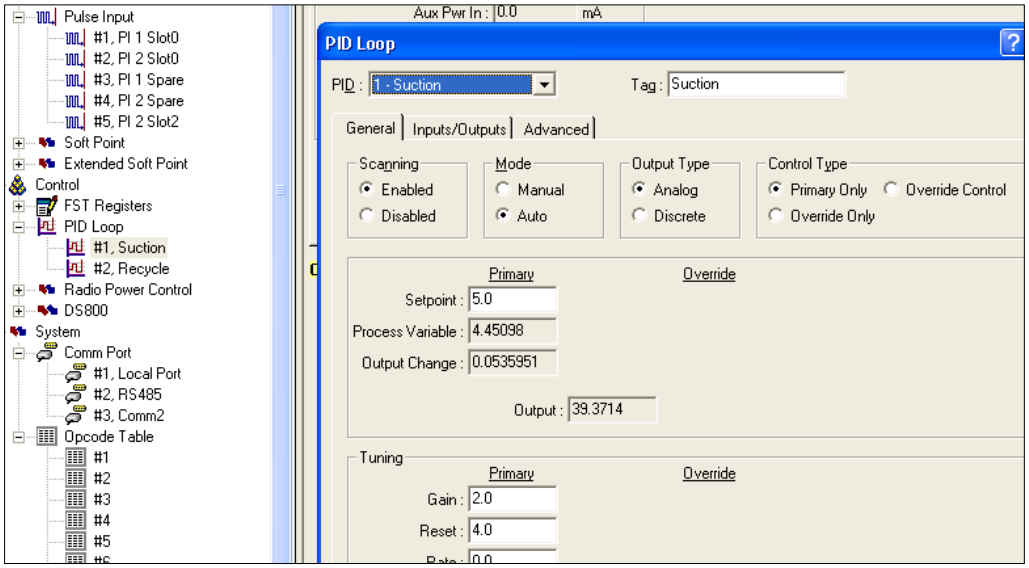
3. Referencing Non-Physical I/O Points

As previously mentioned, ROCLINK 800 software starts referencing Point Types at number 1, whereas KEPServerEX references the points by zero-based addressing. This document will discuss Point Type #6 and Point Type #17 to illustrate how zero-based addressing affects the way that KEPServerEX returns points.

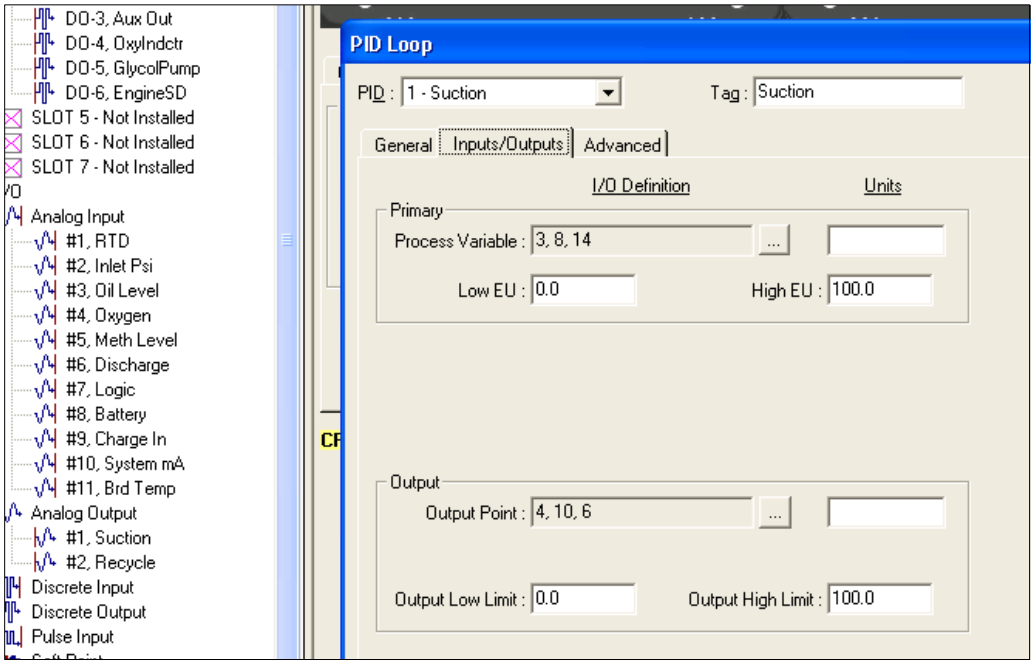
Note: Some physical I/O points may be represented by parameters in non-physical I/O points. For more information, refer to "PID Controls" below.

3.1 PID Controls

PID Controls are Point Type #6. They are registered as 6-0.#, where # is the desired parameter. For example, the Primary Process Variable is 6-0.22.



Note: The PID Control may have Inputs/Outputs associated with it (as displayed in the image below).

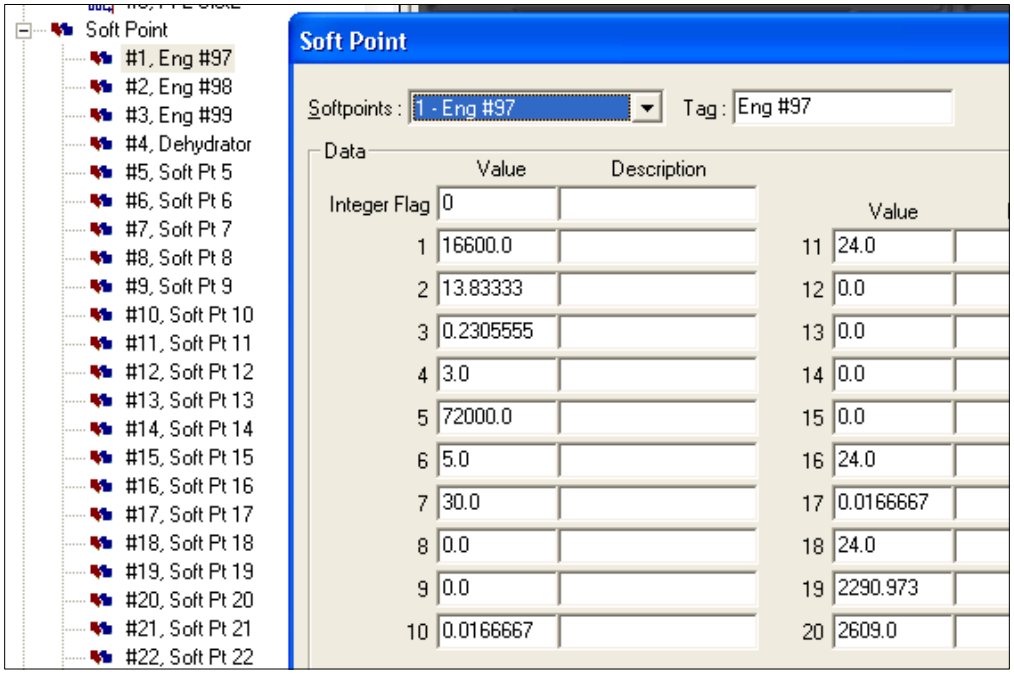


Note: The Input Process Variable is shown at 3-8.14, which implies it is an Analog Input of address A9. Because A is 0-15 and zero-based, users must add 1: therefore, it is A9. The Output Point has an address of 4-10.6, which implies it is an Analog Output of address A11.

3.2 Soft Point

Soft Points are Point Type #17. They are registered as PointTagID_17_0, with an address of 17-0.0. The desired point syntax in KEPServerEX is 17-0.#, where # represents parameters like Integer Flag and Data.

Note: The Data1 address is 17-0.2, due to offset by Point Tag ID and Integer Flag.



4.Summary

At this point, users should have a better understanding of how to reconcile the Point Number addressing syntax used in the ROCLINK 800 software with KEPServerEX's addressing syntax.

5.Referenced Materials

1. ROCLINK 800: Version 1.90.
2. KEPServerEX: Version 5.10.205.0.
3. FloBoss 107 Device.
4. FloBoss 107 Device User Manual: Form Number A4199.