



SICK's Open Service for IO-Link Function Blocks

A pioneering open software service that creates ready-made IO-Link function blocks to integrate data from any IO-Link device into a wide range of common PLC control systems has been launched by the sensor manufacturer SICK.

The SICK Function Block Factory is the first web-based service of its type that enables users to create function blocks automatically from any IO-link device with an I/O device description (IODD), no matter what the device type or its manufacturer.

Creating function blocks from scratch can be a laborious task and errors can easily creep in and be repeated. Using the SICK Function Block Factory service, users without specialist IO-Link knowledge can configure and create their own function block libraries and reuse them in their PLC programs as often as needed. The new 24/7 service offers to save time and cost for example when setting up an IO-Link device for the first time, replacing a device, or adjusting parameters during operation.

Charlie Walker, smart sensor specialist with SICK UK, explains: "Machinebuilders, integrators and end-users have come to value the additional automation benefits that IO-Link devices can bring, such as smart functions, diagnostics and edge applications. But anyone who wants to integrate IO-Link devices and read/write IO-Link device parameters to the PLC control must program many acyclical requests and deal with many different devices, parameters and complex data types.

"With the SICK Function Block Factory, you can have a fully-tested function block ready to use in your code in a matter of minutes. Not only is development time and cost dramatically reduced, but there is no opportunity for errors to creep in.

"You don't need to be experienced in IO-Link and there's no need to start searching for parameters, indexes and data formats. You can download a library with all of the software you need to install the function block as well as the full supporting documentation."

To create a function block, users simply sign in to the SICK 24/7 web service, select the IODD file for the IO-link device and the chosen PLC system. The name of the function block can be edited to suit naming conventions. Then, the IO-Link parameters and key features of the function block are selected. With a click to finish, and an easy e-cart payment, the function block is ready to go.

The function block created can be used to read and write parameters and service data for any IO-Link device. It handles the entire acyclic IO-Link communication including data interpretation, index and sub-index resolution as well as byte-swapping, if required.

As part of the library provided, the data structure already contains all required variables, so the need for manual variable declaration is eliminated. The scope and content of libraries can be defined individually through free selection of the available device parameters and can be adjusted at any time.

In addition, process data parser functions can be generated, simplifying and speeding up PLC programming considerably, as well as helping to avoid errors. The process data parser function makes it possible to systematically access any individual piece of information in the IO-Link process data without having been previously informed of its structure and contents from manuals.

“In a typical factory or logistics operation, dozens of sensors could be performing the same function,” Walker continues. “So, the ability to create function blocks quickly and easily, at any time, will save time, cost and prevent delays in production.

“The SICK Function Block Factory also makes customising diagnostics easier, supporting ongoing condition monitoring, as well as allowing device parameters to be adjusted while a machine is operating, e.g. to change to a new product or batch.”

For more information about the SICK Function Block Factory, please contact Andrea Hornby on 01727 831121 or email andrea.hornby@sick.co.uk.

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