HOLOCON®

W2-CANopen-S is the functionblock based software package (Network Block) that adds CANopen Slave functionality to your W2-FBC Series Function Block Controllers. W2-FBC Controllers are stand-alone or networked, IEC61499-compliant Function Block, event-driven, controllers.

Background:

IEC61499 is a new international standard for highly distributed function block controls. It provides an event-driven mechanism for proper sequencing over multiple device nodes.

The W2 Series is a derivative controller from Western Reserve Controls WRC1 SmartMux®-Plus DeviceNet I/O Block and embedded controller. It supports real-time function block control, embedded JAVA, CAN, Ethernet, Discrete I/ O, analog I/O, 2-axis servo positioning and RS232.

To meet different customer needs, a selection of network function blocks are being added. These add-on software packages are called Network Blocks. The Network Block offered is CANopen S Slave .

The addition of an open standard such as CANopen allows the W2-FBC Function Block Controller to be used simply as dumb I/O or as a way to retrofit existing installations.

W2-CANopen-S allows the W2-FBC I/O, as well as internally computed events and variables, to be read from and written to from a CANopen Master Device, such as a PC or PLC just as any I/O device.

The CANopen Library is based on ground of the communication profile DS-301 V4.x of the CiA e.V. “CANopen Application Layer and Communication Profile” and EN50325-4 , respectively, and provides all services specified therein.

Services Supported include:

- NMT Master (module control service, reset node service, error control service, node guarding service, life guard event, heart beat event, boot up services)
- NMT protocols (start, stop, reset, enter pre-operational, enter operational, reset communication)
- Synchronization Object (SYNC)
- Time Stamp Object (TIME)
- Emergency Object (EMCY)
- SDO Client/Server (expedited transfers and segmented transfers, configurable messages buffers and unlimited number of active SDOs)
- PDO handler
- PDO inhibit time
- Dynamic PDO mapping
- SYNC master
- Local Object dictionary

In addition to the I/O, multiple, 8-byte, user defined, scratchpad memory segments (Register Objects) are provided in the W2-FBC Function Block Controller where internally generated calculations, status, and events can be shared with the CANopen Master Scanner. The content of the scratchpad memory segments is defined using the W2-FBDK Function Block Development Kit.

WRC is a Rockwell Automation Encompass Partner for Gateway, Bus Extender and signal conditioning products.