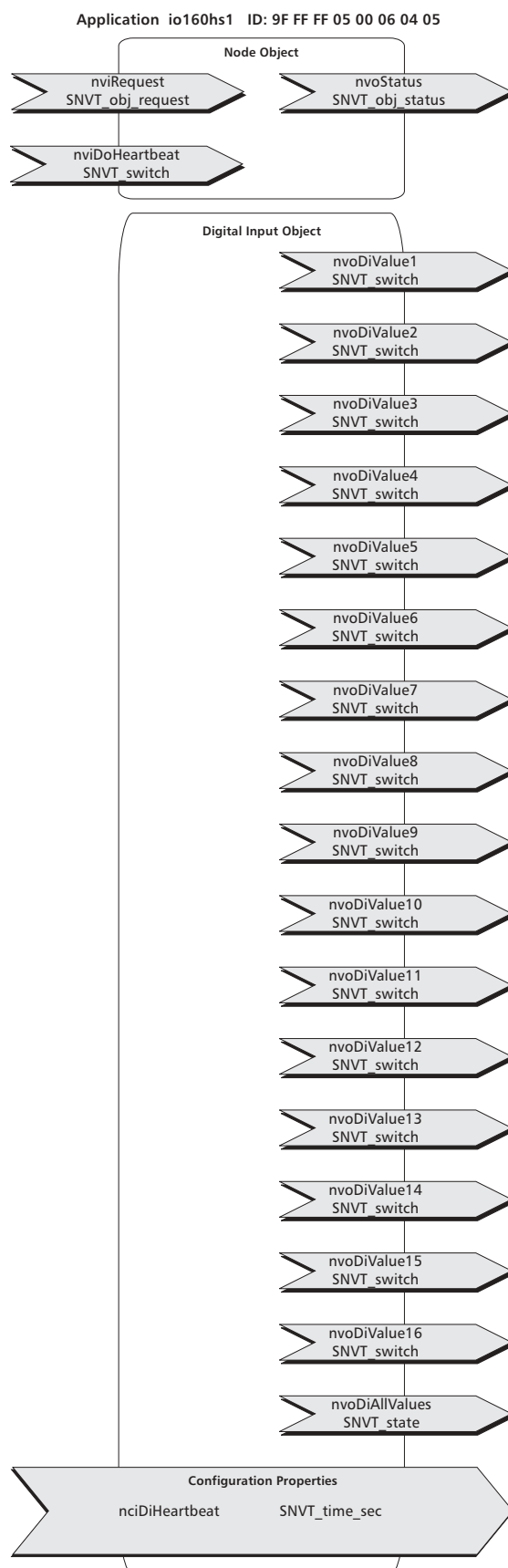


Software Application io160hs1 (Standard I/O)

For Input/Output Module model IO16-0 HS LON

Standard application for status detection of digital inputs and data output. Application uses Standard Network Variables (SNVT) according to LonMark® prescriptions.



Node Object

The Node Object supervises and controls the functions of the individual objects within the unit. The basic functions required by the LonMark® are supported.

Network Variables Node Object:

nviRequest

SNVT Type: SNVT_obj_request

Function: Input variable with functions RQ_NORMAL, RQ_UPDATE_STATUS and RQ_REPORT_MASK.

nvoStatus

SNVT Type: SNVT_obj_status

Function: Output variable including required status bits "invalid_id" and "invalid_request".

nviDoHeartbeat

SNVT Type: SNVT_switch

Function: If input variable is set (100.1 1), the output variables [nvoDiValue[1..16] and nvoDiAllValues are updated and transmitted after a calculated period of time [Node number 1....127] x 10 ms)

Digital Input Object

Object includes status detection of digital inputs and data output.

Network Variables Digital Input Object:

nvoDiValue[1... 16]

SNVT Type: SNVT_switch

Function: Status of digital inputs. The output variables are put out after change of input status, expiration of heartbeat interval (nciDiHeartbeat) and module reset.

Calculated time after module reset: $1s + ([\text{Node number } 1 \dots 127] \times 10\text{ms})$

Potential-free contact closed ==> nvoDiValue[1...16] = 100.0 1

Potential-free contract open ==> nvoDiValue[1...16] = 0.0 0

nvoDiAllValues

SNVT Type: SNVT_state

Function: Status of all digital inputs of one collective network variable. Data output analog to nvoDiValue.

Potential-free contact closed ==> nvoDiAllValues.bit[0...15] = 1

Potential-free contact open ==> nvoDiAllValues.bit[0...15] = 0

Configuration Parameter Digital Input Object:

The configuration variables are designed as bindable network variables, stored in EEPROM. Thus parameterization is also possible without installation tool.

!! The new value will be stored directly into the non-volatile memory of the hardware.

!! User must guarantee, that the total number of writing cycles does not exceed maximum

!! capacity of non-volatile memory (dimension <10000).

nciDiHeartbeat

SNVT Type: SNVT_time_sec

Function: Heartbeat interval. After expiration of nciDiHeartbeat the digital inputs are polled and output variables nvoDiValue[1...16] and nvoDiAllValues are transmitted.

Heartbeat function is disabled with input values < 1 sec. (Default: 0)

Wink - Event:

Service LED is tripped and blinking two times.