Object Group 30 - Analog Inputs

The status for each point in an object group is retained on each transaction; all flags are reported in their sub-type tags. The corresponding event object may also return Time of Occurrence.

● **Note**: Object Group 30 - Analog Input Value is reflected in Object Group 32 - Analog Input Change Event. *For more information, refer to **Other Object Groups**.*

Attributes
The default data type is shown in **bold**.

OBJ.VAR.IDX Attributes	.SUB Attribute	Data Type	Access
30.{0,1,2,3,4,5,6}.{0-65535}	LocalForce, Lost, Online, RemoteForce, Restart, OverRange, ReferenceCheck	Boolean	Read Only
30.{0,1,2,3,4,5,6}.{0-65535}	Flags	Byte	Read Only
30.{0,1,2,3,4,5,6}.{0-65535}	Timestamp	Date	Read Only
30.0.{0-65535}	Value, Explicit	Double	Read Only
30.1.{0-65535}	Value, Explicit	Long	Read Only
30.2.{0-65535}	Value, Explicit	Short	Read Only
30.3.{0-65535}	Value, Explicit	Long	Read Only
30.4.{0-65535}	Value, Explicit	Short	Read Only
30.5.{0-65535}	Value, Explicit	Float	Read Only
30.6.{0-65535}	Value, Explicit	**Double**	Read Only

Variations

Number	Description
0	Variation determined by DNP server device
1	32-bit with Flag
2	16-bit with Flag
3	32-bit without Flag
4	16-bit without Flag
5	32-bit floating-point with Flag
6	64-bit floating-point with Flag

DNP Object Flag Definitions
If the device returns an exception bit set, the quality of the .Value or .Explicit tag is bad. The following available bits are exception bits, excluding Online. Descriptions of the available bits are as follows:

- 0: Online
- 1: Restart
- 2: Communications Lost
- 3: Remote Force
- 4: Local Force
- 5: Overrange
- 6: Reference Check
- 7: Reserved

Examples

Tag Address	Definition	Description
		This tag is updated from the datastore that is populated via responses to integrity and event polls. No explicit request is sent to the device. The DNP server can return

mk:@MSITStore:C:\Program%20Files%20(x86)\Software%20Toolbox\TOP%20Server%206\help\dnp_master_serial.chm::/DNPCLIENTSERIAL/Object_30_Analog_Inputs.htm

5/20/2024

30.0.0.Value*	Value of point 0 as a Double	variation 1, 2, 3, 4, 5, or 6; depending on its Object Group 32 default event variation. These fit in a Double.
30.0.5.Explicit	Value of point 5 as a Double	An explicit request is sent to the device to get the value for this tag. Other object 30 variation 0 Explicit tags are blocked with this tag in one request. The DNP server can return variation 1, 2, 3, 4, 5, or 6; depending on its default static variation. These fit in a Double.
30.1.10.Explicit	Value of point 10 as a DWord	An explicit request is sent to the device to get the value for this tag. Other object 30 variation 1 Explicit tags are blocked with this tag in one request.
30.1.10.Value*	Value of point 10 as a DWord	This tag is updated from the datastore that is populated via responses to integrity and event polls. No explicit request is sent to the device. The variation of 1 in the tag address sets the data type of the tag, but does not define the data type returned by the DNP server. The DNP server uses its Object Group 32 default event variation. If the DNP server is returning a floating-point value using Object Group 32 variations 5, 6, 7, or 8, this tag only displays the integer part of the value of the point.
30.2.10.Explicit	Value of point 10 as a Word	An explicit request is sent to the device to get the value for this tag. Other object 30 variation 2 Explicit tags are blocked with this tag in one request.
30.0.8.Timestamp*	Event Time of Occurrence of point 8 (if an event has occurred and the time of occurrence was returned)	This tag is updated from the datastore that is populated via responses to integrity and event polls. No explicit request is sent to the device. This tag shows a timestamp of 1999-11-30T00:00:00 or 1899-12-30T00:00:00. It has bad quality until the device sends an event with the time. The Object Group 32 default event variation on the device needs to be 3, 4, 7, or 8 for it to return the event time of occurrence.
30.0.9.Flags*	Latest Flag byte for point 9	This tag is updated from the datastore that is populated via responses to integrity and event polls or an explicit request for analog input point 9. No explicit request is sent to the device. The value of this tag displays the latest flag byte received for point 9 (regardless of the variation in the tag address).
30.0.3.Lost*	Latest state of bit 2 of the Flag byte for point 3	This tag is updated from the datastore that is populated via responses to integrity and event polls or an explicit request for analog input point 3. No explicit request is sent to the device. The value of this tag displays the state of bit 2 from the flag byte received for point 3 (regardless of the variation in the tag address).

*If an event time of occurrence is received with the event, then the tag's OPC timestamp should display the DNP client's local time in which the event occurred within the DNP server. *For more information, refer to* **Communications***.

mk:@MSITStore:C:\Program%20Files%20(x86)\Software%20Toolbox\TOP%20Server%206\help\dnp_master_serial.chm::/DNPCLIENTSERIAL/Object_30_Analog_Inputs.htm

5/20/2024