What are the OPC Quality Codes?

This article demonstrates the possible quality codes presented by OPC servers for all items.

TITLE
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QUESTION / PROBLEM
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What information can be inferred by the quality of a given OPC tag?

ANSWER / SOLUTION
Please follow the KCS Knowledge Article guidelines to properly format your answer/solution
The quality of a given OPC tag is used to represent the validity of the tag's value (in other words, whether or not an OPC client can trust the data). OPC quality is divided into three main categories: Good (generally indicates the data is valid), Bad (generally indicates the data is not valid), or Uncertain (generally indicates the data is speculative in some manner). Each category is further divided into sub-categories; the exact criteria for using a particular sub-category may vary depending on the end protocol and vendor, however the list below provides a good starting point for further investigation.

OPC DA Quality Codes

0	0x00000000	Bad [Non-Specific]
4	0x00000004	Bad [Configuration Error]
8	0x00000008	Bad [Not Connected]
12	0x0000000c	Bad [Device Failure]
16	0x00000010	Bad [Sensor Failure]
20	0x00000014	Bad [Last Known Value]
24	0x00000018	Bad [Communication Failure]
28	0x0000001C	Bad [Out of Service]
64	0x00000040	Uncertain [Non-Specific]
65	0x00000041	Uncertain [Non-Specific] (Low Limited)
66	0x00000042	Uncertain [Non-Specific] (High Limited)
67	0x00000043	Uncertain [Non-Specific] (Constant)
68	0x00000044	Uncertain [Last Usable]
69	0x00000045	Uncertain [Last Usable] (Low Limited)
70	0x00000046	Uncertain [Last Usable] (High Limited)
71	0x00000047	Uncertain [Last Usable] (Constant)
80	0x00000050	Uncertain [Sensor Not Accurate]
81	0x00000051	Uncertain [Sensor Not Accurate] (Low Limited)
82	0x00000052	Uncertain [Sensor Not Accurate] (High Limited)
83	0x00000053	Uncertain [Sensor Not Accurate] (Constant)
84	0x00000054	Uncertain [EU Exceeded]
85	0x00000055	Uncertain [EU Exceeded] (Low Limited)
86	0x00000056	Uncertain [EU Exceeded] (High Limited)
87	0x00000057	Uncertain [EU Exceeded] (Constant)

88	0x00000058	Uncertain [Sub-Normal]
89	0x00000059	Uncertain [Sub-Normal] (Low Limited)
90	0x0000005a	Uncertain [Sub-Normal] (High Limited)
91	0x0000005b	Uncertain [Sub-Normal] (Constant)
192	0x000000c0	Good [Non-Specific]
193	0x000000c1	Good [Non-Specific] (Low Limited)
194	0x000000c2	Good [Non-Specific] (High Limited)
195	0x000000c3	Good [Non-Specific] (Constant)
216	0x000000d8	Good [Local Override]
217	0x000000d9	Good [Local Override] (Low Limited)
218	0x000000da	Good [Local Override] (High Limited)
219	0x000000db	Good [Local Override] (Constant)

OPC HDA Quality Codes

65536	0x00010000	Bad [Non-Specific] : Extra Data
65540	0x00010004	Bad [Configuration Error] : Extra Data
65544	0x00010008	Bad [Not Connected] : Extra Data
65548	0x0001000c	Bad [Device Failure] : Extra Data
65552	0x00010010	Bad [Sensor Failure] : Extra Data
65556	0x00010014	Bad [Last Known Value] : Extra Data
65560	0x00010018	Bad [Communication Failure] : Extra Data
65564	0x0001001c	Bad [Out of Service] : Extra Data
65600	0x00010040	Uncertain [Non-Specific] : Extra Data
65601	0x00010041	Uncertain [Non-Specific] (Low Limited) : Extra Data
65602	0x00010042	Uncertain [Non-Specific] (High Limited) : Extra Data

https://honeywellprocess-community.force.com/opcsupport/s/article/What-are-the-OPC-Quality-Codes