IO-Link Data Map

This document refers to the following IODD file: Banner_Engineering-R95C-8UI-20230801-IODD1.1.xml. The IODD file and support files can be found on www.bannerengineering.com under the download section of the product family page.

Communication Parameters

The following communication parameters are used.

Parameter	Value
IO-Link revision	V1.1
Process Data In length	256-bits
Process Data Out length	None
Bit Rate	38400 bps
Minimum cycle time	13.6 ms
Device ID	659472 (0x0A1010)
Port class	A
SIO mode	No
Smart Sensor Profile	No
Block parameterization	Yes
Data Storage	Yes

IO-Link Process Data In (Device to Master)

Two analog modes are supported. The voltage mode is presented in mV and the current mode is presented in µA.

If the mode of Analog In = Voltage, then the Process Data Input = Value × 0.001 V.

If the mode of Analog In = Current, then the Process Data Input = Value × 0.000001 A.

Process Data Input Configuration = Analog Data

Subindex	Name	Number of Bits	Data Values
1	Measurement Value - Analog In 1	32	The measurement device value
5	Measurement Value - Analog In 2	32	The measurement device value
9	Measurement Value - Analog In 3	32	The measurement device value
13	Measurement Value - Analog In 4	32	The measurement device value
17	Measurement Value - Analog In 5	32	The measurement device value
21	Measurement Value - Analog In 6	32	The measurement device value
25	Measurement Value - Analog In 7	32	The measurement device value
29	Measurement Value - Analog In 8	32	The measurement device value

Octet 0								
Subindex	1	1	1	1	1	1	1	1
Bit offset	255	254	253	252	251	250	249	248
Value	0	0	0	0	0	0	0	0

Octet 1								
Subindex	1	1	1	1	1	1	1	1
Bit offset	247	246	245	244	243	242	241	240
Value	0	0	0	0	0	0	0	0

© Banner Engineering Corp.

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Octet 2								
Subindex	1	1	1	1	1	1	1	1
Bit offset	239	238	237	236	235	234	233	232
Value	0	0	0	0	0	0	0	1

Octet 3								
Subindex	1	1	1	1	1	1	1	1
Bit offset	231	230	229	228	227	226	225	224
Value	1	1	1	1	1	1	0	1

Octet 4								
Subindex	5	5	5	5	5	5	5	5
Bit offset	223	222	221	220	219	218	217	216
Value	0	0	0	0	0	0	0	0

Octet 5								
Subindex	5	5	5	5	5	5	5	5
Bit offset	215	214	213	212	211	210	209	208
Value	0	0	0	0	0	0	0	0

Octet 6								
Subindex	5	5	5	5	5	5	5	5
Bit offset	207	206	205	204	203	202	201	200
Value	0	0	0	0	0	0	0	1

Octet 7								
Subindex	5	5	5	5	5	5	5	5
Bit offset	199	198	197	196	195	194	193	192
Value	1	1	1	1	1	1	0	1

Octet 8								
Subindex	9	9	9	9	9	9	9	9
Bit offset	191	190	189	188	187	186	185	184
Value	0	0	0	0	0	0	0	0

Octet 9								
Subindex	9	9	9	9	9	9	9	9
Bit offset	183	182	181	180	179	178	177	176
Value	0	0	0	0	0	0	0	0

Octet 10								
Subindex	9	9	9	9	9	9	9	9
Bit offset	175	174	173	172	171	170	169	168
Value	0	0	0	0	0	0	0	1

Octet 11								
Subindex	9	9	9	9	9	9	9	9
Bit offset	167	166	165	164	163	162	161	160
Value	1	1	1	1	1	1	0	1

Octet 12								
Subindex	13	13	13	13	13	13	13	13

Continued on page 3

© Banner Engineering Corp. All rights reserved.

Continued from page 2

Octet 12								
Bit offset	159	158	157	156	155	154	153	152
Value	0	0	0	0	0	0	0	0

Octet 13								
Subindex	13	13	13	13	13	13	13	13
Bit offset	151	150	149	148	147	146	145	144
Value	0	0	0	0	0	0	0	0

Octet 14								
Subindex	13	13	13	13	13	13	13	13
Bit offset	143	142	141	140	139	138	137	136
Value	0	0	0	0	0	0	0	1

Octet 15								
Subindex	13	13	13	13	13	13	13	13
Bit offset	135	134	133	132	131	130	129	128
Value	1	1	1	1	1	1	0	1

Octet 16								
Subindex	17	17	17	17	17	17	17	17
Bit offset	127	126	125	124	123	122	121	120
Value	0	0	0	0	0	0	0	0

Octet 17								
Subindex	17	17	17	17	17	17	17	17
Bit offset	119	118	117	116	115	114	113	112
Value	0	0	0	0	0	0	0	0

Octet 18								
Subindex	17	17	17	17	17	17	17	17
Bit offset	111	110	109	108	107	106	105	104
Value	0	0	0	0	0	0	0	1

Octet 19								
Subindex	17	17	17	17	17	17	17	17
Bit offset	103	102	101	100	99	98	97	96
Value	1	1	1	1	1	1	0	1

Octet 20								
Subindex	21	21	21	21	21	21	21	21
Bit offset	95	94	93	92	91	90	89	88
Value	0	0	0	0	0	0	0	0

Octet 21								
Subindex	21	21	21	21	21	21	21	21
Bit offset	87	86	85	84	83	82	81	80
Value	0	0	0	0	0	0	0	0

Octet 22								
Subindex	21	21	21	21	21	21	21	21
Bit offset	79	78	77	76	75	74	73	72

Continued on page 4

© Banner Engineering Corp. All rights reserved.

Continued from page 3

Octet 22								
Value	0	0	0	0	0	0	0	1

Octet 23								
Subindex	21	21	21	21	21	21	21	21
Bit offset	71	70	69	68	67	66	65	64
Value	1	1	1	1	1	1	0	1

Octet 24								
Subindex	25	25	25	25	25	25	25	25
Bit offset	63	62	61	60	59	58	57	56
Value	0	0	0	0	0	0	0	0

Octet 25								
Subindex	25	25	25	25	25	25	25	25
Bit offset	55	54	53	52	51	50	49	48
Value	0	0	0	0	0	0	0	0

Octet 26								
Subindex	25	25	25	25	25	25	25	25
Bit offset	47	46	45	44	43	42	41	40
Value	0	0	0	0	0	0	0	1

Octet 27								
Subindex	25	25	25	25	25	25	25	25
Bit offset	39	38	37	36	35	34	33	32
Value	1	1	1	1	1	1	0	1

Octet 28								
Subindex	29	29	29	29	29	29	29	29
Bit offset	31	30	29	28	27	26	25	24
Value	0	0	0	0	0	0	0	0

Octet 29								
Subindex	29	29	29	29	29	29	29	29
Bit offset	23	22	21	20	19	18	17	16
Value	0	0	0	0	0	0	0	0

Octet 30								
Subindex	29	29	29	29	29	29	29	29
Bit offset	15	14	13	12	11	10	9	8
Value	0	0	0	0	0	0	0	1

Octet 31								
Subindex	29	29	29	29	29	29	29	29
Bit offset	7	6	5	4	3	2	1	0
Value	1	1	1	1	1	1	0	1

Example Based Upon the Value Above

Measurement Value = 509 (0x01FD)

Scaled Measurement Value = 0.509 V

© Banner Engineering Corp. All rights reserved.

Process Data Input Configuration = Digital Measuring Sensor

Subindex	Name	Number of Bits	Data Values
1	Measurement Value - Analog In 1	16	The measurement device value
2	Measurement Scale - Analog In 1	8	The measurement device scale: -3 for voltage and -6 for current
4	SSC1.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
5	Measurement Value - Analog In 2	16	The measurement device value
6	Measurement Scale - Analog In 2	8	The measurement device scale: -3 for voltage and -6 for current
8	SSC2.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
9	Measurement Value - Analog In 3	16	The measurement device value
10	Measurement Scale - Analog In 3	8	The measurement device scale: -3 for voltage and -6 for current
12	SSC3.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
13	Measurement Value - Analog In 4	16	The measurement device value
14	Measurement Scale - Analog In 4	8	The measurement device scale: -3 for voltage and -6 for current
16	SSC4.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
17	Measurement Value - Analog In 5	16	The measurement device value
18	Measurement Scale - Analog In 5	8	The measurement device scale: -3 for voltage and -6 for current
20	SSC5.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
21	Measurement Value - Analog In 6	16	The measurement device value
22	Measurement Scale - Analog In 6	8	The measurement device scale: -3 for voltage and -6 for current
24	SSC6.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
25	Measurement Value - Analog In 7	16	The measurement device value
26	Measurement Scale - Analog In 7	8	The measurement device scale: -3 for voltage and -6 for current
28	SSC7.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window
29	Measurement Value - Analog In 8	16	The measurement device value
30	Measurement Scale - Analog In 8	8	The measurement device scale: -3 for voltage and -6 for current
32	SSC8.1 - Switching Signal	1	Indicates the detection status of an object/measurement value within a window

Octet 0								
Subindex	1	1	1	1	1	1	1	1
Bit offset	255	254	253	252	251	250	249	248
Value	0	0	0	0	0	0	0	1

Octet 1								
Subindex	1	1	1	1	1	1	1	1
Bit offset	247	246	245	244	243	242	241	240
Value	1	1	1	1	1	1	0	1

Octet 2								
Subindex	2	2	2	2	2	2	2	2
Bit offset	239	238	237	236	235	234	233	232
Value	1	1	1	1	1	1	0	1

Octet 3								
Subindex	3	3	3	3	3	3	3	4

Continued on page 6

© Banner Engineering Corp. All rights reserved.

Continued from page 5

Octet 3								
Bit offset	231	230	229	228	227	226	225	224
Value	-	-	-	-	-	-	-	1

Octet 4								
Subindex	5	5	5	5	5	5	5	5
Bit offset	223	222	221	220	219	218	217	216
Value	0	0	0	0	0	0	0	1

Octet 5								
Subindex	5	5	5	5	5	5	5	5
Bit offset	215	214	213	212	211	210	209	208
Value	1	1	1	1	1	1	0	1

Octet 6								
Subindex	6	6	6	6	6	6	6	6
Bit offset	207	206	205	204	203	202	201	200
Value	1	1	1	1	1	1	0	1

Octet 7								
Subindex	7	7	7	7	7	7	7	8
Bit offset	199	198	197	196	195	194	193	192
Value	-	-	-	-	-	-	-	1

Octet 8								
Subindex	9	9	9	9	9	9	9	9
Bit offset	191	190	189	188	187	186	185	184
Value	0	0	0	0	0	0	0	1

Octet 9								
Subindex	9	9	9	9	9	9	9	9
Bit offset	183	182	181	180	179	178	177	176
Value	1	1	1	1	1	1	0	1

Octet 10								
Subindex	10	10	10	10	10	10	10	10
Bit offset	175	174	173	172	171	170	169	168
Value	1	1	1	1	1	1	0	1

Octet 11								
Subindex	11	11	11	11	11	11	11	12
Bit offset	167	166	165	164	163	162	161	160
Value	-	-	-	-	-	-	-	1

Octet 12								
Subindex	13	13	13	13	13	13	13	13
Bit offset	159	158	157	156	155	154	153	152
Value	0	0	0	0	0	0	0	1

Octet 13								
Subindex	13	13	13	13	13	13	13	13
Bit offset	151	150	149	148	147	146	145	144

Continued on page 7

© Banner Engineering Corp. All rights reserved.

Continued from page 6

Octet 13								
Value	1	1	1	1	1	1	0	1

Octet 14								
Subindex	14	14	14	14	14	14	14	14
Bit offset	143	142	141	140	139	138	137	136
Value	1	1	1	1	1	1	0	1

Octet 15								
Subindex	15	15	15	15	15	15	15	16
Bit offset	135	134	133	132	131	130	129	128
Value	-	-	-	-	-	-	-	1

Octet 16								
Subindex	17	17	17	17	17	17	17	17
Bit offset	127	126	125	124	123	122	121	120
Value	0	0	0	0	0	0	0	1

Octet 17								
Subindex	17	17	17	17	17	17	17	17
Bit offset	119	118	117	116	115	114	113	112
Value	1	1	1	1	1	1	0	1

Octet 18								
Subindex	18	18	18	18	18	18	18	18
Bit offset	111	110	109	108	107	106	105	104
Value	1	1	1	1	1	1	0	1

Octet 19								
Subindex	19	19	19	19	19	19	19	20
Bit offset	103	102	101	100	99	98	97	96
Value	-	-	-	-	-	-	-	1

Octet 20								
Subindex	21	21	21	21	21	21	21	21
Bit offset	95	94	93	92	91	90	89	88
Value	0	0	0	0	0	0	0	1

Octet 21								
Subindex	21	21	21	21	21	21	21	21
Bit offset	87	86	85	84	83	82	81	80
Value	1	1	1	1	1	1	0	1

Octet 22								
Subindex	22	22	22	22	22	22	22	22
Bit offset	79	78	77	76	75	74	73	72
Value	1	1	1	1	1	1	0	1

Octet 23								
Subindex	23	23	23	23	23	23	23	24
Bit offset	71	70	69	68	67	66	65	64
Value	-	-	-	-	-	-	-	1

© Banner Engineering Corp. All rights reserved.

Octet 24								
Subindex	25	25	25	25	25	25	25	25
Bit offset	63	62	61	60	59	58	57	56
Value	0	0	0	0	0	0	0	1

Octet 25								
Subindex	25	25	25	25	25	25	25	25
Bit offset	55	54	53	52	51	50	49	48
Value	1	1	1	1	1	1	0	1

Octet 26								
Subindex	26	26	26	26	26	26	26	26
Bit offset	47	46	45	44	43	42	41	40
Value	1	1	1	1	1	1	0	1

Octet 27								
Subindex	27	27	27	27	27	27	27	28
Bit offset	39	38	37	36	35	34	33	32
Value	-	-	-	-	-	-	-	1

Octet 28								
Subindex	29	29	29	29	29	29	29	29
Bit offset	31	30	29	28	27	26	25	24
Value	0	0	0	0	0	0	0	1

Octet 29								
Subindex	29	29	29	29	29	29	29	29
Bit offset	23	22	21	20	19	18	17	16
Value	1	1	1	1	1	1	0	1

Octet 30								
Subindex	30	30	30	30	30	30	30	30
Bit offset	15	14	13	12	11	10	9	8
Value	1	1	1	1	1	1	0	1

Octet 31								
Subindex	31	31	31	31	31	31	31	32
Bit offset	7	6	5	4	3	2	1	0
Value	-	-	-	-	-	-	-	1

Example Based Upon the Value Above

Measurement Value = 509 (0x01FD)

Measurement Scale = -3 (0xFD)

Scaled Measurement Value = 0.509 V

Analog Input Validity = True

Parameters Set Using IO-Link

These parameters can be read from and/or written to an R95C 8-Port Analog In to IO-Link Hub. Also included is information about whether the variable in question is saved during Data Storage.

Unlike Process Data In, which is transmitted from the IO-Link device to the IO-Link master cyclically, these parameters are read or written acyclically as needed.

© Banner Engineering Corp. All rights reserved.

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
0	1-16	Direct Parameter Page 1 (incl. Vendor ID & Device ID)				RO	
1	1-16	Direct Parameters Page 2				RW	
2		Standard Command		130 = Restore Factory Settings 162 = Start Discovery 163 = Stop Discovery		WO	
3		Data Storage Index (device-specific list of parameters to be stored)				RW	
4-11		*Reserved by IO-Link Specification*					
12		**Device Access Locks**					
12	1	Parameter Write Access Lock		0 = Off, 1 = On	0	RW	Y
12	2	Data Storage Lock		0 = Off, 1 = On	0	RW	Y
12	3	Local Parameterization Lock		0 = Off, 1 = On	0	RW	Y
12	4	Local User Interface Lock		0 = Off, 1 = On	0	RW	Y
16		Vendor Name String		Banner Engineering Corporation		RO	
17		Vendor Text String		More Sensors. More Solutions.		RO	
18		Product Name String		R95C		RO	
19		Product ID String		R95C-8UI-KQ		RO	
20		Product Text String				RO	
21		Serial Number				RO	
23		Firmware Version				RO	
24		App Specific Tag (user defined)				RW	Y
36		Device Status	8-bit integer	0 = Device is OK 1 = Maintenance required 2 = Out of specification 3 = Functional check 4 = Failure 5..255 Reserved		RO	
37		Detailed Device Status	Array [6] of 3-octet			RO	
38-39		*reserved*					
40		Process Data Input		*See Process Data In*		RO	
41-57		*unused/reserved*					
69		**All-Time Run**					
69	1	Run Counter	32-bit Uinteger	0..2147483647		RO	Y
70		**Resettable Run Time**					
70	1	Run Counter	32-bit Uinteger	0..2147483647	0	RO	
71		**Pulse Frequency Configuration**					
71	1	Near Frequency (Hz)	32-bit Uinteger	100..45000	100	RW	Y
71	2	Far Frequency (Hz)	32-bit Uinteger	100..45000	600	RW	Y
72		**Pulse Frequency LOS Frequency (Hz)**					
72	1	Pulse Frequency LOS Frequency = Frequency used to indicate Loss-of-Signal	32-bit Uinteger	50..45000	50	RW	Y
76		**Vendor Specific Configuration**					
76	1	Process Data Input Configuration	8-bit Uinteger	0 = Analog Value, 1 = Digital Measuring Sensor	0	RW	Y
76	2	IOL Filter Time (ms)	16-bit Uinteger		200	RW	Y
76	3	Secondary Output Function = Pin 2 (White) host side output	8-bit Uinteger	0 = Disabled, 1 = Pulse Frequency Modulation	0	RW	Y

Continued on page 9

© Banner Engineering Corp. All rights reserved.

Continued from page 9

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
76	4	PFM Input Selection	8-bit Uinteger	0 = Analog In 1 1 = Analog In 2 2 = Analog In 3 3 = Analog In 4 4 = Analog In 5 5 = Analog In 6 6 = Analog In 7 7 = Analog In 8	0	RW	Y
76	5	Port 1 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	6	Port 2 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	7	Port 3 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	8	Port 4 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	9	Port 5 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	10	Port 6 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	11	Port 7 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
76	12	Port 8 - The Mode of Analog In	8-bit Uinteger	0 = Voltage, 1 = Current	1	RW	Y
78		**All-Time Run Time Event Time**					
78	1	Event Time	32-bit Uinteger	0..2147483647	0	RW	Y
79		**Resettable Run Time Event Time**					
79	1	Event Time	32-bit Uinteger	0..2147483647	0	RW	Y
12288		**MDC Descriptor - Port 5**					
12288	1	Lower Limit	32-bit Integer			RO	
12288	2	Upper Limit	32-bit Integer			RO	
12288	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
12288	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
12289		**MDC Descriptor - Port 6**					
12289	1	Lower Limit	32-bit Integer			RO	
12289	2	Upper Limit	32-bit Integer			RO	
12289	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
12289	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
12290		**MDC Descriptor - Port 7**					
12290	1	Lower Limit	32-bit Integer			RO	
12290	2	Upper Limit	32-bit Integer			RO	
12290	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
12290	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
12291		**MDC Descriptor - Port 8**					
12291	1	Lower Limit	32-bit Integer			RO	
12291	2	Upper Limit	32-bit Integer			RO	
12291	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
12291	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
16396		**SSC1.BDC1 Setpoints**					
16396	1	Port 1 - Voltage - Setpoint SP1	32-bit Integer	Port 1 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16396	2	Port 1 - Voltage - Setpoint SP2	32-bit Integer	Port 1 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16396	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 1 switchpoint	0.05 V	RW	Y
16396	4	Port 1 - Current - Setpoint SP1	32-bit Integer	Port 1 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16396	5	Port 1 - Current - Setpoint SP2	32-bit Integer	Port 1 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y

Continued on page 11

© Banner Engineering Corp. All rights reserved.

Continued from page 10

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
16396	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 1 switchpoint	0.0001 A	RW	Y
16397		**SSC2.BDC1 Setpoints**					
16397	1	Port 2 - Voltage - Setpoint SP1	32-bit Integer	Port 2 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16397	2	Port 2 - Voltage - Setpoint SP2	32-bit Integer	Port 2 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16397	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 2 switchpoint	0.05 V	RW	Y
16397	4	Port 2 - Current - Setpoint SP1	32-bit Integer	Port 2 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16397	5	Port 2 - Current - Setpoint SP2	32-bit Integer	Port 2 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16397	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 2 switchpoint	0.0001 A	RW	Y
16398		**SSC3.BDC1 Setpoints**					
16398	1	Port 3 - Voltage - Setpoint SP1	32-bit Integer	Port 3 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16398	2	Port 3 - Voltage - Setpoint SP2	32-bit Integer	Port 3 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16398	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 3 switchpoint	0.05 V	RW	Y
16398	4	Port 3 - Current - Setpoint SP1	32-bit Integer	Port 3 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16398	5	Port 3 - Current - Setpoint SP2	32-bit Integer	Port 3 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16398	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 3 switchpoint	0.0001 A	RW	Y
16399		**SSC4.BDC1 Setpoints**					
16399	1	Port 4 - Voltage - Setpoint SP1	32-bit Integer	Port 4 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16399	2	Port 4 - Voltage - Setpoint SP2	32-bit Integer	Port 4 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16399	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 4 switchpoint	0.05 V	RW	Y
16399	4	Port 4 - Current - Setpoint SP1	32-bit Integer	Port 4 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16399	5	Port 4 - Current - Setpoint SP2	32-bit Integer	Port 4 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16399	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 4 switchpoint	0.0001 A	RW	Y
16400		**SSC5.BDC1 Setpoints**					
16400	1	Port 5 - Voltage - Setpoint SP1	32-bit Integer	Port 5 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16400	2	Port 5 - Voltage - Setpoint SP2	32-bit Integer	Port 5 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16400	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 5 switchpoint	0.05 V	RW	Y
16400	4	Port 5 - Current - Setpoint SP1	32-bit Integer	Port 5 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16400	5	Port 5 - Current - Setpoint SP2	32-bit Integer	Port 5 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16400	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 5 switchpoint	0.0001 A	RW	Y
16401		**SSC6.BDC1 Setpoints**					
16401	1	Port 6 - Voltage - Setpoint SP1	32-bit Integer	Port 6 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16401	2	Port 6 - Voltage - Setpoint SP2	32-bit Integer	Port 6 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16401	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 6 switchpoint	0.05 V	RW	Y
16401	4	Port 6 - Current - Setpoint SP1	32-bit Integer	Port 6 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y

Continued on page 12

© Banner Engineering Corp. All rights reserved.

Continued from page 11

Index	Subindex	Name	Length	Value Range	Default	Access Rights	Data Storage?
16401	5	Port 6 - Current - Setpoint SP2	32-bit Integer	Port 6 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16401	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 6 switchpoint	0.0001 A	RW	Y
16402		**SSC7.BDC1 Setpoints**					
16402	1	Port 7 - Voltage - Setpoint SP1	32-bit Integer	Port 7 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16402	2	Port 7 - Voltage - Setpoint SP2	32-bit Integer	Port 7 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16402	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 7 switchpoint	0.05 V	RW	Y
16402	4	Port 7 - Current - Setpoint SP1	32-bit Integer	Port 7 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16402	5	Port 7 - Current - Setpoint SP2	32-bit Integer	Port 7 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16402	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 7 switchpoint	0.0001 A	RW	Y
16403		**SSC8.BDC1 Setpoints**					
16403	1	Port 8 - Voltage - Setpoint SP1	32-bit Integer	Port 8 - SP1 Switchpoint = Voltage In LED lower switchpoint	0 V	RW	Y
16403	2	Port 8 - Voltage - Setpoint SP2	32-bit Integer	Port 8 - SP2 Switchpoint = Voltage In LED upper switchpoint	10 V	RW	Y
16403	3	Voltage - Hysteresis	32-bit Integer	Hysteresis value for the Voltage In Port 8 switchpoint	0.05 V	RW	Y
16403	4	Port 8 - Current - Setpoint SP1	32-bit Integer	Port 8 - SP1 Switchpoint = Current In LED lower switchpoint	0.004 A	RW	Y
16403	5	Port 8 - Current - Setpoint SP2	32-bit Integer	Port 8 - SP2 Switchpoint = Current In LED upper switchpoint	0.02 A	RW	Y
16403	6	Current - Hysteresis	32-bit Integer	Hysteresis value for the Current In Port 8 switchpoint	0.0001 A	RW	Y
16512		**MDC Descriptor - Port 1**					
16512	1	Lower Limit	32-bit Integer			RO	
16512	2	Upper Limit	32-bit Integer			RO	
16512	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
16512	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
16513		**MDC Descriptor - Port 2**					
16513	1	Lower Limit	32-bit Integer			RO	
16513	2	Upper Limit	32-bit Integer			RO	
16513	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
16513	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
16514		**MDC Descriptor - Port 3**					
16514	1	Lower Limit	32-bit Integer			RO	
16514	2	Upper Limit	32-bit Integer			RO	
16514	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
16514	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	
16515		**MDC Descriptor - Port 4**					
16515	1	Lower Limit	32-bit Integer			RO	
16515	2	Upper Limit	32-bit Integer			RO	
16515	3	Unit	16-bit Uinteger	1209 = A, 1240 = V		RO	
16515	4	Scale	8-bit Integer	-6 (µA), -3 (mV)		RO	

IO-Link Events

Events are acyclic transmissions from the IO-Link device to the IO-Link master. Events can be error messages and/or warning or maintenance data.

© Banner Engineering Corp. All rights reserved.

Code	Type	Name	Description
25376 (0x6320)	Error	Parameter error	Check data sheet and values
36000 (0x8CA0)	Warning	All-time Run Time Event	Event indicating the corresponding configured running time has elapsed.
36001 (0x8CA1)	Warning	Resettable Run Time Event	Event indicating the corresponding configured running time has elapsed.

© Banner Engineering Corp. All rights reserved.