

## IO-Link Data Map

This document refers to the following IODD file: Banner\_Engineering-Q76E-KP-ZLVC-Q5-20200801-IODD1.1. The IODD file and support files can be found on [www.bannerengineering.com](http://www.bannerengineering.com) under the download section of the product family page.

## Communication Parameters

The following communication parameters are used.

Parameter	Value	Parameter	Value
IO-Link revision	V1.1	SIO mode	No
Process Data In length	8-bits	Bit Rate	38400 bps
Process Data Out length	1-bit	Minimum cycle time	2.5 ms
Device ID	463617		

## IO-Link Process Data In (Device to Master)

### Process Data - If PDI Content = Switching Signal

Subindex	Name	Number of Bits	Data Values	Bit
1	Q	1	0 = not active, 1 = active	0
2	Warning	1	0 = no warning, 1 = warning	1
3	Status	1	0 = not active, 1 = active	2

### Process Data - If PDI Content = Analog ADC Value and Switching Signal

Subindex	Name	Number of Bits	Data Values	Bit
1	Q	1	0 = not active, 1 = active	0
2	Received Signal	7	ADC	1-7

## IO-Link Process Data Out (Master to Device)

### Process Data - If PDI Content = Switching Signal

Subindex	Name	Number of Bits	Data Values	Bits
1	sign ext	1	0 = not active, 1 = active	0

### Process Data - If PDI Content = Analog ADC value and Switching Signal

Subindex	Name	Number of Bits	Data Values	Bits
1	sign ext	1	0 = not active, 1 = active	0

## Parameters Set Using IO-Link

Index	Octet	Subindex	Bit Offset	Name	Length	Value Range	Default	Access Rights
0				Direct Parameters Page 1				



Index	Octet	Subindex	Bit Offset	Name	Length	Value Range	Default	Access Rights
	0	1		Reserved	8-bit UInteger			ro
	1	2		Master Cycle Time	8-bit UInteger		0	ro
	2	3		Min Cycle Time	8-bit UInteger		23	ro
	3	4		M-Sequence Capability	8-bit UInteger		0	ro
	4	5		IO-Link Version ID	8-bit UInteger		17	ro
	5	6		Process Data Input Length	8-bit UInteger		72	ro
	6	7		Process Data Output Length	8-bit UInteger		1	ro
	7	8		Vendor ID 1	8-bit UInteger		1	ro
	8	9		Vendor ID 2	8-bit UInteger		195	ro
	9	10		Device ID 1	8-bit UInteger		7	ro
	10	11		Device ID 2	8-bit UInteger		19	ro
	11	12		Device ID 3	8-bit UInteger		1	ro
	12	13		Reserved	8-bit UInteger			ro
	13	14		Reserved	8-bit UInteger			ro
	14	15		Reserved	8-bit UInteger			ro
	15	16		Standard Commands	8-bit UInteger	160 = Error Confirmation 161 = Teach 28% (Standard Sensitivity) 162 = Teach 18% (Increased Sensitivity) 163 = light switching 164 = dark switching 170 = Enable Configuration Mode 171 = Reload last Teach (WORKING) 172 = Restore factory defaults 173 = Save current parameters to device 174 = Enable Sensor Mode 191 = Enable ADC Signal Process Data Output		wo
<b>1</b>				<b>Direct Parameters Page 2 - with Overlay</b>				
	0	1	127	Status Teach/Command	Boolean	0 = finished, 1 = running	0	ro
	0	1	126	Command accepted	Boolean	0 = no, 1 = yes	0	ro
	0	1	123	Teach Error	Boolean	0 = no, 1 = yes	0	ro
	0	1	122	Last values restored	Boolean	0 = no, 1 = yes	0	ro
	0	1	121	Reception level too high	Boolean	0 = no, 1 = yes	0	ro
	0	1	120	Reception level too low	Boolean	0 = no, 1 = yes	0	ro
	2	3	104	Off Limit	8-bit UInteger			
	3	4	96	On Limit	8-bit UInteger			
	6	7	77	Key Lock	Boolean	0 = Disabled, 1 = Enabled	1	rw

Index	Octet	Subindex	Bit Offset	Name	Length	Value Range	Default	Access Rights
	6	7	74	Q2 logic function	2-bit UInteger	0 = Inverted Switching Output 1 = Switching Output 2 = Warning Output	0	rw
	7	8	70	Delay Function	2-bit UInteger	0 = On delay 1 = Off delay 2 = pulse stretching 3 = pulse suppression	1	rw
	7	8	68	Time base	2-bit UInteger	0 = 1 ms 1 = 10 ms 2 = 100 ms 3 = 1000 ms	1	rw
	7	8	64	Multiplication factor fo the time base	4-bit UInteger		1	rw
	8	9	60	EasyTune	Boolean	0 = Disabled, 1 = Enabled	0	rw
	8	9	58	Light/Dark Switching	Boolean	0 = light switching, 1 = dark switching	0	rw
	8	9	56	Internal Delay Unit	Boolean	0 = Disabled, 1 = Enabled	0	rw
	13	14	16	Teach Value 2	8-bit UInteger		0	rw
	14	15	8	PDI Content	8-bit UInteger	0 = Switching Signal and Status, 1 = Analog ADC value and Switching Signal	0	ro