Q76 Sensors - IO-Link Data Reference Guide

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 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	8-bits
Process Data Out length	1-bit
Device ID	463617

Parameter	Value
SIO mode	No
Bit Rate	38400 bps
Minimum cycle time	2.5 ms

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**				

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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
1				**Direct Parameters Page 2 - with Overlay**				
	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

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