

# **Type 8318**

## IO-Link IODD

Objects

Document version 1.0

Supplement to Operating Instructions

# 1 History

Document version	Date	Changes
1.00	2020-10-05	Initial draft version

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## 2 Abbreviations

Following datatype abbreviations are used in this document:

Abbreviation	Meaning
BOOL	Boolean (1bit)
UI8	Unsigned integer 8 (8bit)
SI8	Signed integer 8 (8bit)
UI16	Unsigned integer 16 (16bit)
SI16	Signed integer (16bit)
UI32	Unsigned integer 32 (32bit)
SI32	Signed integer 32 (32bit)
UI64	Unsigned integer (64bit)
SI64	Signed integer 64 (64bit)
FL32	Real32 (Float, 32bit)
STR	String (Byte array of max. 19 Bytes, characters coded with "UTF-8")

Following abbreviations are used for expressing conditions:

Abbreviation	Meaning
!=	Not equal
==	Equals

Following abbreviations are used for access rights:

Abbreviation	Meaning
RO	Read only
RW	Read and write

Column label	Description
Sub	Sub index of object
Name	Name of object
Description	Object description
Access type	General access rights: RO = read only, RW = read write
Data type	Data type of sub index / object
Data memory	Sub index is handled by data storage (IO-Link master)
Factory reset	Sub index will be reset to factory default settings, if factory reset function is executed
Device reset	Sub index will be reset to factory default settings, if device reset function is executed

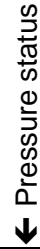
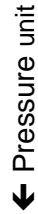
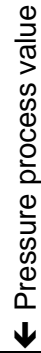
## 3 Important Information

### 3.1 Process data

#### 3.1.1 Input (PDin) from device to master

Sub-Index	Bit-Offset	Length (bits)	Data type	Description
1	24	32	FL32 or SI32	Pressure process value  The "Data format" configuration parameter can be used to switch the data type FL32 and SI32  FL32 = default
2	16	8	UI8	Pressure process value unit  0 = bar 1 = mbar 2 = ftH <sub>2</sub> O 3 = mmH <sub>2</sub> O 4 = mmHG 5 = psi 6 = inH <sub>2</sub> O 7 = inHG 8 = kg/cm <sup>2</sup> 9 = kPA 10 = torr 11 = MPA 12 = mH <sub>2</sub> O
3	8	8	UI8	Pressure process value status  Bit 0 = Process value invalid (overrange or underrange) Bit 1 = Error in configuration Bit 2 = Error in calibration (device is defective)  0 = No error 1 = Error
4	0	8	UI8	Switching Output  Bit 0 = Switching output 1 Bit 1 = Switching output 2  0 = Not switched 1 = Switched

Total length: 7 byte



<b>Bits</b>	56		24	23		16	15		8	7		0
<b>Sub-index</b>	1			2			3			4		
<b>Data type</b>	FL32 or SI32			UI8			UI8			UI8		
<b>Name</b>	Pressure			Pressure Unit			Pressure status			Switching Output		
<b>Length [Bits]</b>	32			8			8			8		

## 3.2 System Commands

The device supports the following system commands:

Value hex (dec)	Description
0x82 (130)	Restore factory settings
0xA0 (160)	Set actual start value
0xA1 (161)	Set actual end value
0xB0 (176)	Complete zero point adjustment

Commands are send to the device via index 2 with sub-index 0 (see chapter “Supported common data objects”)

### 3.3 Non-cyclic parameter (On-Request Data)

#### 3.3.1 General

Designation	Index	Sub-index	Data type	Value range	Default	Access	Description
Data format	64	0	UI8	0 = FL32 1 = Integer	FL32	RW	
Pressure process value unit	120	0	UI8	0 = bar 1 = mbar 2 = ftH <sub>2</sub> O 3 = mmH <sub>2</sub> O 4 = mmHG 5 = psi 6 = inH <sub>2</sub> O 7 = inHG 8 = kg/cm <sup>2</sup> 9 = kPA 10 = torr 11 = MPA 12 = mH <sub>2</sub> O	bar	RW	Main value
Pressure process value offset	121	0	FL32	-9999 to 9999	0	RW	
Pressure filter time constant	122	0	FL32	0 to 100 s	0	RW	

### 3.3.2 Switching output 1 and 2

Designation	Index	Sub-index	Data type	Value range	Default	Access	Description
Switching behaviour	200 and 201	1	UI8	0 = Inactive  1 = Hysteresis function N/O contact  2 = Hysteresis function N/C contact  3 = Window function N/O contact  4 = Window function N/C contact	Inactive	RW	Index 200 = Switching Output 1  Index 201 = Switching Output 2
Switching Point / Windows high	200 and 201	2	FL32	-99999 to 99999	0	RW	Index 200 = Switching Output 1  Index 201 = Switching Output 2
Switching Point / Windows low	200 and 201	3	FL32	-99999 to 99999	0	RW	Index 200 = Switching Output 1  Index 201 = Switching Output 2
Switch-on delay	200 and 201	4	FL32	0 to 100 s	0	RW	Index 200 = Switching Output 1  Index 201 = Switching Output 2
Switch-off delay	200 and 201	4	FL32	0 to 100 s	0	RW	Index 200 = Switching Output 1  Index 201 = Switching Output 2
Output mode	200 and 201	6	UI8	0 = P-switching 1 = N-switching	P-Switching	RW	Index 200 = Switching Output 1  Index 201 = Switching Output 2



### 3.3.3 Events

Designation	Index	Sub-index	Data type	Value range	Default	Access	Description
Event settings	111	0	UI8	Bit 0 = Process data invalid  Bit 1 = Process data overrange  Bit 2 = Process data underrange  Bit 3 = Device hardware error	0	RW	0 = inactive 1 = active

### 3.3.4 Fine adjustment

Designation	Index	Sub-index	Data type	Value range	Default	Access	Description
Active	220	0	UI8	0 = No 1 = Yes	No	RW	
Actual start value	221	0	FL32	-99999 to 99999	0	RW	
Actual end value	222	0	FL32	-99999 to 99999	0	RW	
Target start value	223	0	FL32	-99999 to 99999	0	RW	
Target end value	224	0	FL32	-99999 to 99999	0	RW	

### 3.3.5 Service data

Designation	Index	Sub-index	Data type	Value range	Default	Access	Description
Operating hours counter	3000	0	UI32			RO	
Drag indicator pressure process value min.	3002	0	FL32			RO	
Drag indicator, pressure process value max.	3003	0	FL32			RO	
Reset all	3100	0	Device command	1 = Reset		WO	Resets all drag indicators and the operating hours counter
Reset operating hours counter	3100	0	Device Command	2 = Reset		WO	
Drag indicator pressure process value min.	3100	0	Device Command	3 = Reset		WO	
Drag indicator, pressure process value max.	3100	0	Device Command	4 = Reset		WO	
VDN version	1000	0	STR	12 byte		RO	
Bootloader version	1001	0	STR	14 byte		RO	