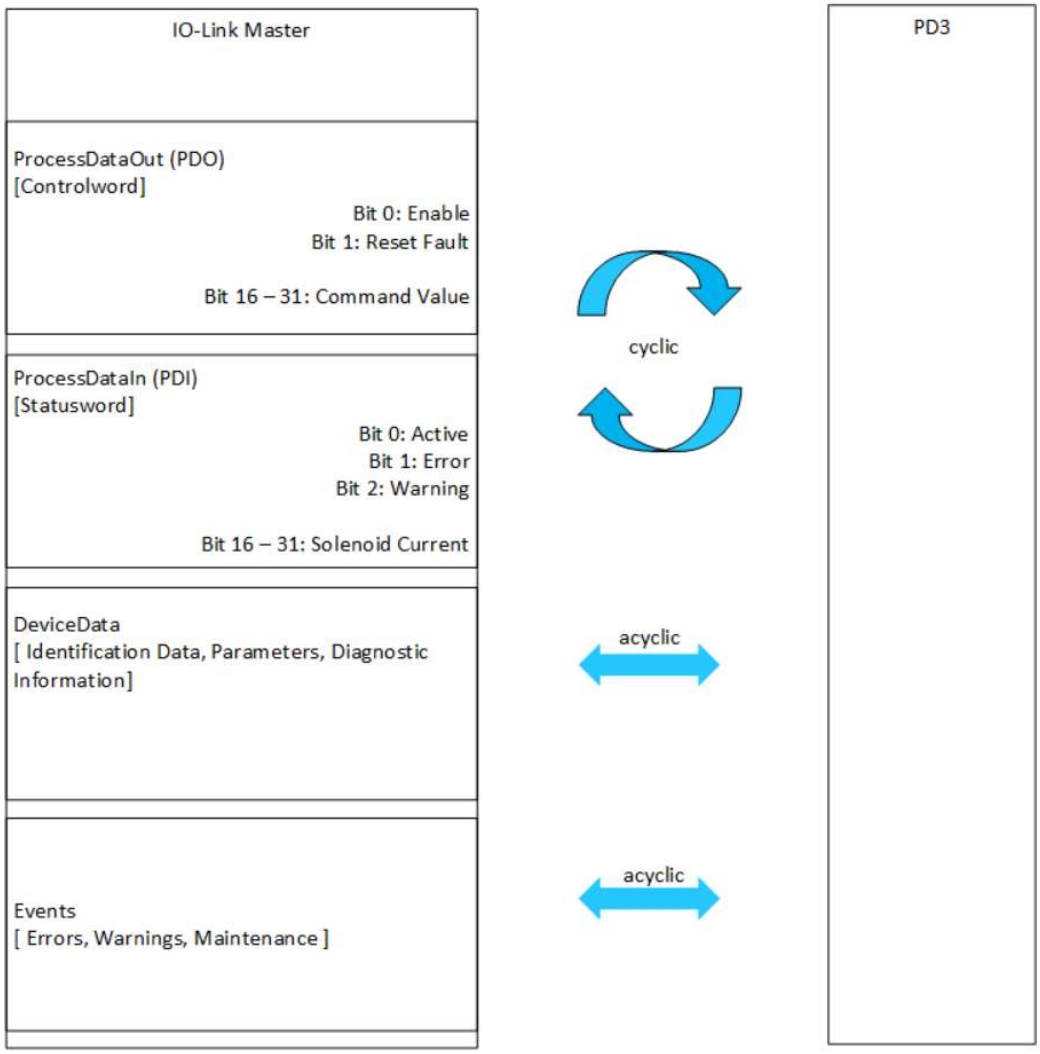
PD3 IO-Link Interface Description

For general information about IO-Link please refer to
- [English] → io-link.com → Downloads → About IO-Link → IO-Link System Description
- [Deutsch] → io-link.com → Downloads → Über IO-Link → IO-Link Systembeschreibung

Identification

Vendor Name:	Wandfluh AG	Bitrate:	COM2
Vendor ID:	1208 (0x04B8)	MinCycleTime:	500 us
Decice ID:	65793 (0x010101)	SIO Mode:	NoData
IO-Link Version:	1.1	Profile:	Common-Profile
IODD:	Wandfluh-PD3-20200701-IODD1.1.zip		

Overview



Cyclic

Process Data Out (Controlword + Command)

Bit	Name	Description	Datatyp	Bitlength	Gradient	Unit
0	Enable	1 = Enable Device 0 = Disable Device	BooleanT	1		
1	Reset Fault	1 = Reset Fault 0 = Idle	BooleanT	1		
16-31	Command Value	Command Value 0 – 10 000 incr.	IntegerT	16	1	Increment

Process Data In (Statusword + Solenoid Current)

Bit	Name	Description	Datatyp	Bitlength	Gradient	Unit
0	Active	1 = Device Active 0 = Device Inactive	BooleanT	1		
1	Error	1 = Failure Active 0 = Failure Inactive	BooleanT	1		
2	Warning	1 = Warning Active 0 = Warning Inactive				
16-31	Solenoid Current	Solenoid Current 0 – 2500 mA	IntegerT	16	1	mA

Acyclic

Device Data (Subindex is always Zero)

Common profile relevant device parameters

Index	***Variablenname***	***Datatype***	***Length***	***Access Rights***	***Factory Setting***	
2	SystemCommand	UIntegerT	1 octet	RO		
13	Profile Characteristic	ArrayT of UIntegerT16	Variable	RO		
14	PDInput Descriptor	ArrayT of UIntegerT16	Variable	RO	Solenoid Current: Active: Error: Warning:	"0x03,0x0F,0x10" "0x01,0x01,0x00" "0x01,0x01,0x01" "0x01,0x01,0x02"
15	PDOutput Descriptor	ArrayT of UIntegerT16	Variable	RO	Command Value: Enable: Reset Fault:	"0x03,0x0F,0x10" "0x01,0x01,0x00" "0x01,0x01,0x01"
16	Vendor Name	StringT	Max. 64 octets	RO	Wandfluh AG	
18	Product Name	StringT	Max. 64 octets	RO	PD3	
19	Product ID	StringT	Max. 64 octets	RO	0x010101	
21	Serial Number	StringT	Max. 16 octets	RO		
22	Hardware Revision	StringT	Max. 64 octets	RO		
23	Firmware Revision	StringT	Max. 64 octets	RO		
24	Application Specific Tag	StringT	32	RW		
25	Function Tag	StringT	32	RW		
26	Location Tag	StringT	32	RW		
36	Device Status	UIntegerT	1 octet	RO		
37	Detailed Device Status	ArrayT of OctetStringT3	Variable	RO		

PD3 parameters

Index	Variablenname	Min	Max	Datatype	Length	Gradient	Unit	Unit Code	Variablentext	Access Rights
70	V_DeviceTemperature	-40	85	IntegerT	16	1	°C	1001	Device Temperature	ro
71	V_DeviceMinTemperature	-40	85	IntegerT	16	1	°C	1001	Min. temperature value	ro
72	V_DeviceMaxTemperature	-40	85	IntegerT	16	1	°C	1001	Max. temperature value	ro
73	V_TempertureClass_0	0	65535	UIntegerT	16	1	h	1059	Operat. hours below 0°C	ro
74	V_TempertureClass_0_40	0	65535	UIntegerT	16	1	h	1059	Operating hours 0-40°C	ro
75	V_TempertureClass_40_60	0	65535	UIntegerT	16	1	h	1059	Operating hours 40-60°C	ro
76	V_TempertureClass_60_70	0	65535	UIntegerT	16	1	h	1059	Operating hours 60-70°C	ro
77	V_TempertureClass_70_80	0	65535	UIntegerT	16	1	h	1059	Operating hours 70-80°C	ro
78	V_TempertureClass80	0	65535	UIntegerT	16	1	h	1059	Operat. hours above 80°C	ro
79	V_SupplyVoltage	8000	32000	IntegerT	16	0.001	V	1240	Supply voltage	ro
80	V_SupplyVoltageSolenoid	8000	32000	IntegerT	16	0.001	V	1240	Supply voltage solenoid	ro
81	V_CommandValue	0	10000	IntegerT	16	0.01	Incr.	1342	Command value	ro
82	V_OperatingHours	0	2^{32}	UIntegerT	32	1	h	1059	Operating hours	ro
100	V_SolenoidType	1	2	UIntegerT	8	1			Solenoid Type	rw
101	V_RampUp	0	50000	UIntegerT	16	0.04	s	1054	Ramp up	rw
102	V_RampDown	0	50000	UIntegerT	16	0.04	s	1054	Ramp down	rw
103	V_SolenoidIMin	0	2500	UIntegerT	16	1	mA	1211	Solenoid Imin	rw
104	V_SolenoidIMax	0	2500	UIntegerT	16	1	mA	1211	Solenoid Imax	rw
105	V_DitherFrequency	2	250	UIntegerT	16	1	Hz	1077	Dither frequency	rw
106	V_DitherAmplitude	0	400	UIntegerT	16	1	mA	1211	Dither amplitude	rw
107	V_SwitchingOnThreshold	0	10000	UIntegerT	16	0.01	%	1342	Switching on threshold	rw
108	V_SwitchingOffThreshold	0	10000	UIntegerT	16	0.01	%	1342	Switching off threshold	rw
109	V_ReductionTime	0	2000	UIntegerT	16	1	ms	1056	Reduction time	rw
110	V_ReductionValue	0	10000	UIntegerT	16	0.01	%	1342	Reduction value	rw
111	V_CablebreakDetection	0	1	UIntegerT	8	1			Cablebreak Detection	rw

Device Status

Value	Description
0	*Device is operating properly*
1	*Not implemented*
2	*Out of Specification*
3	*Not implemented*
4	*Failure*

Events

Eventcode Decimal (Hexadecimal)	Description	IO-Link Standard Event	Error Type	Cause of Failure
4096 (0x1000)	*General malfunction – unknown Error*	*Yes*	*Error*	*n/a*
16384 (0x4000)	*Temperatur Fault - Overload*	*Yes*	*Error*	*Device temperature >90°C*
16912 (0x4210)	*Device Temperatur over-run Clear source of heat*	*Yes*	*Warning*	*Device temperature >80°C & <90°C*
20497 (0x5011)	*Non Volattile Memory Loss*	*Yes*	*Error*	*EEPROM Failure*
20752 (0x5110)	*Component Malfunction*	*Yes*	*Warning*	*n/a*
30480 (0x7710)	*Short Circuit*	*Yes*	*Error*	*Solenoid Short Circuit*
6201 (0x1839)	*Supply Voltage Error*		*Error*	*Supply Voltage <16V*
6202 (0x183A)	*Error Solenoid Supply*		*Error*	*Supply Voltage <7V*
6203 (0x183B)	*Cablebreak Solenoid Driver*		*Error*	*Solenoid Cable Break*
6204 (0x183C)	*Event Error*		*Error*	*Unknown Event Appeared*