



FR 25-R(L)-PNSL-...

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www.sensopart.com

GENERAL INFORMATION	
Communication mode IO-Link	COM 2
Min. cycle time	2.3 ms
SIO mode	supported
Length process data	16 Bit
Vendor ID	347 (0x01 0x5B)
Device ID	17665 / 17921 / 20737 / 20993
Data storage	supported
Specification IO-Link	1.1

PROCESS DATA															
SMART-SENSOR PROFILE															
Byte 0							Byte 1								
7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Switching output Q₁

Switching output 1 - corresponds to switching output Q₁ in SIO-mode

IDENTIFICATION DATA						
Index dec / hex	Access	Data type	Length		Description	Comment
16 / 0x10	Read	String	Max. 64 Byte		Vendor name	SensoPart Industriesensorik GmbH
17 / 0x11					Vendor text	www.sensopart.com
18 / 0x12					Product name	FR 25-RL-PNSL-... FR 25-R-PNSL-...
19 / 0x32					Product ID	609-31014 609-31015 609-31016 609-31017 609-31018 606-11042 606-11043 606-11044 606-11045 606-11046 606-11047 606-11048
20 / 0x11					Product text	Device specific
23 / 0x17					Firmware revision	1.0

SMART SENSOR PROFILE PARAMETER								
Index in dec / hex	Access	Data type	Length	Subindex	Default value	Range	Description	Comment
12 / 0x0C	Read / write	Uint	16 Bit		0x00 0x00	D0, D1, D3	Lock functions	D0 - parameter write access D1 - data storage lock D3 - local user interface lock
24 / 0x18	Read / write	StringT	32 characters		**** ... ****		Application text	Free text, e.g. item designation
59 / 0x3B	Read	Uint	8 Bit				Teach status	
							Define switching output Q ₁	
60 / 0x3C	Read / write	Uint	16 Bit	1	10 16	10 ... 990 16 ... 990	Switching point 1	Determined by teach operation, via IODD only RO
							Set-Up switching output Q ₁	
61 / 0x3D	Read / write	Uint	8 Bit	1	1	0, 1	NC / NO	0 = NC 1 = NO

PARAMETER									
Index dec / hex	Access	Data type	Length	Subindex	Default value	Range	Description	Comment	
							Read operating data		
88 / 0x58	Read	Uint	32 Bit	1			Counter operating hours	No reset possible	
				2			Counter switch cycle	No reset possible	
							Read sensor characteristics		
95 / 0x5F	Read	String		1	Device specific		Operating range		
				5	Device specific		Type of light and laser class		
				6	≤ 30 mA		No-load current		
				7	Device specific		Switching frequency		
				9	-20 ... 60 °C		Ambient temperature		
							Smart functions Q ₁		
208 / 0xD0	Read / write	Uint	16 Bit	1	0	0 ... 65535	Counter		
				2	0	0 ... 65535	On delay	in ms, adjustable in 1ms	
				3	0	0 ... 65535	Off delay	in ms, adjustable in 1ms	
				4	0	0 ... 65535	Impulse	in ms, adjustable in 1ms	
				5	0	0 ... 500	Monitoring frequency	in 1/10 Hz, adjustable in 0.1 Hz steps ¹⁾	
							Function switching output Q ₁		
213 / 0xD5	Read / write	Uint	8 Bit	1	2	0, 1, 2	PNP / NPN	0 = NPN 1 = PNP 2 = autodetect	
							Control input ²⁾		
221 / 0xDD	Read / write	Uint	8 Bit	1	1	0, 1	Control input PIN 2	0 = PIN 2 disable 1 = PIN 2 active	
							Current energy		
206 / 0xCE	Read / write	Uint	16 Bit			0 ... 1000	Energy		
							Gain		
222 / 0xDE	Read / write	Uint	8 Bit	1	1	0, 1	Gain	Only for FR 25-R-PNSL-... 0 = low gain 1 = high gain	

SYSTEM COMMANDS									
Index dec / hex	Access	Data type	Length		Function dec / hex	Range	Description	Comment	
2 / 0x02	Read / write	Uint	8 Bit		64 / 0x40		Teach apply	Adopt teach values on sensor	
					65 / 0x41		Single value teach - switching point 1	The switching point is on the teach value	
					67 / 0x43		Two value teach - teachpoint 1 for switching point 1	The switching point is in the middle of both teachpoints	
					68 / 0x44		Two value teach - teachpoint 2 for switching point 1		
					71 / 0x47		Dynamic teach - switching point 1 - start	The switching point is in the middle of the min. / max. value	
					72 / 0x48		Dynamic teach - switching point 1 - stop		
					79 / 0x4F		Teach cancel		
					160 / 0xA0		Emitter off		
					161 / 0xA1		Emitter on		
					162 / 0xA2		Reset switching channel	Reset of current switching channel	
					175 / 0xAF		Detect sensor	1x activated - sensor flashes 60 s 2x activated - permanent flashing 3x activated - stop permanent flashing	
					128 / 0x80		Reset sensor		
					130 / 0x82		Factory setting		

EVENTS				
Event	Status value	Warning		
20480 / 0x5000	4	Error	Device hardware fault	Default: deactivated ³⁾
20497 / 0x5011	4	Error	Non-volatile memory loss	
65425 / 0xFF91	0	Notice	Data storage - upload request	Not blockable via 0x51
16384 / 0x4000	4	Error	Temperature fault	Temperature range exceeded; default: deactivated ³⁾

¹⁾ differs to real frequency ±10%

²⁾ Only 4-pin version

³⁾ Differs to real frequency ± 10 %