Data sheet

IO-Link

996-01028

IMT 12-FM-S-NB2-PSL-L4M

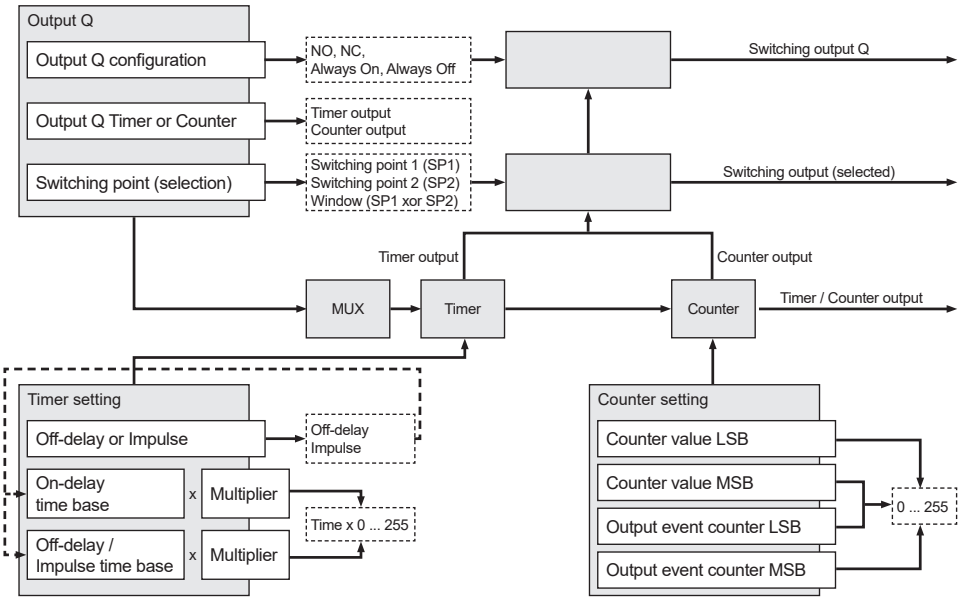
096-00064 09.03.2021-00
www.sensopart.com

GENERAL INFORMATION	
Communication mode IO-Link	COM 2
Min. cycle time	10.4 ms
SIO mode	Supported
Length process data	7 Bit
Vendor ID	347 (0x01 0x5B)
Device ID	29441
Specification IO-Link	1.1
ISDU	Not supported

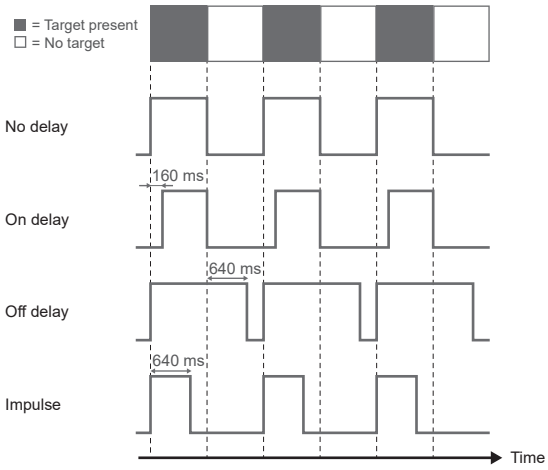
PROCESS DATA

	Bit	Name	Description	
Byte 0	6	Temperature threshold	Value "True" = temperature ≥ threshold	Value "False" = temperature < threshold
	5	Switching point 2 (80 %)	Value "True" = object is detected with margin	Value "False" = no detection with margin
	4	Switching point 1 (100 %)	Value "True" = object is detected	Value "False" = no detection
	3	Selected switching point	Value "True" = object is detected	Value "False" = no detection
	2	Timer output	Value "True" = object is detected	Value "False" = no detection
	1	Counter output	Value "True" = object is detected	Value "False" = no detection
	0	Switching output Q	Value "True" = object is detected	Value "False" = no detection

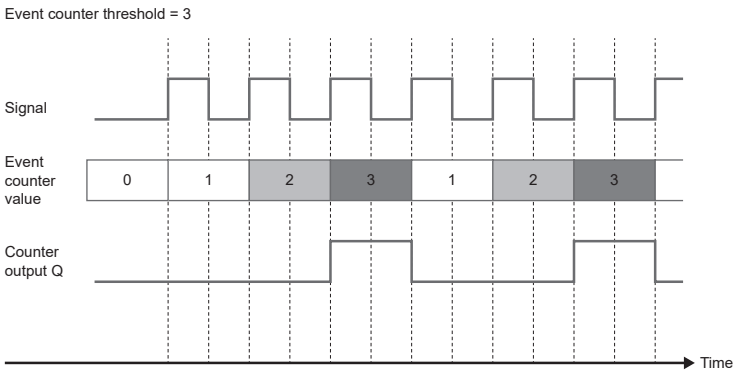
SIGNAL FLOW CHART



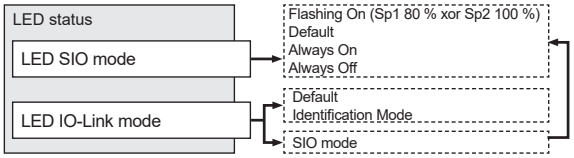
TIMER PARAMETER



COUNTER PARAMETER



LED PARAMETER



DEVICE-SPECIFIC PARAMETER DATA TABLE									
Direct parameter page 2 address dec / hex	**Index dec / hex**	**Subindex dec / hex**	**Length**	**Bit offset**	**Access**	**Default value**	**Range**	**Description**	**Comment**
16 / 0x10	1 / 0x01	1 / 0x01	1 Bit	4 Bit	Read / write	0	0 ... 1	Off-delay or Impulse	0 = Off-delay 1 = Impulse
	1 / 0x01	1 / 0x01	2 Bit	2 Bit	Read / write	0	0 ... 3	Off-delay or Impulse time base	0 = 0.1 ms 1 = 0.4 ms 2 = 1.6 ms 3 = 6.4 ms
	1 / 0x01	1 / 0x01	2 Bit	0	Read / write	0	0 ... 3	On-delay time base	0 = 0.1 ms 1 = 0.4 ms 2 = 1.6 ms 3 = 6.4 ms
17 / 0x11	1 / 0x01	2 / 0x02	8 Bit	0	Read / write	0	0 ... 255	On-delay multiplier	Multiplier for the On-delay timer. Example: A value of 100 and an On-delay of 1.6 ms (parameter: on delay = 2) generates a delay of 160 ms.
18 / 0x12	1 / 0x01	3 / 0x03	8 Bit	0	Read / write	0	0 ... 255	Off-delay or Impulse multiplier	Multiplier for the Off-delay and Impulse timer. Example: A value of 100 and an Off-delay of 1.6 ms (parameter off delay = 2) generates a delay of 160 ms.
19 / 0x13	1 / 0x01	4 / 0x04	2 Bit	0	Read / write	0	0 ... 3	Output function	0 = NO 1 = NC 2 = Always On 3 = Always Off
20 / 0x14	1 / 0x01	5 / 0x05	2 Bit	1 Bit	Read / write	0	0 ... 2	Switching point selection	0 = Switching point 1 (SP1 100 %) 1 = Switching point 2 (SP2 80 %) 2 = Window (SP1 xor SP2)
			1 Bit	0	Read / write	0	0 ... 1	Output Q Timer or counter	0 = Timer output 1 = Counter output
21 / 0x15	1 / 0x01	6 / 0x06	2 Bit	2 Bit	Read / write	0	0 ... 2	LED IO-Link mode	0 = Default (standard IO-Link flashing 1 Hz) 1 = Identifikation mode 2 = SIO mode
			2 Bit	0	Read / write	0	0 ... 3	LED SIO mode	0 = Flashing ON (Sp1 100 % xor Sp2 80 %) 1 = Default 2 = Always On 3 = Always Off
22 / 0x16	1 / 0x01	7 / 0x07	8 Bit	0	Read / write	0	0 ... 255	Counter value MSB	There is only one switching signal on the selected output (counter output and / or switching output Q) when the parameterized cycles have been reached. See diagram counter parameters	Example: 200 switching cycles needed: LSB = 200, MSB = 0 400 switching cycles needed: LSB = 144, MSB = 1
23 / 0x17		8 / 0x08		0	Read / write	0	0 ... 255	Counter value LSB	There is only one switching signal on the selected output (counter output and / or switching output Q) when the parameterized cycles have been reached. See diagram counter parameters	
24 / 0x18		9 / 0x09		0	Read / write	0	0 ... 255	Output event counter MSB	MSB value of the 16 bit detection counter (max. 65.536 cycles). Any write operation resets the counter to 0.	Example: 200 switching cycles: LSB = 200, MSB = 0 400 switching cycles: LSB = 144, MSB = 1
25 / 0x19		10 / 0x0A		0	Read / write	0	0 ... 255	Output event counter LSB	LSB value of the 16 bit detection counter (max. 65.536 cycles). Any write operation resets the counter to 0.	
26 / 0x1A	1 / 0x01	11 / 0x0B	8 Bit	0	Read		0 ... 255	Current temperature	Actual sensor temperature. Real temp [°C] = (Act_Temp*1)-75 50 = -25 °C; 100 = 25 °C; 145 = 70 °C	
27 / 0x1B	1 / 0x01	12 / 0x0C	8 Bit	0	Read / write	145	0 ... 255	Temperature threshold	Temperature threshold value which controls status of MTTR boolean flag. Real_Temp_Treshold [°C] = (Max_Temp_Threshold*1)-75 50 = -25°C; 100 = 25 °C; 145 = 70 °C Temperature threshold = 0 if Real_Temp < Real_Temp_Threshold Temperature threshold = 1 if Real_Temp ≥ Real_Temp_Threshold	

EVENT FLAGS DESCRIPTION (SUBINDEX 10)					
Name		**Description**	**IO-Link**		
			Type	**Severity**	**Normalized error code**
EMC	EMC_DETECTED	If 1, an EMC event has been detected	Impulse	Notification	0x8CA0 (vendor specific)
Maximum temperature	OVERTEMP	If 1, new maximum temperature has been detected	Appears / disappears	Warning	0x4210
Undervoltage IO-Link	!VIOL_OK	If 1, supply voltage below IO-Link required level has been detected	Appears / disappears	Warning	0x5100
LC circuit	!LC_OK	If 1, no oscillation on LC tank	Appears / disappears	Error	0x8CA1 (vendor specific)