



## FT 05-R-PSL-..

096-00031 19.03.2019-00  
www.sensopart.com

| GENERAL INFORMATION        |                 |
|----------------------------|-----------------|
| Communication mode IO-Link | COM 2           |
| Min. cycle time            | 10 ms           |
| SIO mode                   | Supported       |
| Length process data        | 2 Bit           |
| Vendor ID                  | 347 (0x01 0x5B) |
| Device ID                  | 33793 / 34049   |
| Specification IO-Link      | 1.0             |
| Service PDU                | Not supported   |

| PROCESS DATA |                 |                                                                                           |
|--------------|-----------------|-------------------------------------------------------------------------------------------|
| Bit          | Name            | Description                                                                               |
| 1            | Stability alarm | Value "True" if detection is not stable (not enough margin on 20 consecutive detections). |
| 0            | Detection state | Value "True" if object is detected.                                                       |

| 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           | 2 Bit  | 6          | Read / write | 0             | 0 ... 3    | On delay                     | 0 = 0.1 ms<br>1 = 0.4 ms<br>2 = 1.6 ms<br>3 = 6.4 ms                                                                                                                             |
|                                           |                 | 1 / 0x01           | 2 Bit  | 4          | Read / write | 0             | 0 ... 3    | Off delay                    | 0 = 0.1 ms<br>1 = 0.4 ms<br>2 = 1.6 ms<br>3 = 6.4 ms                                                                                                                             |
|                                           |                 | 1 / 0x01           | 2 Bit  | 2          | Read / write | 0             | 0 ... 3    | Output configuration         | 0 = NO<br>1 = NC<br>2 = stability alarm (NO) (if not enough margin on 20 consecutive detections)<br>3 = stability alarm (NC) (if not enough margin on 20 consecutive detections) |
|                                           |                 | 1 / 0x01           | 2 Bit  | 0          |              |               |            | Reserved                     |                                                                                                                                                                                  |
| 17 / 0x11                                 |                 | 2 / 0x02           | 8 Bit  | 0          | Read / write | 0             | 0 ... 255  | On delay multiplier          | Multiplier for the on delay timer.<br>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                                 |                 | 3 / 0x03           | 8 Bit  | 0          | Read / write | 0             | 0 ... 255  | Off delay multiplier         | Multiplier for the off delay timer.<br>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                                 |                 | 4 / 0x04           | 2 Bit  | 0          | Read / write | 1023          | 0 ... 1023 | Sensitivity                  | Sensitivity adjustment<br>0 to 1023, 1023 = maximum range                                                                                                                        |
| 20 / 0x14                                 |                 | 5 / 0x05           | 8 Bit  | 0          |              |               |            |                              |                                                                                                                                                                                  |
|                                           |                 | 6 / 0x06           | 4 Bit  | 4          |              |               |            | Reserved                     |                                                                                                                                                                                  |
| 21 / 0x15                                 |                 | 6 / 0x06           | 4 Bit  | 0          | Read / write | 2             | 1 ... 3    | Switching frequency          | 1 = fine 500 Hz<br>2 = normal 1 kHz<br>3 = fast 2.5 kHz                                                                                                                          |
| 22 / 0x16                                 |                 | 7 / 0x07           | 2 Bit  | 0          | Write        | 0             | 0 ... 3    | Teach-in                     | 0 = Idle<br>1 = Single value teach<br>2 = Two value teach - teachpoint 1<br>3 = Two value teach - teachpoint 2                                                                   |
| 23 / 0x17                                 |                 | 8 / 0x08           | 8 Bit  | 0          | Read / write |               |            | Counter                      | Counter MSB. Any read operation refreshes the LSB.<br>Counter LSB. Any write operation resets the counter to 0.                                                                  |
| 24 / 0x18                                 |                 | 9 / 0x09           | 8 Bit  | 0          |              |               |            |                              |                                                                                                                                                                                  |
| 25 / 0x19                                 |                 | 10 / 0x0A          | 7 Bit  | 0          | Read / write |               |            | Event flags                  | See table below. All flags generate a "Device Warning" in IO-Link-standard "Event" byte. Writing any value will reset the flag                                                   |
| 26 / 0x1A                                 |                 | 11 / 0x0B          | 8 Bit  | 0          | Read         |               |            | Maximum lifetime temperature | Temperature [°C] = (value*115/129)-54.125                                                                                                                                        |
| 27 / 0x1B                                 |                 | 12 / 0x0C          | 8 Bit  | 0          | Read         |               |            | Current temperature          |                                                                                                                                                                                  |

| EVENT FLAGS DESCRIPTION (SUBINDEX 10) |                         |                                                                                  |
|---------------------------------------|-------------------------|----------------------------------------------------------------------------------|
| Bit                                   | Name                    | Description                                                                      |
| 6                                     | LED regulation limit    | If 1, the limit on LED regulator is reached, no additional compensation possible |
| 5                                     | Disturbance on receiver | If 1, a disturbance has been detected on receiver stage                          |
| 4                                     | Undervoltage IO-Link    | If 1, supply voltage below IO-Link required level has been detected              |
| 3                                     | Undervoltage sensor     | If 1, supply voltage below required level has been detected                      |
| 2                                     | Maximum temperature     | If 1, new maximum temperature has been detected                                  |
| 1                                     | EMC                     | If 1, an EMC event has been detected                                             |
| 0                                     | Short-circuit detection | If 1, too high current causing short circuit protection                          |