

Parameter and Process Data

PT20#-####.#####2#.#####.####



IO-Link

PT20#-####.#####2#.#####.####

Device ID

| Product | Hex | Decimal |
|-------------------------------|--------|---------|
| PT20#-####.#####2#.#####.#### | 0x03FB | 1019 |

IO-Link Version: V 1.1
 Data Storage: Yes
 Block Parameter: Yes
 Min. Cycle Time: 12.0 ms
 SIO-Mode: Yes
 COM-Mode: 38400 bit/s (COM 2)

Process Data (Length: 72 Bit)

| Subindex | Bit offset | Name | Length | Type | Range |
|----------|------------|----------------------------|--------|---------|--|
| 1 | 71 | Temperature Unit | 2 bit | Boolean | 0 = Celsius 1 = Fahrenheit 2 = Kelvin |
| 2 | 67 | Valid Configuration | 1 bit | Boolean | 0 = false 1 = true |
| 3 | 66 | Measurement range exceeded | 1 bit | Boolean | 0 = false 1 = true |
| 4 | 65 | Wire break | 1 bit | Boolean | 0 = no wire break 1 = wire break |
| 5 | 64 | Switch output | 1 bit | Boolean | 0 = In measurement range 1 = Out of measurement range |
| 6 | 32 | Accumulated data Switch 1 | 32 bit | Float | |
| 7 | 0 | Current output mA | 32 bit | Float | |

Octet 0

| | | | | | | | | |
|-------------------|------------------|----|----|----|---------------------|----------------------------|------------------|---------------|
| Bit Offset | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 |
| Subindex | Temperature Unit | | - | - | Valid Configuration | Measurement range exceeded | Wire break Alarm | Switch output |

Octet 1-4

| | | | |
|-------------------|------------------------------|------|----|
| Bit Offset | 63 | | 32 |
| Subindex | Measurement data Temperature | | |

Octet 5-9

| | | | |
|-------------------|-------------------|------|---|
| Bit Offset | 31 | | 0 |
| Subindex | Current output mA | | |

| Index | Subindex | Access | SPDU name | Number of Bytes | Format | Range of values | Definition |
|---------------------------------------|----------|--------|----------------------------|-----------------|---------------------------|-----------------|---|
| System commands | | | | | | | |
| 2 | 0 | W | System Command | 1 | U08 | | Command Code Definition Public: 0x00 – 0x9F Vendor specific 0xA0 – 0xFF - <u>64 (0x40)</u> : QTeach, press 1 = start Teach, press 2 = Measure and store. - <u>130 (0x82)</u> : Factory Reset. - <u>160 (0xA0)</u> : Teach Air. - <u>161 (0xA1)</u> : Teach Media channel 1 - <u>162 (0xA2)</u> : Teach Media channel 2 |
| General information of sensors | | | | | | | |
| 16 | 0 | R | Vendor Name | 18 | String | ASCII | Baumer A/S |
| 17 | 0 | R | Vendor Text | 14 | String | ASCII | www.baumer.com |
| 18 | 0 | R | Product Name | 22 | String | ASCII | <Product Key Internal> (<Product Key External>) PT20#-####.#####.#####.#### |
| 19 | 0 | R | Product Id | 8 | String | ASCII | Eg: PT20 |
| 20 | 0 | R | Device Text | 64 | String Max 64 Chars | ASCII | Sensor specific. |
| 21 | 0 | R | Serial number | 19 | String | ASCII | Baumer Serial Number Eg: L47327X05078212 |
| 22 | 0 | R | Hardware revision | 5 | String | ASCII | Eg. 01.00 |
| 23 | 0 | R | Firmware revision | 8 | String | ASCII | Eg. 01.00.00 |
| 24 | 0 | R/W | Application Specific Tag | 32 | String | ASCII | The application specific tag can be used by the end user to store data that is specific to the end users application. The value does not influence the sensor operation. Length: 32 bytes. |
| 25 | 0 | R/W | Function Tag | 32 | String | ASCII | The function tag can be used by the end user to store data that is specific to the end users application. The value does not influence the sensor operation. Length: 32 bytes. |
| 26 | 0 | R/W | Location Tag | 32 | String | ASCII | The location tag can be used by the end user to store data that is specific to the end users application. The value does not influence the sensor operation. Length: 32 bytes. |
| 36 | 1 | R | Status / Diagnosis | 1 | UInt8 | 0-4 | 0 = Device Ok 1 = Maintenance required 2 = Out of specification 3 = Functional check 4 = Failure |
| Sensor functions | | | | | | | |
| 61 | 1 | R/W | Switch logic | 1 | UInt8 | 0-1 | 0 = High-Active 1 = Low-Active |
| 61 | 3 | R/W | Switch Hysteresis | 1 | Float | 0-60 | Sets the hysteresis of the switch output |
| 74 | 1 | R/W | Temperature unit selection | 2 | UInt16 | Enum | 13 = Celcius 14 = Farenheit 29 = Kelvin |
| 78 | 1 | R/W | Switch mode | 1 | UInt8 | 0-3 | 0 = OFF 1 = Push-Pull 2 = PNP 3 = NPN |
| 78 | 5 | R/W | Switch alarm mode | 4 | UInt32 | 1-4 | 1 = Output High 2 = Output Low 3 = Output floating (High impedance) 4 = Output frozen |

| Index | Subindex | Access | SPDU name | Number of Bytes | Format | Range of values | Definition |
|-------|----------|--------|------------------------------------|-----------------|--------|-----------------|--|
| 104 | 4 | R/W | User Day | 1 | Uint8 | 1-31 | |
| 104 | 5 | R/W | User Month | 1 | Uint8 | 1-12 | |
| 104 | 6 | R/W | User Year | 2 | Uint16 | 1900-2100 | |
| 116 | 3 | R/W | Wire break current | 4 | Uint32 | 3500-24000 | Sets the current of the device when wire break is detected |
| 116 | 4 | R/W | Wire break Enable / Disable | 1 | Uint8 | 0-1 | 0 = Disabled 1 = Enabled |
| 121 | 2 | R/W | Response delay Output | 4 | Uint32 | 0-60000 | Sets the response delay (damping) on the switch output |
| 121 | 12 | R/W | Response delay IOut | 4 | Uint32 | 0-60000 | Sets the response delay (damping) on the current output |
| 121 | 22 | R/W | Response delay Output | 4 | Uint32 | 0-60000 | Sets the response delay (damping) on the switch input. This has effect on both switch output, current output and digital values. |
| 202 | 2 | R/W | Analog output – temperature at LRV | 4 | Float | -200 - 524 | Sets the temperature at lower range value (LRV). |
| 202 | 4 | R/W | Analog output – temperature at URV | 4 | Float | -200 - 524 | Sets the temperature at upper range value (URV). |
| 202 | 7 | R/W | Analog output – output current min | 4 | Uint32 | 3500-23000 | Minimum current allowed |
| 202 | 8 | R/W | Analog output – output current max | 4 | Uint32 | 3500-23000 | Maximum current allowed |
| 234 | 1 | RO | RTD sensor type | 1 | Uint8 | 0-255 | 1 = PT A3850 2 = PT A3902 3 = PT A3916 4 = NI A1618 5 = CU A1428 6 = PT A3920 255 = User specified |
| 234 | 2 | RO | RTD Base value | 4 | Float | | Base value in ohm of the RTD device |
| 235 | 1 | RO | Transducer connection wiring type | 1 | Uint8 | 1-4 | 1 = 2 Wire 2 = 3 Wire 3 = 4 Wire 4 = internal |
| 400 | 1 | R/W | Calibration Point 1 | 4 | Uint32 | -200-524 | User calibration point |
| 400 | 2 | R/W | Calibration Point 2 | 4 | Uint32 | -200-524 | User calibration point |
| 400 | 3 | R/W | Calibration Point 3 | 4 | Uint32 | -200-524 | User calibration point |
| 401 | 1 | R/W | Calibration Value 1 | 4 | Uint32 | -200-524 | User calibration value |
| 401 | 2 | R/W | Calibration Value 2 | 4 | Uint32 | -200-524 | User calibration value |
| 401 | 3 | R/W | Calibration Value 3 | 4 | Uint32 | -200-524 | User calibration value |