

Parameter Set Survey

1. Hardware

- Galvanic isolation included No Yes (-40...105°C)
- Bus termination included No
 Yes: 120 Ω
 Yes: Split (2x 60 Ω + 4,7nF)
 Yes: Switchable 120 Ω (-40...100°C)
- EMC requirements Industrial CE Railway applications
 12V/24V vehicles

2. Software Parameters

2.1 General parameters

- Initial bit rate [kBit/s] 20 100
 33.333 125
 40 250
 47.619 500
 50 800
 83.333 1000
 95.238 Other:.....
- Endianness of measurements Little Endian (*CANopen Standard*) Big Endian
- Bootup behaviour Automatical transfer to *Operational State* ("Autostart")
 No automatical transfer for *Operational State*
- Node-ID 0x20 (32₁₀) Other:.....
- Vendor-ID 0 x00 00 04 50 Other:.....
- COB-ID settings
- | | | |
|----------------|---|--------------------------------------|
| SYNC (0x1005) | <input type="checkbox"/> 0x80 | <input type="checkbox"/> Other:..... |
| TIME (0x1012) | <input type="checkbox"/> 0x100 | <input type="checkbox"/> Other:..... |
| EMCLY (0x1014) | <input type="checkbox"/> 0x80 + Node-ID | <input type="checkbox"/> Other:..... |
| TPD01(0x1800) | <input type="checkbox"/> 0x00000180 + Node-ID | <input type="checkbox"/> Other:..... |
| TPD02 (0x1801) | <input type="checkbox"/> 0x00000280 + Node-ID | <input type="checkbox"/> Other:..... |
- Process Value - Linear Scaling (in case of pressure transducer)
- | | | |
|---------------------------------|-------------------------------|--------------------------------------|
| Pressure (Primary channel) | <input type="checkbox"/> 0x80 | <input type="checkbox"/> Other:..... |
| Temperature (Secondary channel) | <input type="checkbox"/> 0x80 | <input type="checkbox"/> Other:..... |
- Process Value - Linear Scaling (in case of temperature transducer)
- | | | |
|-------------------------------|-------------------------------|--------------------------------------|
| Temperature (Primary channel) | <input type="checkbox"/> 0x80 | <input type="checkbox"/> Other:..... |
|-------------------------------|-------------------------------|--------------------------------------|

Pressure Sensor - EPT31CN with CAN Signal



Eurosensor

2.1 TPDO configuration

Communication parameters

Transmission trigger TPDO1 Timer (time as follows:.....ms)
 SYNC (count as follows:.....)

Transmission trigger TPDO2 Timer (time as follows:.....ms)
 SYNC (count as follows:.....)

Mappings
(valid mapping entries see section 3)

TPDO1 mappings
 Mapping 1:.....
 Mapping 2:.....
 Mapping 3:.....
 Mapping 4:.....

TPDO2 mappings
 Mapping 1:.....
 Mapping 2:.....
 Mapping 3:.....
 Mapping 4:.....

2.3 Additional parameters

Heartbeat producer

Enabled (time as follows:.....ms)
 Disabled

User-defined serial number

(Unsigned64; lower 32 bits used for LSS)

Based on the engraved "Z..." number
 Other:.....

Device Name String

(Corresponds to object entry 0x1008)

Empty
 Other:.....

Comment String

(Accessible via object entry 0x4020)

Empty
 Other:.....

3. APPENDIX A - Valid TPDO mapping entries

TPDO mapping is a simple and flexible method to build *Process Data Messages* and to arrange the desired data values completely according to the user's needs. There are multiple values that can be mapped into TPDO1 and TPDO2. The following table shows all mappable entries.

A short explanation for better understanding: Each EPT CANopen sensor features **two measuring channels**. In case of a CANopen **pressure sensor**, the *primary measuring channel* corresponds to the measured *pressure*; the secondary measuring channel provides a coarse temperature signal ($\pm 5K$).

In case of a **temperature sensor**, the *primary measuring channel* corresponds to the *temperature*; the secondary channel may be neglected.

| Name | Valuetyp | Value range | Object index, sub-index |
|--|--------------|---------------------------------------|-------------------------|
| Error Register | Unsigend8 | - | 0x1001,- |
| Field Value (<i>Primary channel</i>) | Integer16 | 0...20000 | 0x7100,1 |
| Field Value (<i>Secondary channel</i>) | Integer16 | 0...20000 | 0x7100,2 |
| Process Value (<i>Primary channel</i>) | Integer16 | (Acc. to linear scaling, section 2.1) | 0x7130,1 |
| | Integer32 | (Acc. to linear scaling, section 2.1) | 0x9130,1 |
| | Float32/Real | (Acc. to linear scaling, section 2.1) | 0x6130,1 |
| Process Value (<i>Secodary chanel</i>) | Integer16 | (Acc. to linear scaling, section 2.1) | 0x7130,2 |
| | Integer32 | (Acc. to linear scaling, section 2.1) | 0x9130,2 |
| | Float32/Real | (Acc. to linear scaling, section 2.1) | 0x6130,2 |
| Status Byte (<i>Primary channel</i>) | Unsigend8 | - | 0x6150,1 |
| Status Byte (<i>Secondary channel</i>) | Unsigend8 | - | 0x6150,2 |
| Time stamp (Days since 1984-01-01) | Unsigned16 | - | 0x3140,1 |
| Time stamp (Milliseconds) | Unsigned32 | - | 0x3140,2 |

