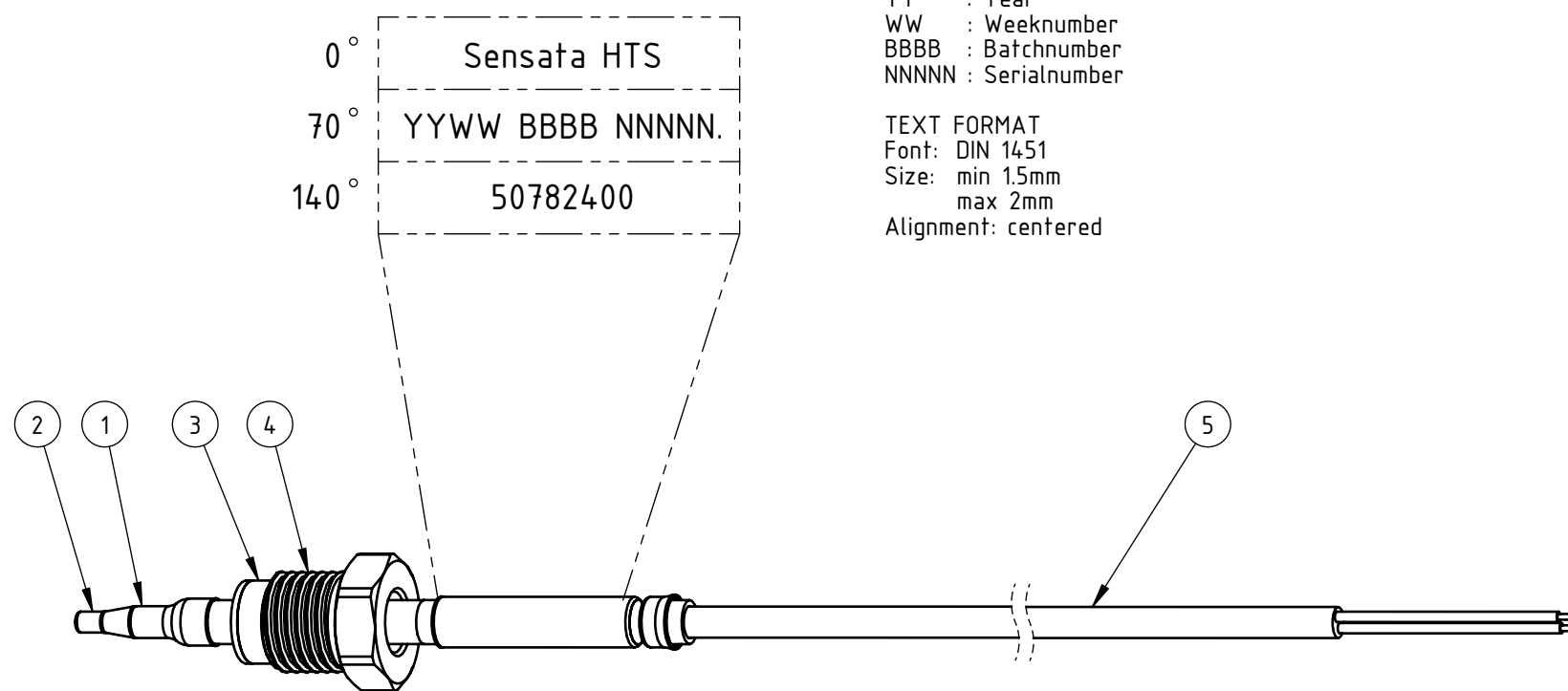


$$R_s = R_l + R_0(1 + \alpha T + \beta T^2)$$

$$\alpha = 3.8285 \cdot 10^{-3}$$

$$\beta = 5.85 \cdot 10^{-7}$$

| T (°C) | R _s (Ω) | U ₀ (V) |
|--------|--------------------|--------------------|
| -40 | 169.7 | 0.725 |
| 0 | 200.5 | 0.835 |
| 25 | 219.6 | 0.900 |
| 50 | 238.5 | 0.963 |
| 100 | 275.9 | 1.081 |
| 200 | 349.0 | 1.293 |
| 300 | 419.7 | 1.478 |
| 400 | 488.1 | 1.640 |
| 500 | 554.1 | 1.783 |
| 600 | 617.8 | 1.909 |
| 700 | 679.2 | 2.022 |
| 800 | 138.2 | 2.123 |
| 850 | 766.8 | 2.170 |

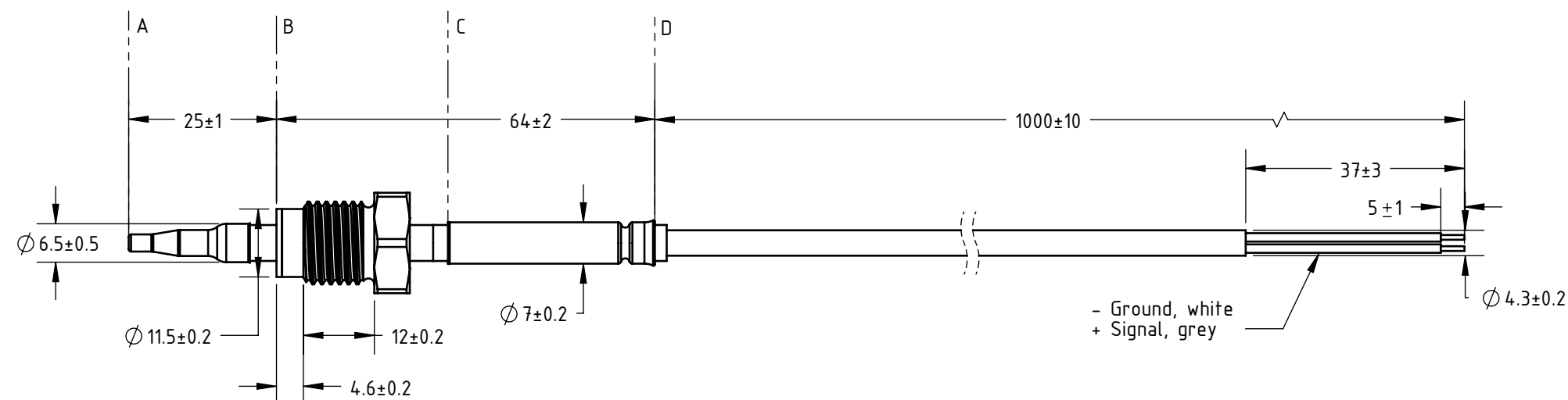


LEGEND
 YY : Year
 WW : Weeknumber
 BBBB : Batchnumber
 NNNNN : Serialnumber

TEXT FORMAT
 Font: DIN 1451
 Size: min 1.5mm
 max 2mm
 Alignment: centered

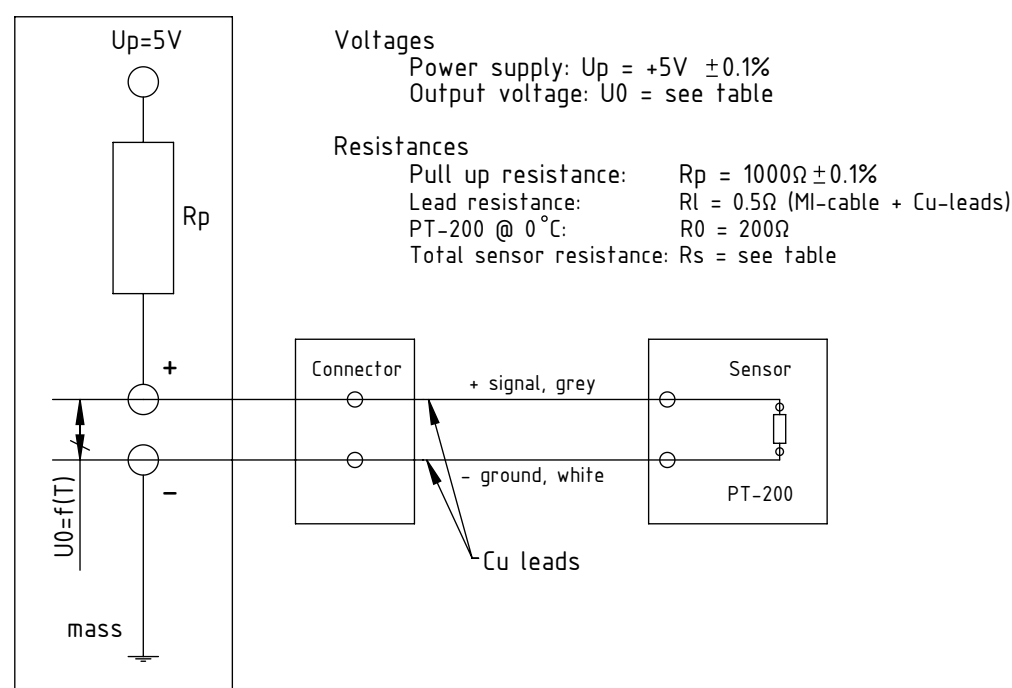
| Nr. | Name | Material | Remark |
|-----|----------------|-----------------------------------|--------------|
| 1 | Housing | 1.4845 310H | |
| 2 | Pt-200 | Platin temperature sensor element | |
| 3 | Filling ring | 1.4845 310H | |
| 4 | Hexagon nut | 1.4571 | M14x1.5 SW17 |
| 5 | Flexible cable | | |

| Position | Temperature (*) |
|-----------------|-----------------|
| A (Tip) | 750 °C |
| B (Flange) | 625 °C |
| C (Rearhousing) | 260 °C |
| D (Cable Seal) | 180 °C |



(*)=Temperature higher than indicated in the tabel can be allowed when measured under specific conditions and documented by the customer and approved by Sensor-NITE. Special DARTS200 sensors for these measurements with thermocouples in the sensorbody are made by Sensor-NITE. See also Technical specification and validation DARTS200 Exhaust gas temperature Sensor. For connector, sleeve, clips, labels,... see individual temperature specifications

RTD circuit to MCU



Voltages
 Power supply: $U_p = +5V \pm 0.1\%$
 Output voltage: $U_0 = \text{see table}$

Resistances
 Pull up resistance: $R_p = 1000\Omega \pm 0.1\%$
 Lead resistance: $R_l = 0.5\Omega$ (MI-cable + Cu-leads)
 PT-200 @ 0 °C: $R_0 = 200\Omega$
 Total sensor resistance: $R_s = \text{see table}$

Tightening of the hexagon nut 45Nm ±10%

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| FIRST ISSUE DATE | 27/10/16 | NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES | | |
| DRAWN | Vasil Valchev | TITLE Temperature Sensor DARTS200-AW | | |
| MATERIAL Material <not specified> | | INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS. | | |
| GEN. ROUGHNESS R_a | | TOLERANCES: LINEAR ANGLES 0 UP TO 6: ±0.1 OVER 6 UP TO 30: ±0.2 OVER 30 UP TO 120: ±0.3 OVER 120 UP TO ∞: ±0.5 | | |
| APPROX. WEIGHT (g) 4.3 ± 5 | | DO NOT SCALE DRAWING | | |
| THIRD ANGLE PROJECTION | | DRAWING SIZE A2 | | |
| REVISION TABLE | | DRAWING NUMBER 50782450 | | |
| C | Marking updated | ECO-154321 | 16/03/2017 | D. Mullen |
| B | Drawing updated | ECO-145565 | 01/02/2017 | D. Mullen |
| A | Design release | ECO-139508 | 27/10/2016 | D. Mullen |
| REV. | DESCRIPTION | ECO No | DATE | REQUESTOR |
| SCALE 1:1 | | SOLIDWORKS | | SHEET 1 OF 1 |