

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

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

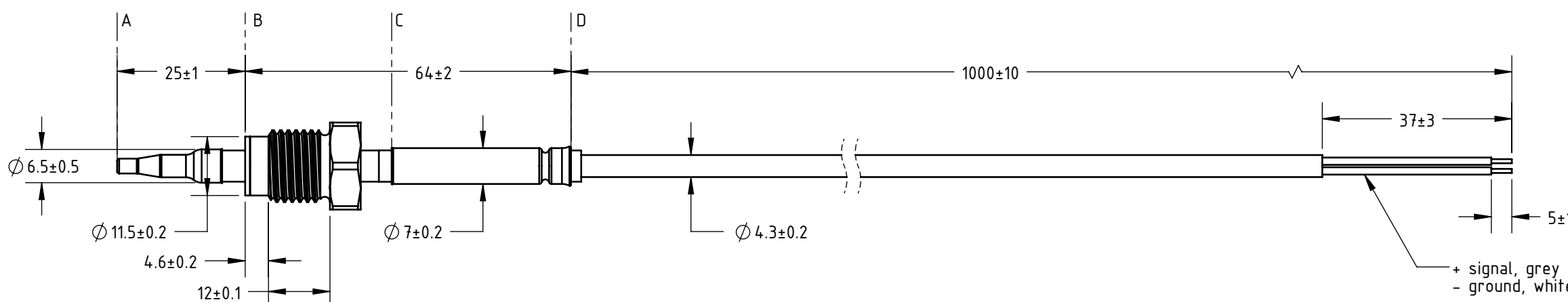
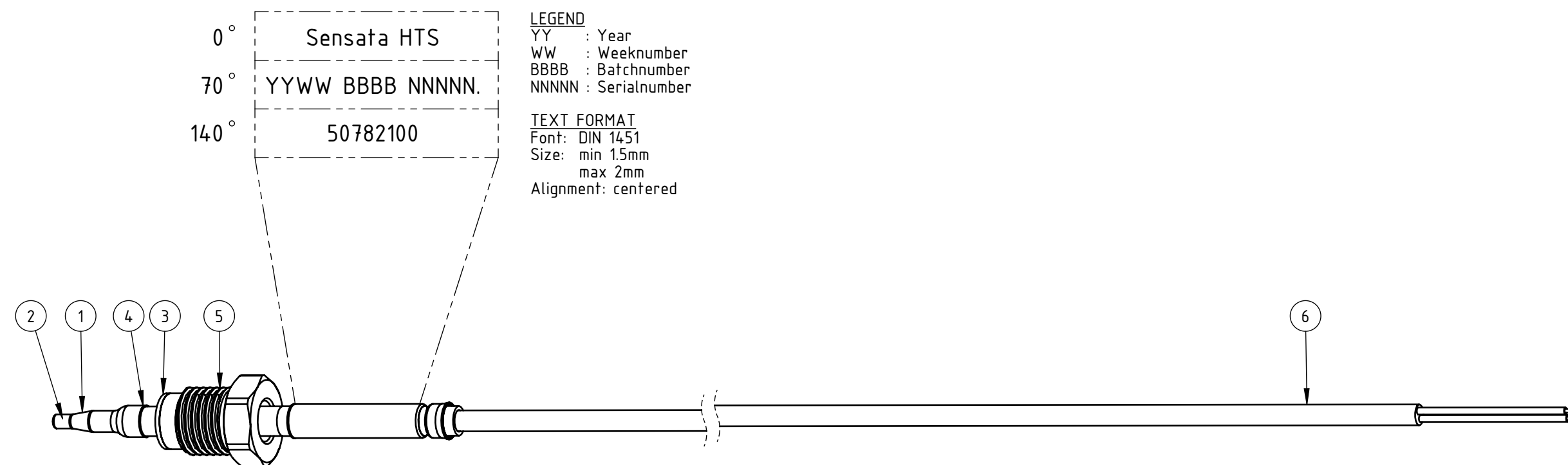
$$\beta = -5.85 \cdot 10^{-7}$$

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	738.2	2.123
850	766.8	2.170

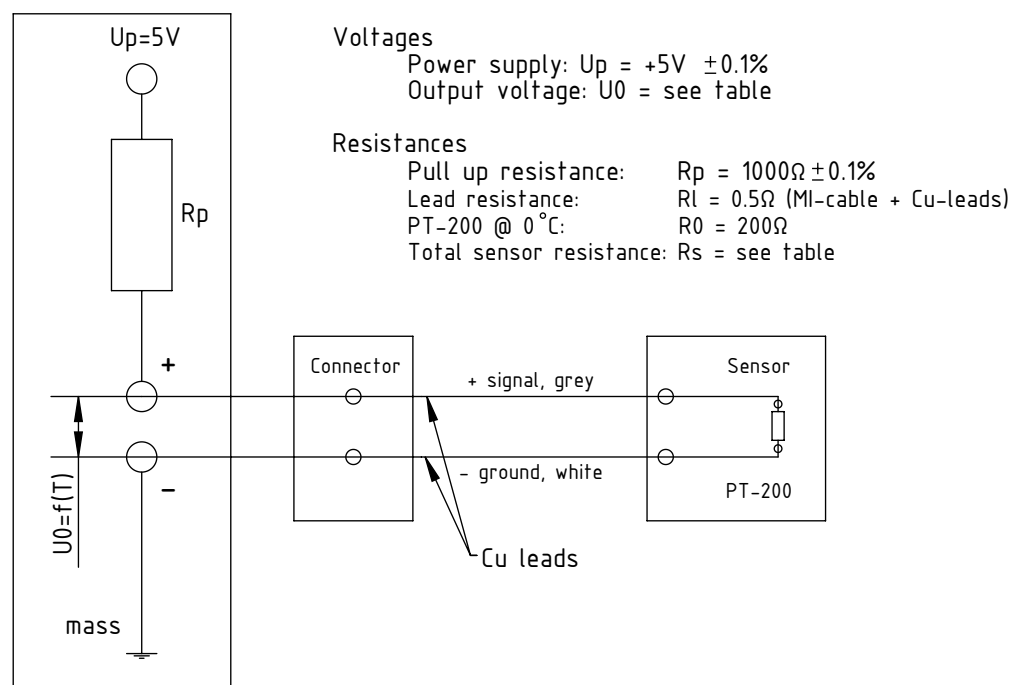
Position	Temperature (*)
A (Tip)	850 °C
B (Flange)	625 °C
C (Rearhousing)	260 °C
D (Cable Seal)	180 °C

(*)=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

Nr.	Name	Material	Remark
1	Front cover	Inconel 601	
2	Pt-200	Platin temperature sensor element	
3	Flange	1.4845 310H	
4	MI cable	1.4845 310H	
5	Hexagon nut	1.4571	M14x1.5 SW17
6	Flexible cable		



RTD circuit to MCU



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

Tightening of the hexagon nut 45 Nm ±15%

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REV.	DESCRIPTION	ECO No	DATE	REQUESTOR
B	Marking updated	ECO-154321	16/03/17	Daniel Mullen
A	Design Release	ECO-139337	24/10/16	Daniel Mullen

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.		<p>INDUSTRIELAAN 24 2250 OLEN BELGIUM</p>
FIRST ISSUE DATE	24/10/2016	
DRAWN	Boris Rizov	<p>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</p> <p>INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS.</p> <p>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</p>
MATERIAL	-	<p>DO NOT SCALE DRAWING</p> <p>THIRD ANGLE PROJECTION</p> <p>DRAWING SIZE A2</p>
GEN. ROUGHNESS	Ra	SCALE 1:1
APPROX. WEIGHT (g)	tbd.	SOLIDWORKS
REVISION TABLE		SHEET 1 OF 1
DRAWING NUMBER 50782150		REV B