

ANL-9080N100 regular version

Non-contact Radar Level Transmitter Datasheets

Version V.2024

Characteristics

- 80GHz Frequency FMCW radar system.
- Measurement application in liquids, solids, the nozzle diameter >=100 mm.
- Suitable for dust applications, also the liquid which be heated with steam.

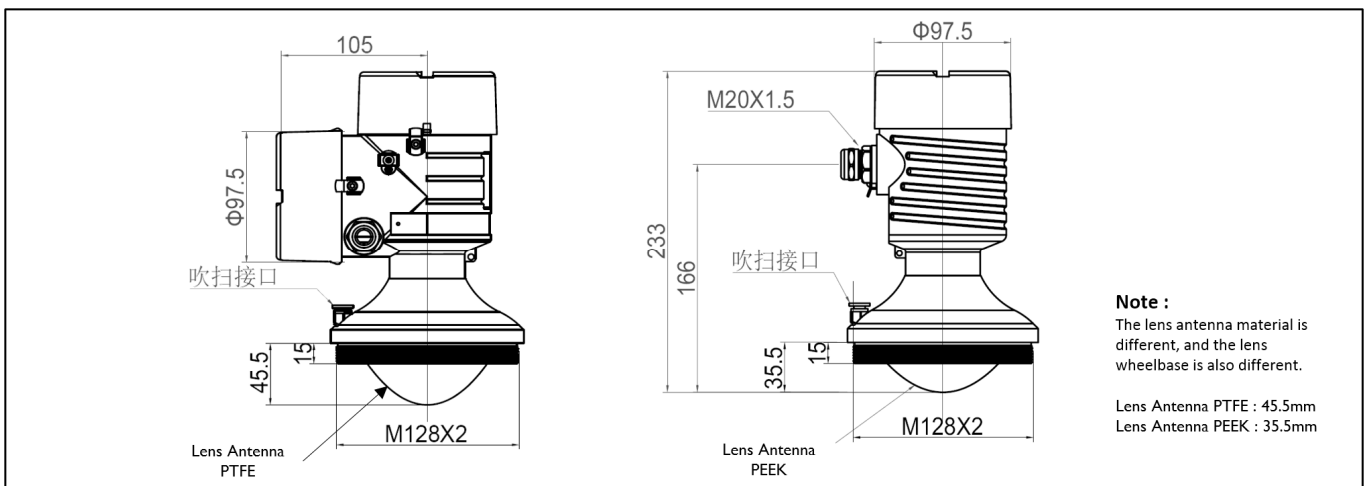
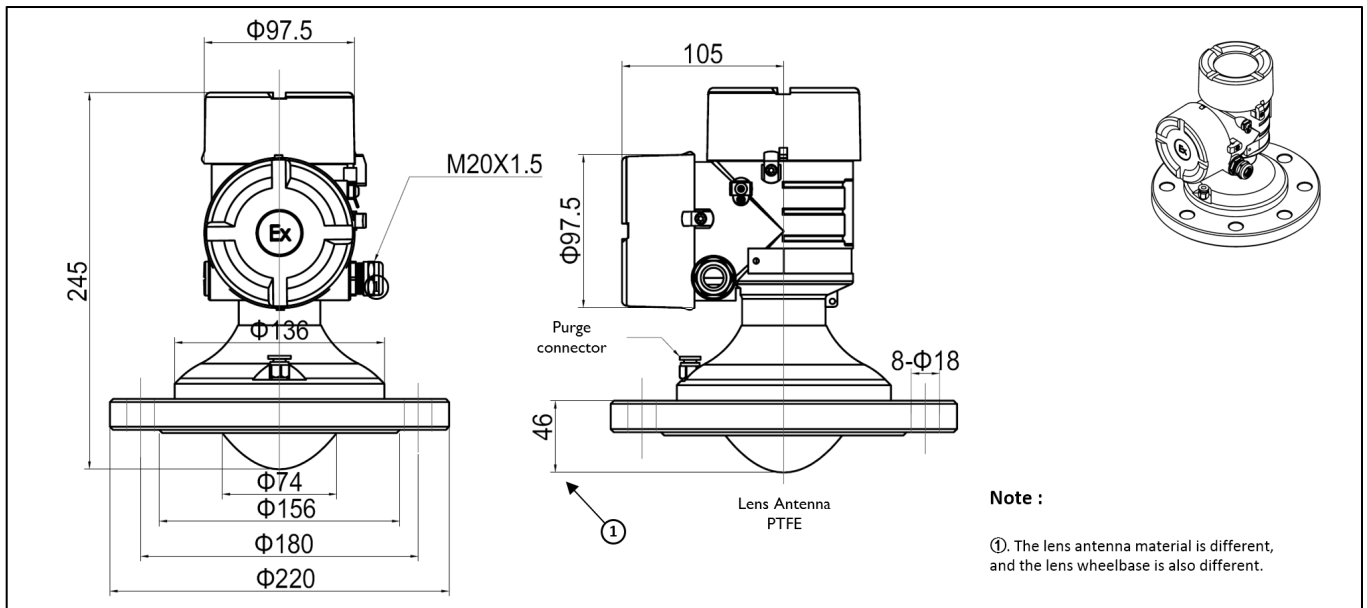
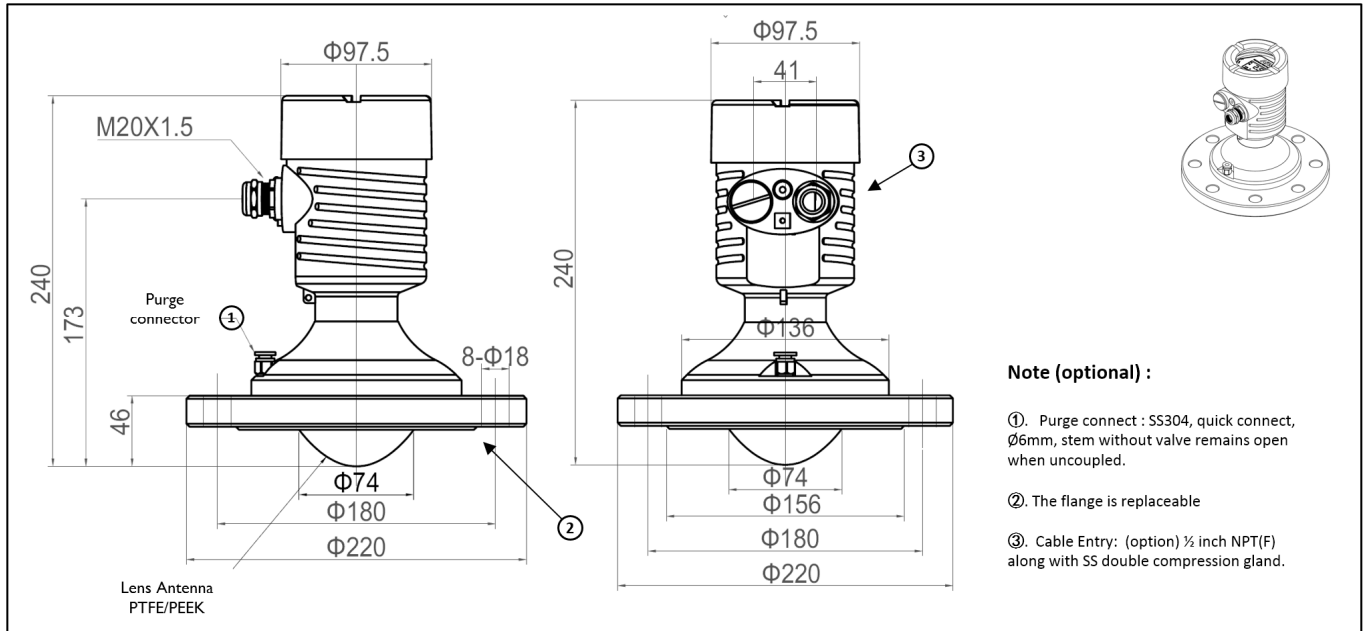


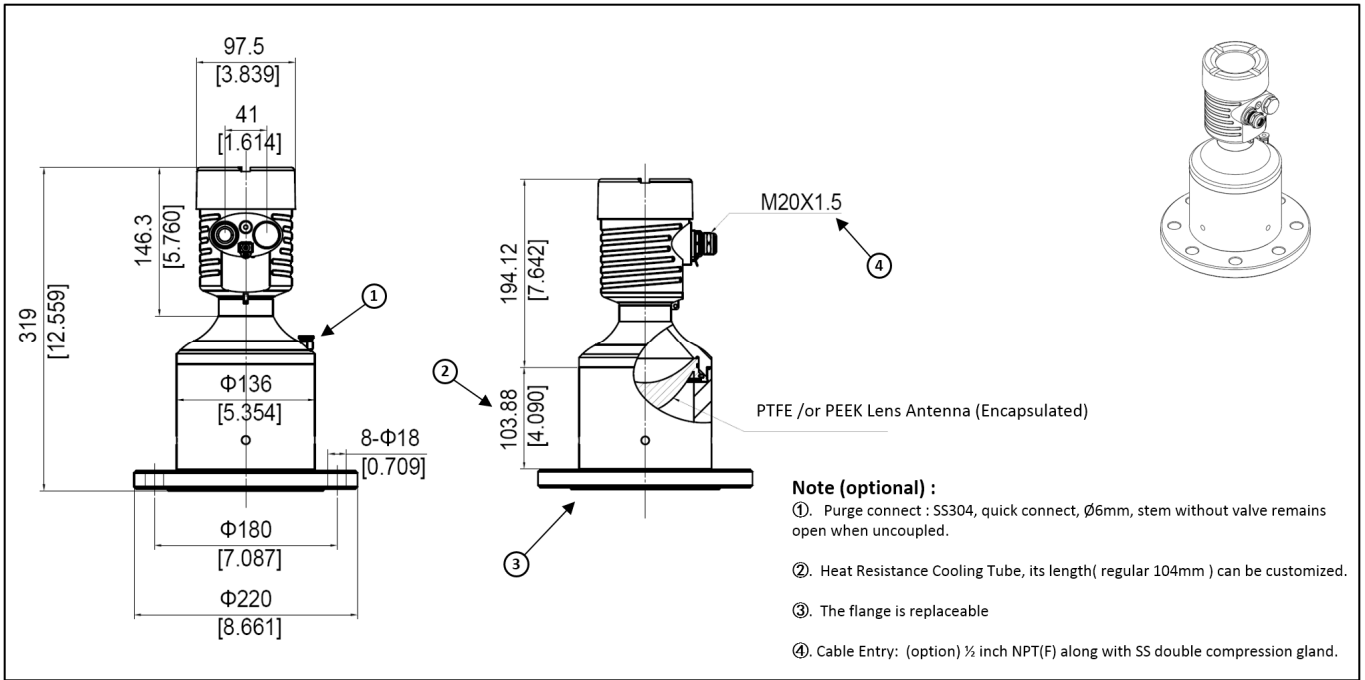
Specifications

ANL-9080N100	Lens material PTFE		Lens material PEEK	N60 (cool version)
Max. measuring range	100M	100M	100M	100M
Tx/Rx frequency	Tx/Rx frequency 76.2 to 80.2GHz Dynamic FM Sweep Bandwidth 1~4GHz (The adjustment FM range can be customized according to the ISM requirements of the customer's region)			
Near blind spot	< 100mm from the flange down surface			
Meas. Principle	FMCW Radar System			
Lens Antenna Medium	PTFE Φ100mm	PEEK Φ100mm	PEEK Φ100mm	PEEK Φ100mm
Antenna beam / Gain	Beam angle 3.5°/ Gain 31.51dB		Beam angle 3.5°/ Gain 31.4dB	
Meas. Resolution	0.1mm (<10m range)			
Meas. Accuracy	±2 mm			
Ambient temperature	-40 ... +85 °C		-60 ... +105 °C	
Process temperature	-40°C ... +200°C		-60°C ... +200°C	
Process pressure	-0.2 ~ +0.5MPa		-1.0 ~ +3.5MPa	
Process connection	Flanges >= DN100			
Signal output	4-20 mA/HART7 2-wire, 4-20 mA/HART7 4-wire, Profibus PA / DP, Ethernet-APL, Modbus protocol 4-wire			
Variables influencing meas. accuracy	Specifications for the digital measured value Temperature drift - Digital output: ±1mm/10K relating to the max. measuring range or max. 15 mm Additional deviation through electromagnetic interference acc. to EN-61326: < ±10 mm Specifications apply also to the current output Temperature drift - Current output: ±0.01%/10K relating to the 16.7 mA span or max. ±0.15% Deviation in the current output due to digital/analogue conversion Non-Ex and Ex-ia version: < ±1μA; Ex-d-ia version: < ±1μA Additional deviation through electromagnetic interference acc. to EN-61326: < ±150μA			
Indication/Adjustment (LOI)	1. 160x80 LCD FSTN RGB backlight monitor adapter with keyboard module, operation Temp. -20°C ... 70°C. or 128x64 OLED monitor adapter with keyboard module, operation Temp. -55°C ... 80°C. (option) or 230x240 LCD TFT colors monitor adapter with keyboard module, operation Temp. -20°C ... 70°C. (option only for 4-wire system) 2. (APP) Radar MobileManager via BT wireless connection 3. (PC software) Radar PCManager /or Via a PC with PACTware/DTM (an interface converter AiW-305 USB CONNECT is required)			
Power supply	16V ~ 40 VDC / Load resistor > 600Ω			
Wireless communication	Bluetooth 5.0 (Bluetooth 4.0 LE compatible), communication range 40m, in rainy day 20m			
Approvals	Ex ia IIC T6 Ga IP67; Ex d IIC T6 Gb IP67			
Housing	Single chamber / Double chamber, Aluminum / Stainless steel / Plastic PBT, IP66 / IP67 / IP68			
Applications	liquids, solids, dust applications			

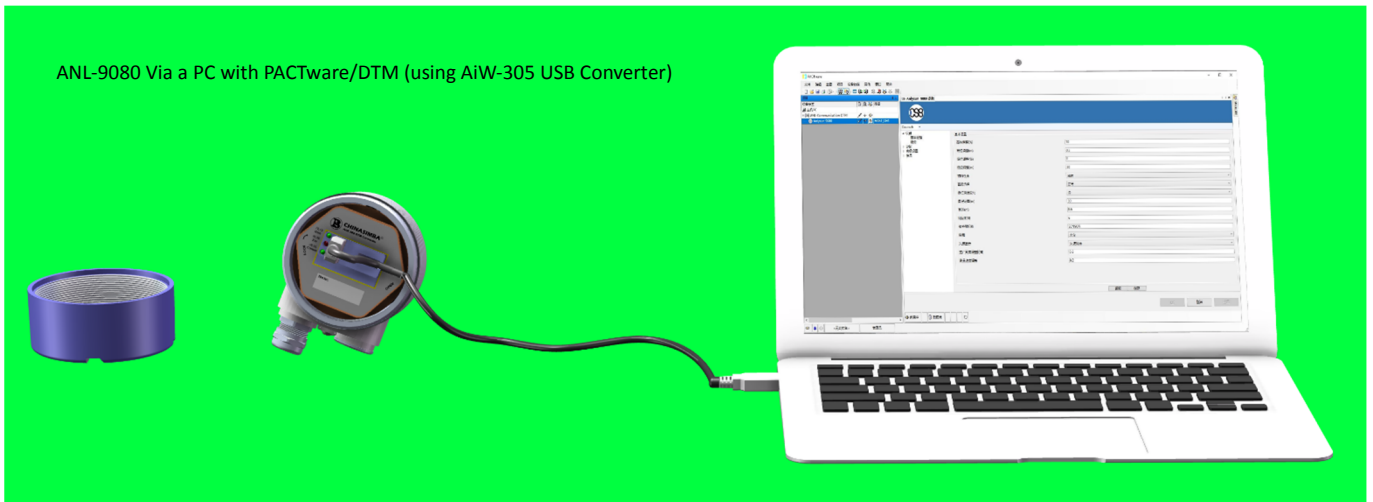
SERVICE CONTACT: 86-13799977915, 86-18965063391(TECHNICAL SUPPORT), 86-18106067295(AFTER SALE SERVICE)
 ALTHOUGH WE HAVE RECONCILED THE CONTENTS OF THE MANUAL WITH DESCRIPTION OF INSTRUMENT, THERE MAY STILL BE CHANGES WE CANNOT ENSURE THAT IT IS FULLY CONSISTENT. THE CONTENT WILL BE CHECKED AND CORRECTED IN AN ORDERLY, AND THE ERRATA WILL BE IN SUBSEQUENT RELEASES. WE WELCOME USERS TO MAKE VARIOUS SUGGESTIONS FOR IMPROVEMENT. [TECHNICAL DATA SUBJECT TO CHANGE]

Dimensions





DTM Adapter



ANL-9080 Via a PC with PACTware/DTM (using AiW-305 USB Converter)

AiW-305 USB Converter Adapter



Remote programmer cum Indicator Adapters

Remote indicator with HART compatible (RDM-25)

Note :

- ① RDM is a HART compatible remote indicator. It can be possible to configure the radar level transmitter using HART communicator from remote indicator.
- ② Wall-mounted fixing holes .
- ③ Cable Entry: (option) ½ inch NPT(F) along with SS double compression gland.
- ④ Housing: Die Cast Aluminum with caustic and corrosion protection paint.

Control Center — 4~20mA / HART — Radar level transmitter

24VDC — RDM

Remote indicator via Serial communication (LRD-21)

Note :

- ① LRD is a serial communication remote indicator. It can be possible to configure the radar level transmitter LOI (Local Operator Interface) from remote indicator.
- ② Wall-mounted fixing holes .
- ③ Cable Entry: (option) ½ inch NPT(F) along with SS double compression gland.
- ④ Housing: Die Cast Aluminum with caustic and corrosion protection paint.

Control Center — 4~20mA / HART — Radar level transmitter

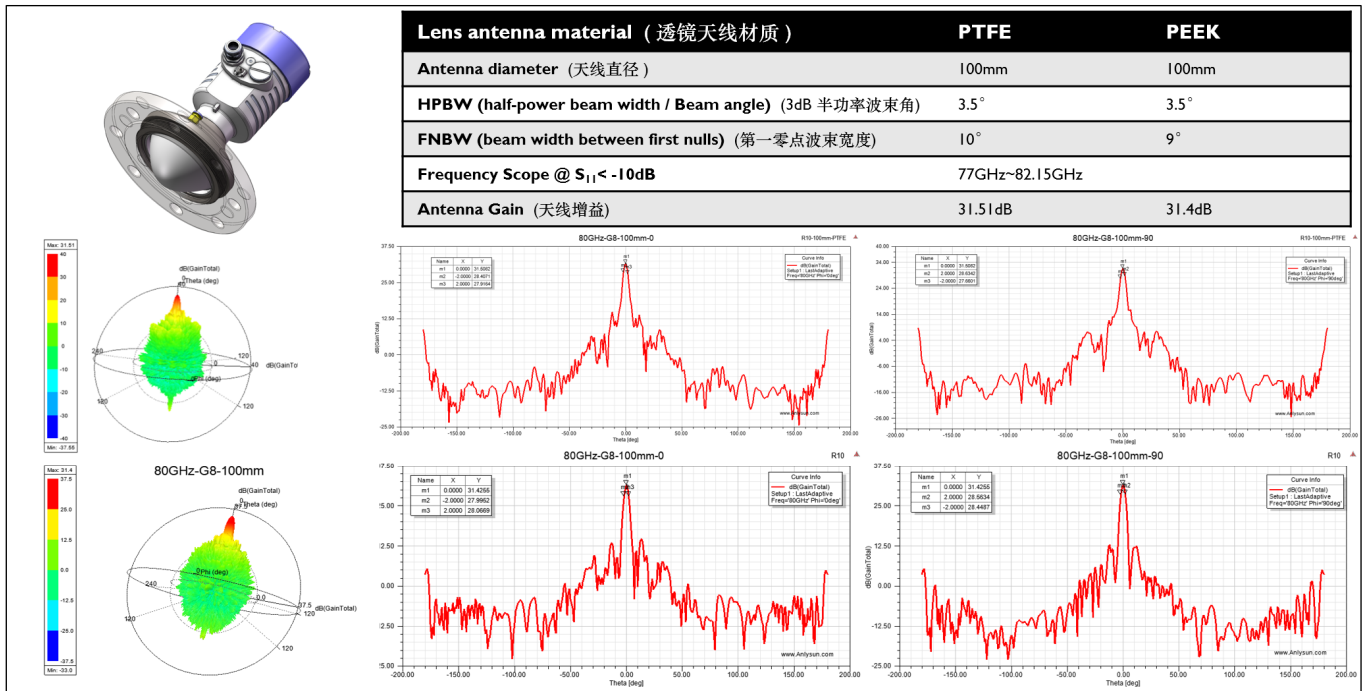
两对双绞线
Twisted pair line
传输距离 < 200m
Up to 200 mtrs. distance

LRD

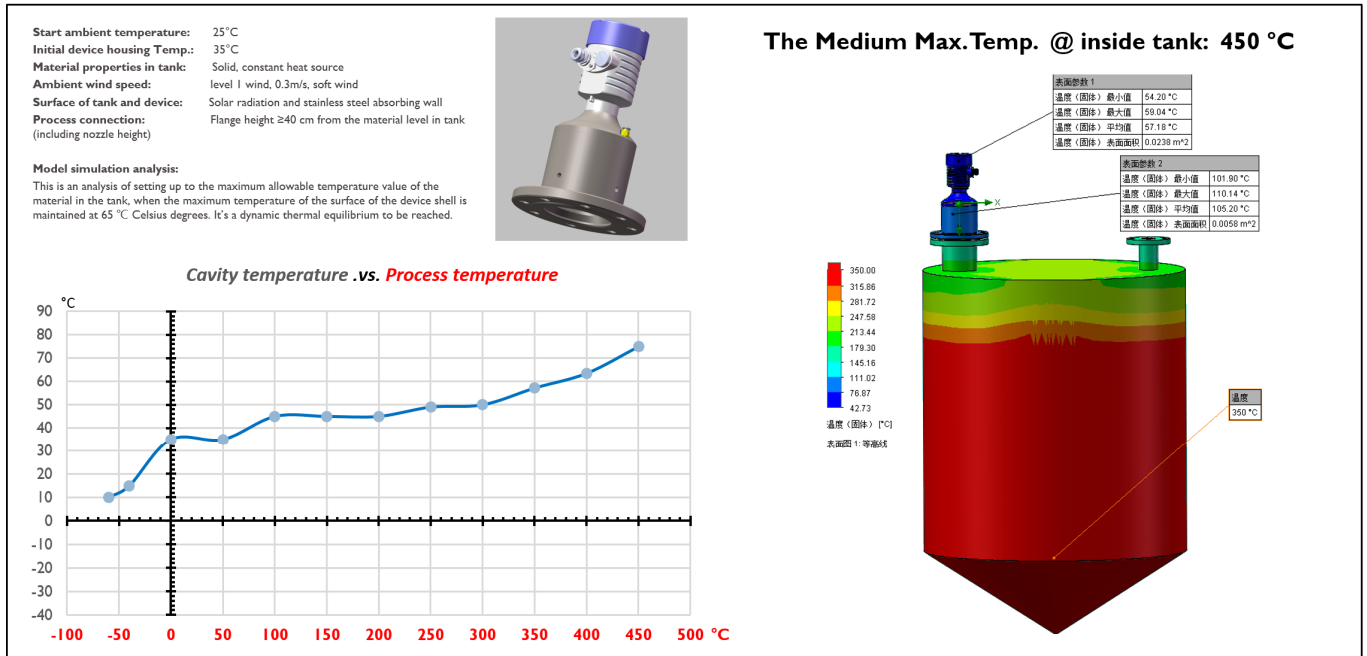
Remote indicator via Bluetooth communication

ANL9080 radar level transmitters (with Bluetooth function) can be connected to mobile phone through Bluetooth wireless system. The mobile phone needs to install the RadarMobileManager APP. This is a free registered APP (Android and IOS etc.) software, which can be downloaded and installed directly in major APP Stores, or please contact the relevant product suppliers.

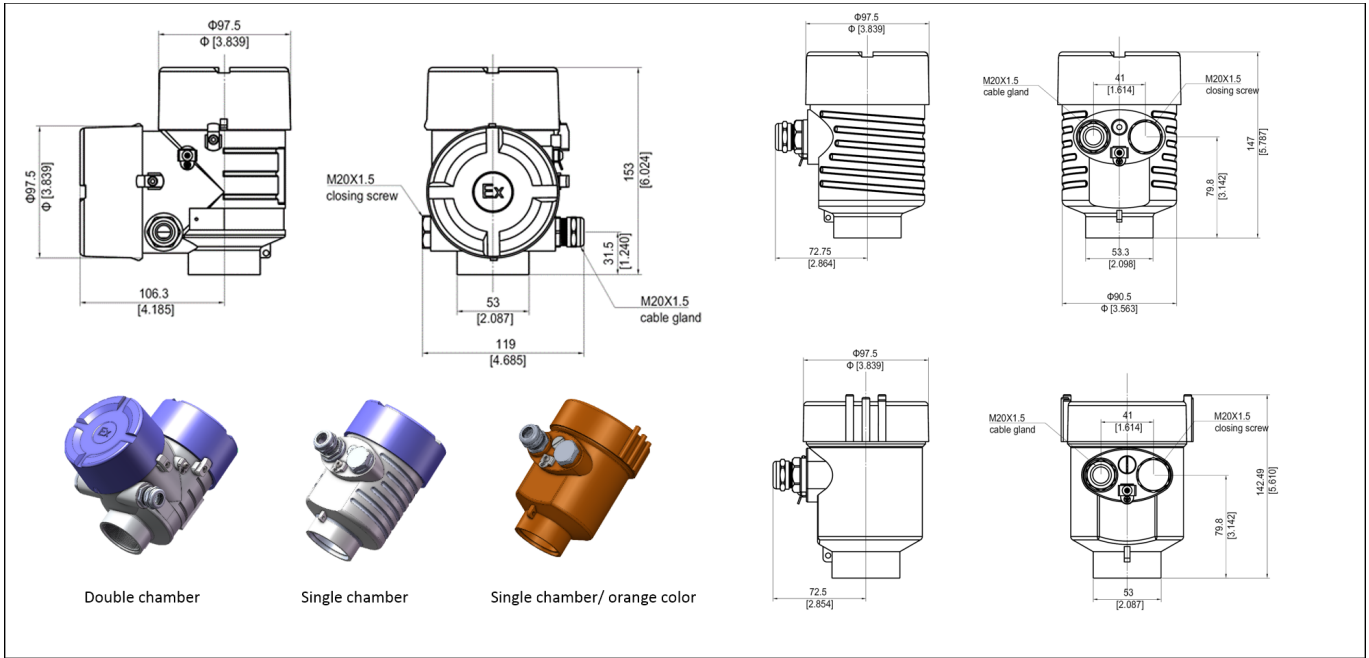
The Radar Antenna Specification of the ANL-9080N100



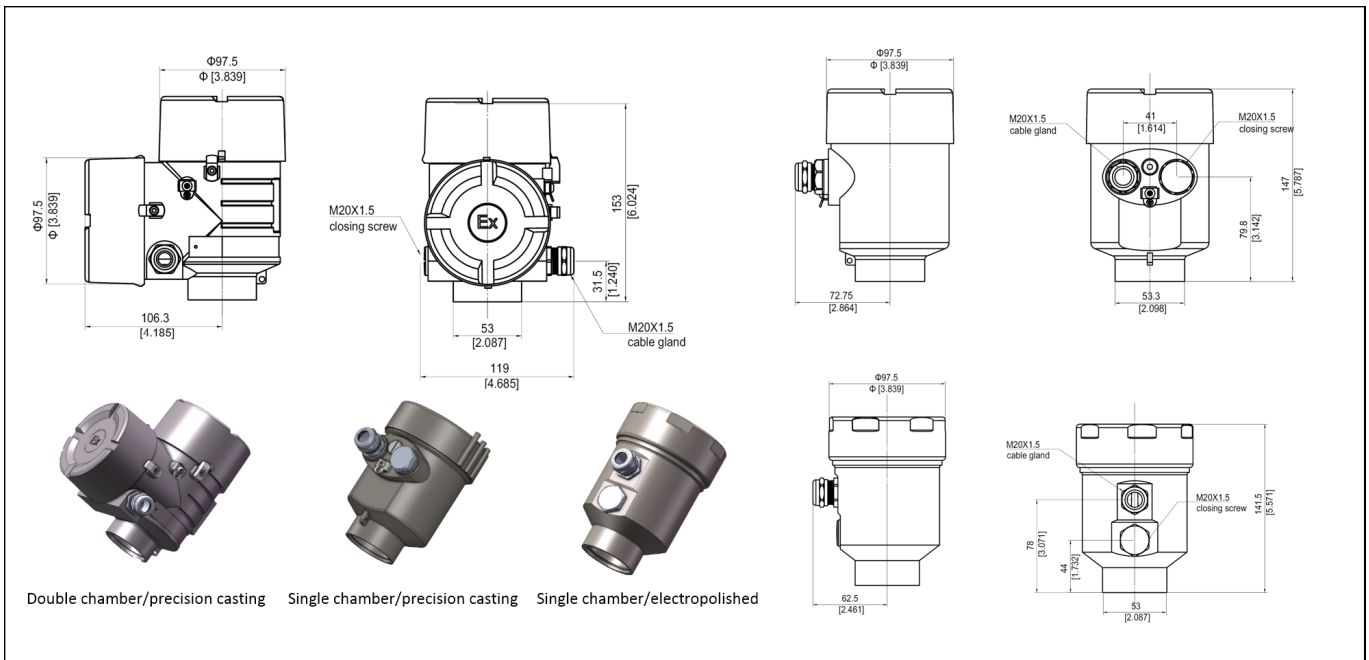
Thermal simulation graph for the ANL-9080N100-2



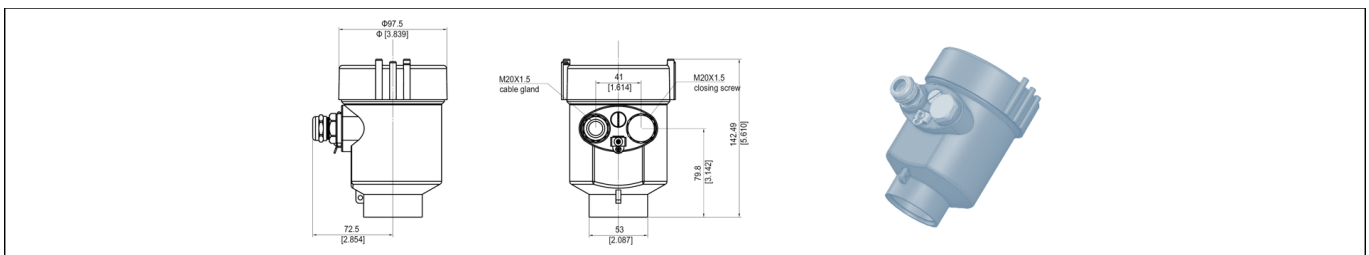
Aluminum housing



Stainless steel housing



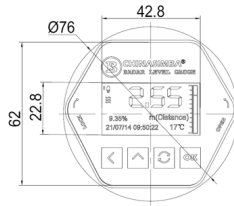
Plastic housing



Indication/Adjustment LOI Adapter

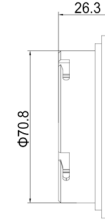
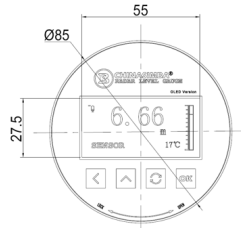
160x80 LCD RGB Backlight Monitor Adapter

Display type: FSTN
 View direction: 6 o'clock
 Operation temperature : -20°C ... 70°C



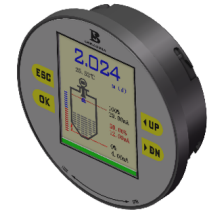
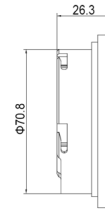
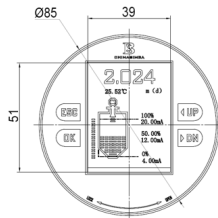
128x64 OLED graphic Monitor Adapter

Display type: OLED
 View direction: 180 o'clock
 Operation temperature : -55°C ... 80°C



320x240 LCD TFT colors Monitor Adapter

Display type: 2.4" TFT 65K/262K colors
 View direction: 6 o'clock
 Operation temperature : -20°C ... 70°C



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