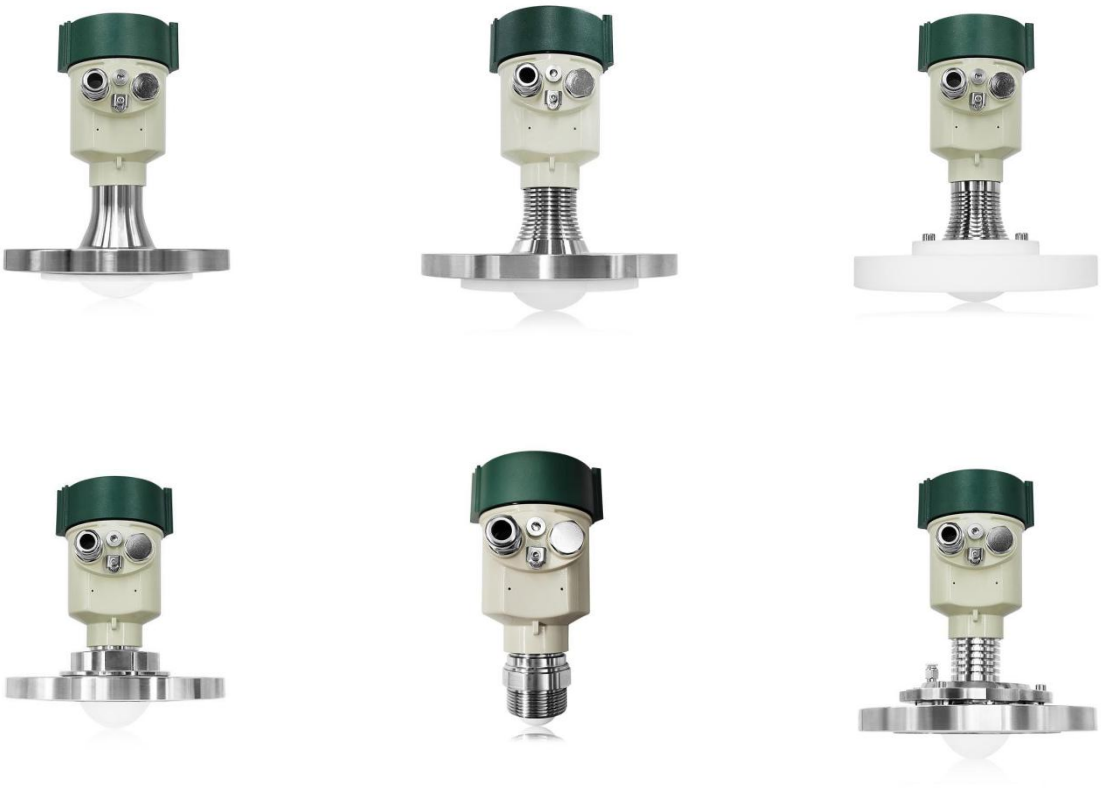
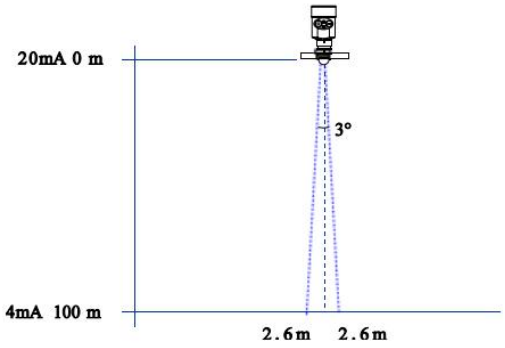
HYM290 (80G) Radar Level Meter



Nanjing Hangjia Electronic Technology Co.,Ltd.

Working Principle

HYM290 FMCW radar (also known as millimeter wave radar), because the millimeter wave band with a higher frequency than Ku-band radar, has important applications in remote target detection, strong smoke and dust environment, remote imaging, multi-spectral imaging and other aspects, and can detect smaller targets than microwave radar and achieve more accurate positioning. It has higher resolution and stronger confidentiality.



Features

◎ Good transient performance: More compact RF architecture, higher signal-to-noise ratio

◎ 5GHz working bandwidth, so that the product has higher measurement resolution and accuracy

◎ Coherence: dipole oscillation driven by coherent current or nonlinear difference frequency effect of coherent laser pulse

◎ Low energy: the energy of millimeter-wave photon is only a few millielectron volts, so there will be no phenomenon of X-ray ionization and destruction of the substance to be detected, because it is not easy to destroy the substance to be detected

◎ Strong penetration: It has strong penetration for non-polar substances. Many non-metallic non-polar materials absorb less rays in this band. Therefore, it can be used to detect the internal structure of materials. For example, ceramic/cardboard/plastic/foam, etc. are transparent to this band of electromagnetic radiation, and can also be used for airport/station security monitoring, such as detecting machinery/explosives and drugs, or for circuit board welding detection

◎ Easy to be absorbed by polar molecules: this band has less scattering in non-uniform material, can detect and measure water vapor content, etc. They can also be used to study the composition of substances or quality control by analyzing their characteristic spectra.

◎ Large range, small blind area. The maximum range can reach 120m, and the blind area can do 8cm.

◎Small beam Angle, small antenna size, easy to install. Small influence by tank nozzle size, obstacle interference.

◎ Shorter wavelength, better reflection characteristics on solid surface, so there is no need to use special universal flange for aiming.

◎ Support remote debugging and remote upgrade, convenient for on-site personnel maintenance work.

Technical Parameters

Typical Application	Electromagnetic wave emission Angle is less than 3°, suitable for narrow space or waveguide tube measurement
	Suitable for large storage tank (max.120m) and small storage tank (small blind area)
	High precision, high health grade and other occasions measurement
	Complex process conditions (mixing, heating rod, ladder, floating roof, strong dust, strong steam, etc.) occasions
Emissino Frequency	76GHz~81GHz, FM scanning frequency width 5GHz
Antenna Material	PTFE, SS304 with PTFE
Measuring Range	15m 35m 85m 120m
Accuracy	0.05%~0.1%FS
Supply	24VDC, 220VAC
Output Signal	4~20mA/HART/RS485/Modbus/Bluetooth
Working Temperature	-30~80℃, -20~200℃ (≥260℃ customizable)
Working Pressure	-0.1~2.0MPa
Process Connection	Thread, bracket, flange, sanitary clamp (optional)
Protective Grade	IP 67, IP 68(Optional)

Ordering Guide

Model	HYM290 Radar Level Meter
Process Connection	P4: G1½A thread F50: DN50 flange F80: DN80 flange F100: DN100 flange F150: DN150 flange X: Customized
Output Signal	B1: 4~20mA/24VDC B7: RS485 B8: Hart
Power Supply	V1:24VDC V2:220VAC
Working Temperature	N: -30~80℃ H: -30~200℃ X: Customized
Working Pressure	1: -0.1~0.3MPa 2: -0.1~2.0MPa 3: -0.1~4.0MPa X: Customized
Housing Material	A: Aluminum S4: SS304 E: Explosion-proof standard