

Millimeter-Wave Radar/Distance Measurement Applications

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# 120GHz 20m Distance Measuring Radar Module

KGLD03R Product Specification



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## Table of Contents

1. Product Overview.....	1
2. Main Parameters.....	1
3. Product Appearance Dimension.....	2
4. Wiring Definitions.....	3



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## 1. Product Overview

The KGLD03R 120GHz distance measuring radar module adopts a FMCW FM continuous wave mode and a microstrip array antenna, which is able to replace laser and industrial ultrasonic distance measuring radars and other products. The product's small size and compact structure make it suitable for a variety of application scenarios.

The 120GHz radar system accurately measures the distance to stationary or moving targets, and the sensor's output can be configured by the filtering results of the range or signal strength.

## 2. Main Parameters

Parameter	Symbol	Mini. Value	Typical Value	Max. Value	Unit	Remarks
Emission Frequency	$f$	120		123	GHz	
Output Power (EIRP)	$P_{out}$		13	20	dBm	1dBm (TX)
Output Power Consumption		9	12	14	mw	
Beamwidth (-3dB) Antenna Angle	Horizontal Direction		3		°	
	Vertical Direction		3		°	
Working Voltage	$V_{CC}$	9	12	24	V	
Working Current	$I_{CC}$		20		mA	Typical Value
Output	RS485 communication mode. The default baud rate is 115200 and the ASCII/Modbus protocol can be freely switched.					
Working Temperature	$T_{OP}$	- 45		+ 85	°C	
Refresh Rate		0.1	10	25	Fps	
Module Size	36.6*43 mm					
Weight	10g					
<b>MEASUREMENT INDICATORS</b>						
Measuring Range	0.1~20m					
Measuring Accuracy	±2mm					
Resolution	1mm					
Start-Up Time	1s					

### Note:

- The radar working frequency band is 120 GHz, and the maximum distance measurement is 20 meters . According to the RCS, the maximum detection distance will have a deviation.
- The default configuration of the radar is compatible with ASCII/MODBUS two protocols. You can switch the protocol mode according to the corresponding instructions. Please ask our company for the detailed protocol file.



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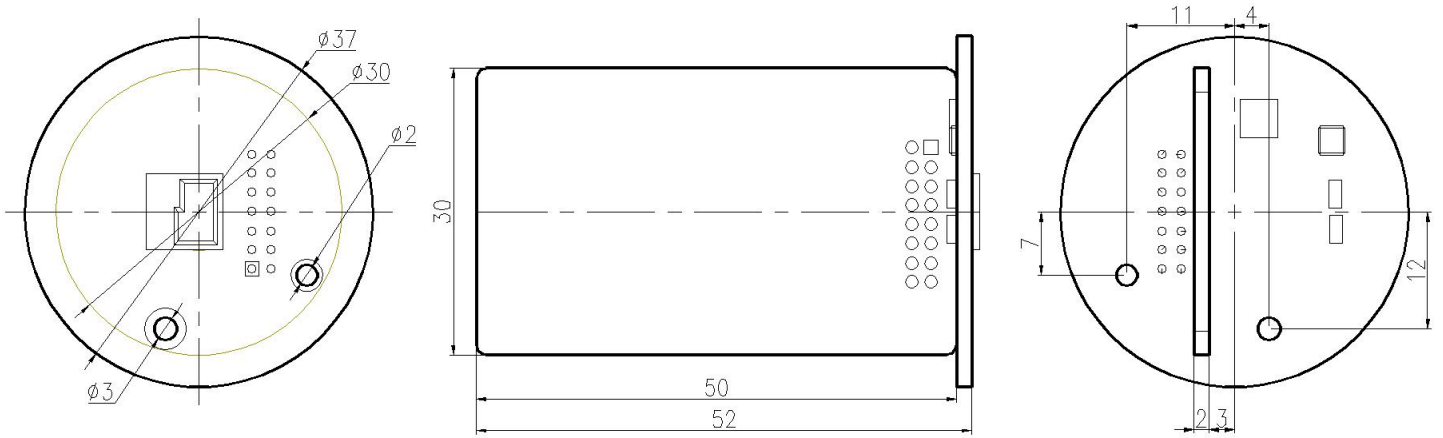
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## 3. Product Appearance Dimension



Module Front



Module Back



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## 4. Wiring Definitions

