

VanJee LiDAR creates vision for robotics.

Safety certification from
German TÜV Rheinland

CE certification

VanJee LiDAR

The World's First 3D Safety LiDAR WLR-719E

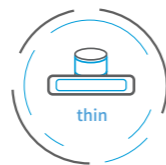
Description

The VanJee WLR-719E is a 3D safety LiDAR with superior detection capabilities, including a 40-meter range and up to a 4-meter protection zone. The LiDAR offers $\pm 20\text{mm}$ accuracy and a 3D vertical field of view (FOV) with angles of 4.5° , 0° , $+4.5^\circ$, $+9^\circ$. This ultra-compact LiDAR ($99\text{mm} \times 102\text{mm} \times 64.8\text{mm}$) complies with IEC 61508 SIL2 and ISO 13849 PLd safety standards from TÜV Rheinland. The LiDAR incorporates advanced features such as dirt detection and anti-interference capabilities, ensuring robots receive reliable and precise data for optimal safety performance.



Ultra-Wide FOV

$276^\circ \times 13.5^\circ$ FOV to provide large safety detection range



Ultra-Light and Thin
Only 64.8mm in height



3D Safety Protection
4-line laser scanning

Provides a three-dimensional protection area

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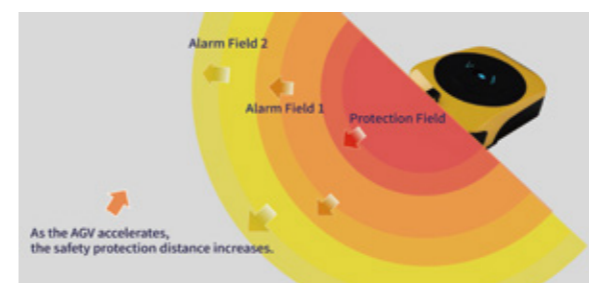
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Advantages



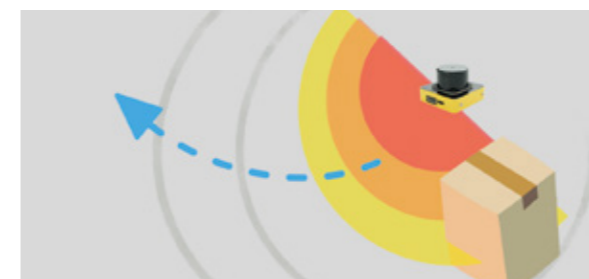
Ultra-Light and Thin Model

The LiDAR is only 64.8mm high, making it an ultra-thin safety LiDAR, suitable for installation in most AMR models.



Adaptive LiDAR Protection Area

The LiDAR can dynamically adjust the protection area based on the AMR's speed, turns, and other driving conditions, ensuring autonomous operation with the utmost safety.



Combined With Navigation and Obstacle Avoidance Function

The LiDAR has a high-precision ranging of 20mm, which can provide reliable safety protection and achieve high-precision positioning and navigation.



3D Safety Protection

The LiDAR can provide 4 planes (9° , 4.5° , 0° , -4.5°) to configure the monitoring area and realize 3D stereoscopic protection for the environment.



WLR-719E

Parameters

Basic Parameters >>>			
Model	WLR-719E	Horizontal FOV	276°
Warning Field Range	10m	Horizontal Resolution	0.2° (20Hz)
Multisampling	1~16	Number of Fields	128
Response Time	≥60ms	Field Group	128
Tolerance Zone	65mm	Power Consumption	6W
Protective Field Range	4m	Protection Field Resolution (Can be configured)	20mm,30mm, 40mm, 50mm, 60mm,70mm, 160mm,200mm
Additional Extension Distance	350mm(Measurement Errors Caused by Reflections)	Number of Simultaneously Monitored Fields	≤8
Safety Level Related Parameters >>>			
Safety Integrity Level	SIL2(IEC 61508)	Performance Level	PLd(ISO 13849)
Type	Type3(IEC 61496)	Continuously Operation Time	20 years (EN ISO 13849)
PFHD (Probability of Dangerous Failure per Hour)	2×10 ⁷	Safe State In the Event of A Fault	At least one OSSD is in the off state
Electrical Parameters and Interfaces >>>			
Protection Class	III (IEC 61140)	Operating Voltage	24VDC (16.8V-30V DC)
	Ethernet、USB to UART	Output Signal Switching Device (OSSD)	2 (Can be configured as up to 2 pairs of OSSD)
Mechanical Parameters >>>			
Cable Length	1.5m	Weight	0.7kg
Housing Color	RAL 1021 (yellow), RAL 9005 (black)	Dimensions (Length × Width × Height)	99mm× 102mm × 64.8mm
Environmental Parameters >>>			
Operating Temperature	−10°C ~+50°C	Storage Temperature	−25°C~+70°C
Vibration Resistance Standard	IEC 60068-2-6,IEC60068-2-64, IEC 60721-3-5, IEC TR60721-4-5, IEC 61496-3	Shock Resistance Standard	IEC 60068-2-27,IEC 60721-3-5, IEC TR60721-4-5,IEC 61496-3
Vibration Resistance Level	Class: 5M1 (IEC 60721-3-5)	Shock Resistance Level	Class: 5M1(IEC 60721-3-5)
Ingress Protection	IP65(IEC60529)	Electromagnetic Compatibility	IEC 61496-1, IEC 61000-6-2, IEC 61000-6-3

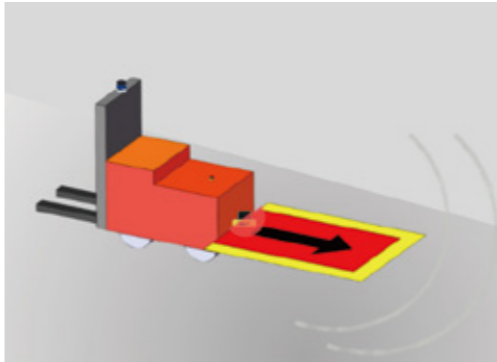


WLR-719E

Parameters

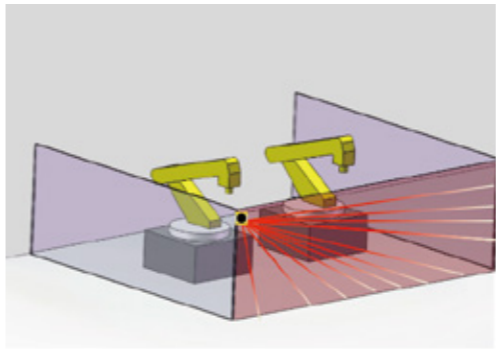
Environmental Parameters >>>			
Ranging Distance	0.05m~40m	Range Accuracy	±20mm
Vertical FOV	-4.5° , 0° , +4.5° , +9°	Laser Lines	1/2/4 option(up to 4 lines)
Laser Wavelength	905nm (Class 1 eye safe)		

Scenarios



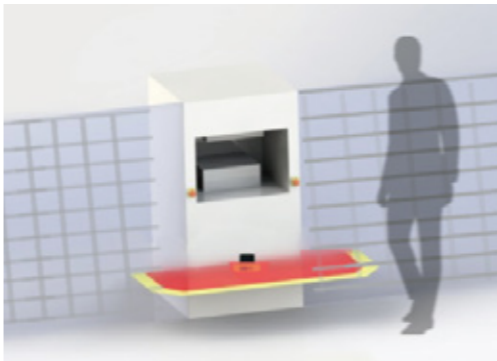
AMR Obstacle Avoidance

Helps the AGV avoid obstacles, such as pedestrians or objects, in its path while driving.



Intrusion Protection

Detects whether there is intrude of people or objects in the protection area.



Detention Detection

Detect whether there are people or objects detained in the protection area.