TSR18 Velocity Feedback Radar



TSR18 is a high-performance traffic speed radar, which uses the frequency difference between the transmitted radio wave and the echo to accurately measure the target speed and other information. The radar adopts microstrip array antenna design, with a detection range of 180 meters, accurate speed measurement, and can distinguish between incoming and outgoing vehicles. It is installed beside the road and can automatically measure the speed of motor vehicles in 1-4 lanes. The product can meet the application requirements of roadside overspeed capture, intersection vehicle reminder and speed feedback instrument, and can be applied to the scenes that need to display vehicle speed, such as highway, ordinary highway, community entrance, school section, driving practice section etc.



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Product characteristics

Accurate, effective and safe

- **Long distance:** detection distance 180m
- **Large speed range:** speed range: 5-255km/H
- **Multi-lane:** 1-4 lanes can be covered to distinguish the coming and going direction

Strong adaptability to complex environment

- **All-day and all-weather:** applicable to all kinds of bad weather environment, such as rain, snow, fog, dust, etc., to prevent missing and false alarm to the maximum extent
- **Anti-interference:** 5-gear sensitivity can be adjusted in multiple gears to reduce the false alarm rate; Frequency error design can avoid interference between radars.

Efficient, Smart, Reliable, Flexible

- **Efficient:** 24GHz band and "MIMO + DBF" technology for efficient operation in harsh environments
- **Intelligence:** support three capture modes of coming, going and two-way, adopt counter-control technology, can automatically eliminate interference signals and external environmental impact, and improve measurement accuracy
- **Flexible installation:** support front installation and side installation, and can detect and track multiple vehicle information in multiple lanes in real time
- **Flexible customization:** finished circuit board, neutral finished product, personalized customized brand Logo of shape structure
- **Reliable:** Military quality standards, stable and reliable products

Small size and easy installation

- **Small size:** integrated design, compact and beautiful, can be installed inside and outside, easy to integrate;
- **Simple installation:** The radar integrates the lane sight, level and gyroscope, which can assist in calibrating the installation angle of the radar and avoid the data error caused by the installation angle deviation.

Deep opening and accurate adaptation to multiple traffic scenarios

- Deep opening of 10 + algorithm parameters, customers can adjust on demand, effectively avoid the problems of large vehicle splitting and false alarm, ensure that radar can achieve the best performance in highway, urban road, curve and construction area scenarios, and accurately adapt to diversified traffic scenarios.

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Technical specifications

Parameter	Condition	Minimum value	Typical value	Maximum value	Unit
System characteristics					
Refresh period			20		ms
Output time	Adjustable	50	500	2000	ms
Transmit frequency error		-40		40	MHz
Power consumption			1		W
Communication interface		RS485/RS232/switching value			
Velocity measurement characteristics					
Speed measurement range		5		255	km/h
Speed measurement accuracy		-1		0	km/h
Direction		It can distinguish the coming and going direction			
Detection range	Vehicles		180		m
Antenna characteristics					
Beamwidth/TX	Azimuth plane (-6 dB)		10		deg
	Elevation plane (-6 dB)		50		deg
Other features					
Operating voltage			12		V DC
Operating current	Average current		0.08		A
Operating temperature		-40		85	℃
Operating humidity		5%		95%	RH
Size	With a shell	137*117*35			mm
Degree of protection		IP66（The protection rating is not a permanent standard, and the protective capability may diminish due to product wear）			
laws and regulations		In certain countries or regions, this millimeter-wave radar may not be available for purchase. For details, please refer to local laws and regulations			

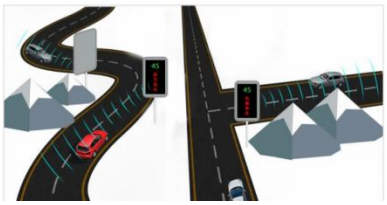
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Application scenario

TSR18 speed feedback radar can be used in speed law enforcement, bend warning and other scenarios to monitor vehicle speed in real time and ensure traffic road safety.



Law enforcement speed measurement



Curve early warning