

TF03-ANALOGVERSION is an industrial-grade long-range LiDAR. Its maximum detection range can reach 100m. With integrated compensating algorithm for outdoor glare and other interference, TF03-ANALOGVERSION can work under strong light environment and rain, fog and snow conditions<sup>1</sup>. Multiple built-in operating modes let customers to change its parameters and configuration to meet different applications.



### Main product features

- High frame rate
- IP67 protection
- Small size

### Main application scenarios

- Vehicle collision avoidance and safety warning
- Traffic flow statistics
- Camera trigger

## SPECIFICATIONS

Parameters		100M	180M
Product performance	Operating range (Indoor)	0.1-100m@90% reflectivity 0.1-40m@10% reflectivity	
	Operating range (Outdoor @ 100Klux)	0.1-80m@90% reflectivity&100Klux 0.1-30m@10% reflectivity&100Klux	
	Detecting Accuracy	±10cm (within 10m), 1% (10m and further) <sup>2</sup>	
	Output Accuracy	0.1mA	
	Distance resolution	1cm	
	Frame rate	1Hz~1000Hz adjustable (default 100Hz)	
	Repeatability	1σ: <3cm	
	Ambient light immunity	100Klux	
	Operation temperature	-25~60℃	
	Enclosure rating	IP67	
Optical parameters	Light source	LD	
	Central wavelength	905nm	
	Photobiological safety	Class1 (EN60825)	
	FOV	0.5° <sup>3</sup>	
Electrical	Supply voltage	5V~24V	

<sup>1</sup> Rain, snow and fog conditions generally refer to moderate rain, snow and below. Moderate rainfall < 25mm/24h or < 7.9mm/h

<sup>2</sup> The detection range is measured at temperature of 25℃. Accuracy and repeatability are measured with white board (90% reflectivity).

<sup>3</sup> FOV, field of view, consists of vertical angle and horizontal angle.

<b>parameters</b>	Average current	≤150mA @ 5V, ≤80mA @ 12V, ≤50mA @ 24V
	Power consumption	≤1W
	Communication interface	Analog Signals (Current)
<b>Others</b>	Dimension	44mm*43mm*32mm(L*W*H)
	Enclosure material	Aluminum alloy
	Storage temperature	-40~85℃
	Weight	92g±3g
	Cable length	70cm

## DIMENSIONS

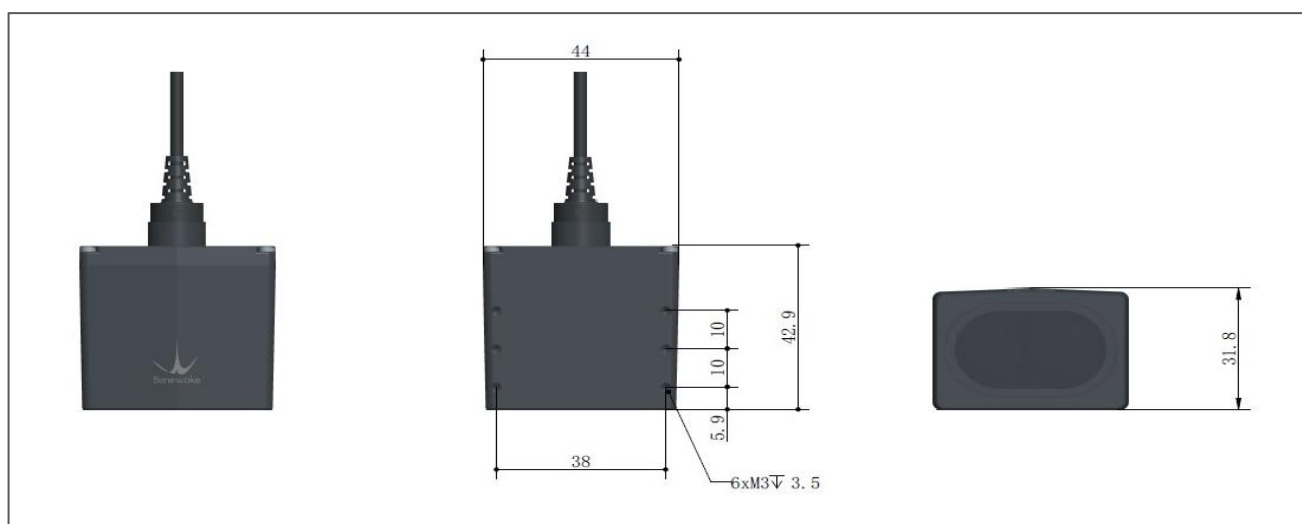


Figure 1 TF03-ANALOGVERSION dimensions (Left 1: top view; Left 2: upward view; Left 3: front view) Unit: mm

## CONFIGURABLE PARAMETERS

Table 1 Configurable parameters example

Configurable parameters	Description	Default setting
<b>Frame rate</b>	Output frame rate could be configured by related command, range 1~1000Hz	100Hz
<b>Baud rate</b>	Serial port baud rate could be customized	/
<b>Restore default</b>	TF03-ANALOGVERSION can be restored to the factory settings	/
<b>Save configuration</b>	After defining the configuration parameters, you can send the corresponding command to choose to save the configuration permanently	/

Note: for more configurable parameters and instructions, please refer to the user manual.

### ■ WIRING

The connector of TF03 is Molex 1.25 W/B SD-51021-0700.

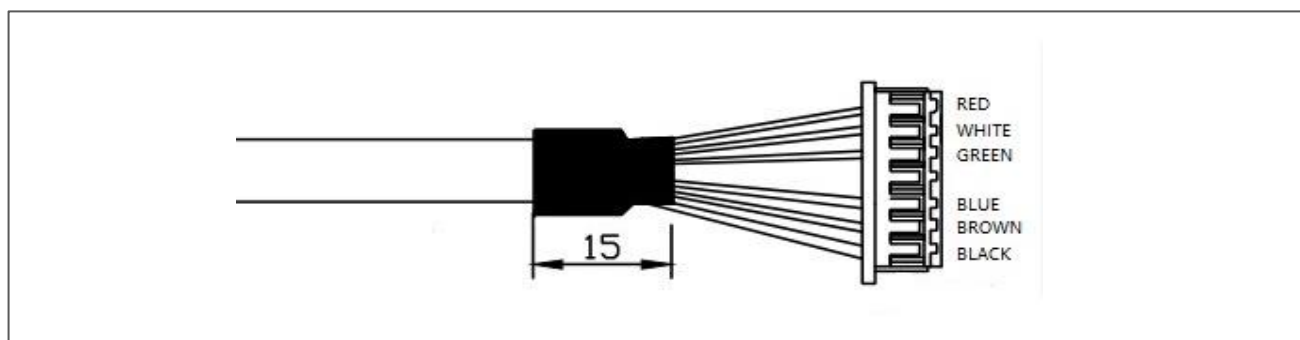


Figure 2 Wiring of new version TF03-ANALOGVERSION

Below is new version TF03's pin definition and function description.

No.	Color	Description	
		PIN definition	Function
1	Red	VCC	Power supply
2	White	/	/
3	Green	Analog Signals (Current)	4~20mA
4	/	/	/
5	Blue	UART_RX	UART receive(debug) <sup>4</sup>
6	Brown	UART_TX	UART transport(debug)
7	Black	GND	Ground

### ■ CERTIFICATIONS



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<sup>4</sup> The UART interface of TF03-100 RS485 version is debugging interface. It cannot be used to read detection data.