

WF-EN-50 Engine Test Bench			Remarks
Basic Information	Operating Temperature	0 ~ +40 °C	
	Operating Humidity	≦80%(No condensation)	
	Storage Temperature	-20 ~ +60 °C	
	Storage Humidity	≦ 90%(No condensation)	
	Power Supply	12V/24V 2A DC5521	
Engine	Recommended Engine	250cc Engine(without Accessories)	<b>DO NOT</b> test engine with accessories. Keep the distance less than 20cm between the engine and mounting plate.
	Min Engine	110cc Engine(without Accessories)	
	Max Engine	684cc Engine(without Accessories)	
	Max Hanging Type Engine	20kg	
	Max Propeller	60 inch	
Thrust Measurement	Range	150 kg	Destructive Experiment is <b>Prohibited</b> . Stop testing immediately when resonance incurred.
	Resolution	0.01 kg	
	Instant Overload	200%F.S.	
	Destructive Overload	400%F.S.	
	Accuracy	0.2%+0.2%FS	
Torque Measurement	Range	150 N•M	
	Resolution	0.01 N•M	
	Instant Overload	200%F.S.	
	Destructive Overload	400%F.S.	
	Accuracy	0.2%+0.2%FS	
Optical Speed Sensor	Range(Two Blades)	0 ~ 90000 RPM	Resolution and accuracy increase with the number of blades. User can use stickers on the fairing shell to measure the speed.
	Resolution(Two Blades)	30 RPM	
	Accuracy(Two Blades)	±30 RPM	
Temperature Probe(Infrared)	Cylinder Temperature	-70 ~ +350 °C	Only measure the temperature of the cylinder surface. Will add a spark plug thermocouple later.
	Resolution	0.1 °C	
	Cylinder Accuracy	±0.5 °C	
	Ambient Temperature	-40 ~ +125 °C	
	Resolution	0.1 °C	
Barometric sensor	Accuracy(Ambient Temperature)	±0.5 °C	
	Pressure Range	50 ~ 120 kpa	
	Resolution	0.01 kpa	
	Accuracy	±0.4 kpa	
	Humidity Range	0 ~ 100 %RH	
	Humidity Resolution	1 %RH	
	Humidity Accuracy	±3%	
Optional			Remarks
High Precision Oil Meter	Range	0~650 ml/min	Only test the flow(without bubbles) of single oil inlet . <b>CAN NOT</b> measure the flow after oil returned.
	Resolution	0.001 ml/min	
	0-100ml/min(Accuracy)	±1 ml/min	
	100-650ml/min(Accuracy)	±1%	
	Measurement Type	Non-Contacted Serial Connection	
Airspeed Sensor (differential Pressure)	Range(differential Pressure)	1 psi	<b>Do NOT</b> display differential pressure. No fixed Airspeed accuracy. The higher the airspeed, the higher the accuracy.
	Resolution(differential Pressure)	0.84 pa	
	Accuracy(differential Pressure)	1%	
	Airspeed Range(standard atmosphere)	5 ~ 100m/s	
	Airspeed Resolution	0.1 m/s	
	Length of Pitot Tube	800 mm	
Wireless Data Transmission	Working Frequency	2400 MHz	Communication <b>CAN NOT</b> go through Metal Barriers.
	TX Power	20 dBm	
	Communication distance(Open Area)	2000 m	
DC Voltage&Current Sensor	Voltage Range	0-650 V(Custom)	<b>DO NOT</b> exceed the range, otherwise test bench will be damaged permanently.
	Voltage Resolution	0.01 V	
	Voltage Accuracy	0.05%+0.05%FS	
	Current Range	0 ~ 650 A(Custom)	
	Current Resolution	0.01 A	
	Current Accuracy	0.1%+0.1%FS	
RPM Sensor (Engine, Triple-Phase Engine)	Range(Bipolar Motor)	60 ~ 150000 RPM	eg: Motor series 28, max rotational speed is 10714RPM, Accuracy ±10RPM; <b>DO NOT</b> use the PRM sensor when voltage exceeds 110V.
	Resolution	1 RPM	
	Accuracy	0.05%±0.05%FS	
	Safety Voltage	110 V	