

WF-EN-15 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	110cc(without Accessories)	DO NOT test engine with accessories. Keep the distance less than 20cm between the engine and mounting plate.	
	Min Engine	60cc(without Accessories)		
	Max Engine	200cc(without Accessories)		
	Max Hanging Type Engine	10kg		
	Max Propeller	50 inch		
Thrust Measurement	Range	50 kg	Destructive Experiment is Prohibited. 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	50 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	Humidity Accuracy	±3%		
	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 . CAN NOT 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	Do NOT 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		
Wireless Data Transmission	Length of Pitot Tube	800 mm		
	Working Frequency	2400 MHz		
	TX Power	20 dBm		
DC Voltage&Current Sensor	Communication distance (Open Area)	2000 m	Communication CAN NOT go through Metal Barriers.	
	Voltage Range	0-650 V(Custom)		
	Voltage Resolution	0.01 V		
	Voltage Accuracy	0.05%+0.05%FS		
	Current Range	0 ~ 650 A(Custom)		
RPM Sensor (Engine, Triple-Phase Engine)	Current Resolution	0.01 A	DO NOT exceed the range, otherwise test bench will be damaged permanently. .	
	Current Accuracy	0.1%+0.1%FS		
	Range(Bipolar Motor)	60 ~ 150000 RPM		
	Resolution	1 RPM		
	Accuracy	0.05%±0.05%FS		
Safety Voltage	Safety Voltage	110 V	eg: Motor series 28, max rotational speed is 10714RPM, Accuracy ±10RPM; DO NOT use the PRM sensor when voltage exceeds 110V.	