



Sense
Measure
Control

KTST Series Turbo Speed / Temperature Sensor

- **Eddy Current Sensing Principle**
- **Rugged Construction**
- **Speed up to 400,000 rpm**
- **Temperature -50 to +300°C**
- **Voltage & Frequency Outputs**



The KTST Series of turbo speed /temperature sensors are designed for direct installation onto the turbo. The sensor uses eddy current principle to detect the blades (Titanium or aluminium) as they pass by. Temperature is also measured at the tip of the sensor.

The sensor is available in several sizes to suit most common turbo types. Blade count from 1 to 16 can be programmed. Connection is made to a control box which converts the speed sensor signal into analogue and frequency outputs.

Parameter	Value
Speed range	200,000 or 400,000 rpm (selectable)
Distance sensor to blade	Aluminium = 0.1 to 0.7mm depending upon blade width Titanium = 0.1 to 1.5mm depending upon blade width
Blade material	Aluminium or Titanium
Blade count	1 to 16 blades selectable by switch
Speed outputs	1 pulse/blade (TTL, variable pulse duration) 1 pulse/revolution (TTL, pulse width 100 µs) 0-10V = 0-200,000 rpm or 0-400,000 rpm (min 1kΩ, max 1nf load)
Accuracy	±0.2% FS. Linearity 0.1% FS. Resolution
Temperature measurement range	-50 to +300°C
Temperature output	0 to 3.5V
Supply voltage	8-16V, 150mA
Operating temperature	Sensor = -30 to +285°C Sensor cable = -30 to + 200°C Controller = -30 to +70°C
Electrical connection	Sensor cable = 800mm + triax Lemo connector Controller = Deutsch ASDD 9-way connector
Mechanical dimensions	Controller = 126 x 80 x 30mm (excluding connectors)
Weight	250 g approx
Environmental protection	IP60