

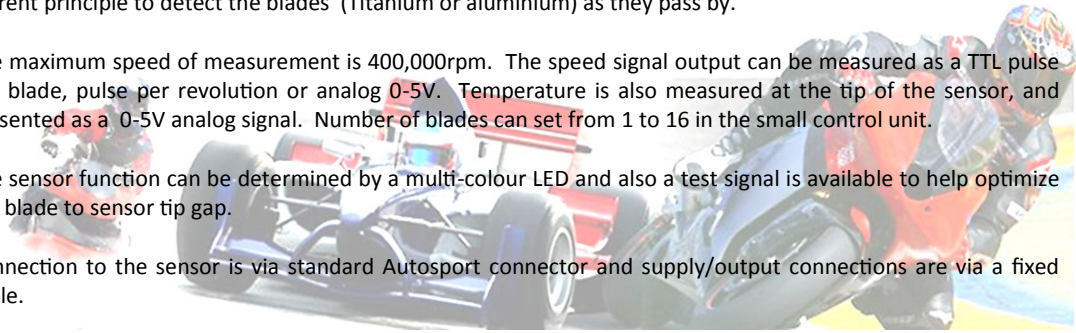
## KTSM SERIES TURBO SPEED SENSOR

The KTSM Series of turbo speed /temperature sensors are designed for direct installation onto the turbo casing. Development of the system has taken into account the environment inside the engine compartment and various design features have been incorporated to keep the signal clean and rugged. Sensing is by the eddy current principle to detect the blades (Titanium or aluminium) as they pass by.

The maximum speed of measurement is 400,000rpm. The speed signal output can be measured as a TTL pulse per blade, pulse per revolution or analog 0-5V. Temperature is also measured at the tip of the sensor, and presented as a 0-5V analog signal. Number of blades can set from 1 to 16 in the small control unit.

The sensor function can be determined by a multi-colour LED and also a test signal is available to help optimize the blade to sensor tip gap.

Connection to the sensor is via standard Autosport connector and supply/output connections are via a fixed cable.



**Sense  
Measure  
Control**

### Features

- Eddy Current Sensor
- Up to 400,000 rpm
- Inc. Temp. Output
- -60 to +575°F
- TTL & Analog O/P

### TECHNICAL SPECIFICATIONS

<b>Speed Range</b>	0—400,000 rpm
<b>Sensor Type and Blade Count</b>	Eddy Current (1 to 16 blades)
<b>Blade Material and Sensing Range</b>	Aluminum 0.004" to 0.028". Titanium 0.004" to 0.06"
<b>Accuracy</b>	±0.2% FS linearity. 0.1% of FS Resolution
<b>Speed Output</b>	1 pulse/blade (TTL, pulse width 100µs) 1 pulse/revolution (TTL, pulse width 100µs) 0-5V = 0-400,000 rpm (min 1kΩ, max 1nf load)
<b>Supply</b>	9-30Vdc, less than 80mA
<b>Operating Temperature Range</b>	Sensor -60°F to 575°F (-50°C to +300°C) Sensor Cable -20°F to 400°F (-30°C to +200°C) Controller -20°F to 180°F (-30°C to +70°C)
<b>Temperature Measurement Range</b>	-60°F to +575°F = 0 to 5V
<b>Electrical Connection</b>	Sensor: Deutsch ASL606-05SC-HE Supply/signal 20 ins 26 AWG cable + DR25 sleeve
<b>Protection Class</b>	IP65
<b>EMC Protection</b>	EN 560947-5-2
<b>Weight (Excluding Cable)</b>	4.8oz including sensor, but excluding power cable
<b>Options</b>	Blade Count, cable assembly, thread size and labelling

### Applications

- Turbo Speed
- High Shaft Speed

### Contact us

KA Sensors  
Division of  
PMC Engineering LLC  
11 Old Sugar Hollow Rd  
Danbury, CT 06810  
USA  
sales@pmc1.com  
Tel: 203-792-8686  
Fax: 203-743-2051  
www.kasensors.com

Represented by:



PMC/KA Sensors adopts a continuous development program which sometimes necessitates specification changes without notice

**Sensors and solutions for Motorsport and On-Vehicle applications**

## SENSOR DETAILS

<b>KAfigurator</b>				KS1T	5	A20	000
Thread Size	(M_5 x 0.5)			05			
	(M_5 x 0.8)			08			
Cable Length	20 inch			A20			
Special Code	None						000

## CONTROLLER DETAILS - FACTORY SET

			KTSM1	06	PR	000
Blade Count	1			01		
	2			02		
	3			03		
	4			04		
	5			05		
	6			06		
	7			07		
	8			08		
	9			09		
	10			10		
	11			11		
	12			12		
	13			13		
	14			14		
	15			15		
	16			16		
	17			17		
Output	1 pulse per blade					PB
	1 pulse per revolution					PR
	0 to 5 V analog					05
Special Code	None					000

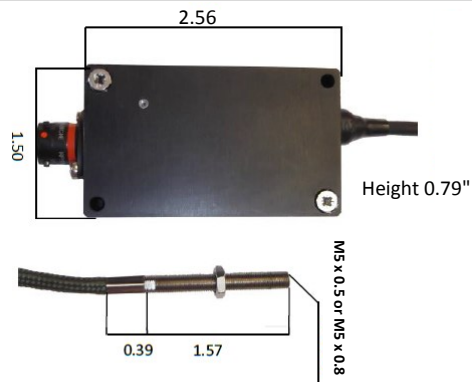
## CONTROLLER DETAILS - USER SETTABLE

			KTSM2	000
Special Code	None		000	

The KA configuration tool is used to specify a standard KA Sensor, **other options are available.**

## MECHANICAL DETAILS

Dimensions in inches



## ELECTRICAL DETAILS

+Ve Supply	0V Supply	Speed O/P	Temp. O/P	Test Signal	Screen
Red	Black	White	Green	Yellow	Connect to GND (Connected to Controller case)

## Sense Measure Control

### Sensors for

- Temperature
- Acceleration
- Pressure
- Position
- Torque
- Speed
- Angle
- Force

### Services for

- Data Logging
- Telemetry
- Controls
- Wiring
- Design

### KA Sensors are

- Engineering led
- Confidential
- Experienced
- Responsive
- Dynamic
- Friendly

**Sensors and solutions for Motorsport and On-Vehicle applications**