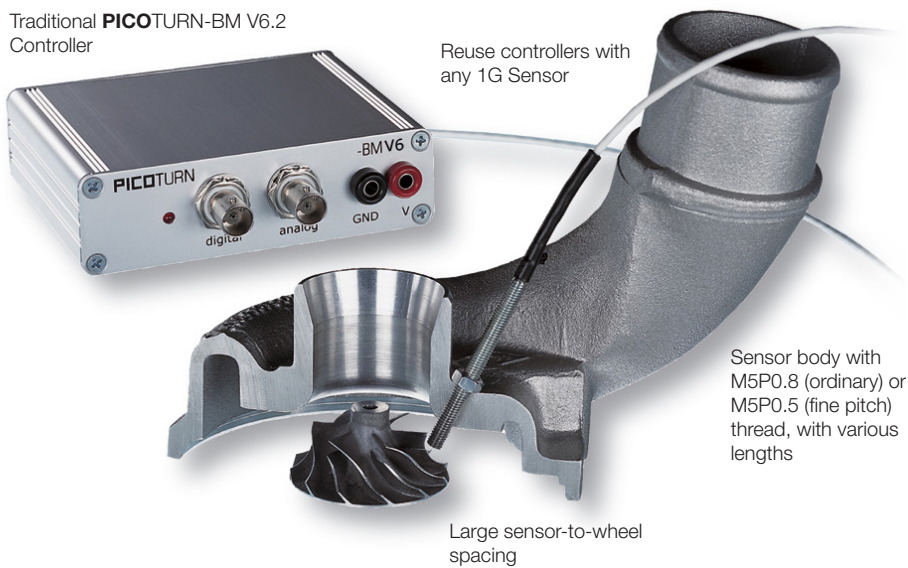


# PICOTURN® -1G

## Rotational Speed Sensors

Accurate Technologies Inc. (ATI) offers the PICOTURN 1G rotational speed sensor for turbochargers. Compared to optical or magnetic sensing systems, the PICOTURN system is proven as a rugged, reliable, simple, accurate and cost effective solution. The system's functional principle is a 1MHz pulse induction with eddy current discrimination, using a compressor mounted solenoid sensor that detects and counts compressor vanes individually, generating a standard TTL/CMOS output signal. Maximum wheel speed measurement is 400,000 rpm, with a minimum operating speed of 390 rpm. The preferred turbo compressor wheel material is aluminum; titanium wheels require individual testing to verify compatibility with the PICOTURN sensor.

The PICOTURN system benefits from high sensitivity, allowing a large distance between sensor and the rotating vanes in the range of 1 at 0.6mm vane thickness. Various sensors are available to accommodate numerous user cases differentiated by the length and thread the sensor head. The PTSM-H series benefits from enhanced sensitivity, enabling use with titanium wheel and other critical applications where higher temperatures are a priority.

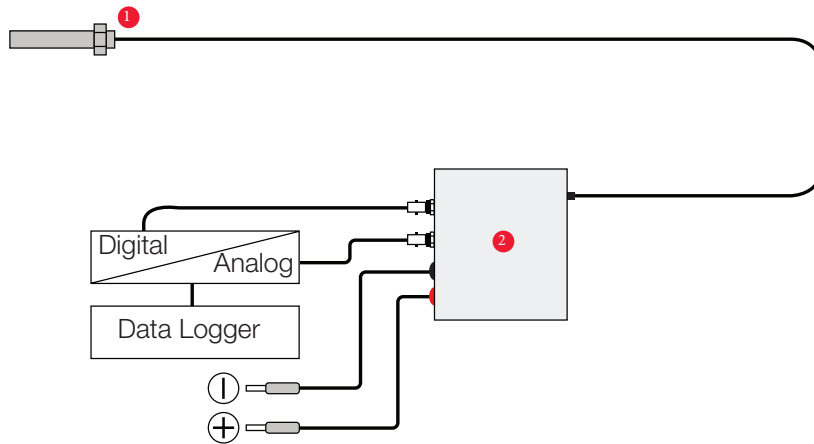


Sensor Specifications		
Sensors Tip Element Temperature	Standard sensor	-40°C to +250°C* (482°F)
	H-type sensor	-40°C to +270°C* (518°F)
IP67 rating	Yes	
Sensor Body Dimensions	Fine thread M5x0.5, with various lengths 25mm to 60mm	
	Standard thread M5x0.8, with various lengths 40mm to 70mm	
Extension cable	Max length	1.5 meters / 2.5 meters

\* Excess temperature tolerated for short periods

Controller/Signal Conditioning Box Specifications	New IP67 rated PTCM	PICOTURN-BM V6.2
Dimensions	50 x 45 x 25mm	105 x 84 x 30mm
IP67 rating	Yes	No
Number of Vanes	1 to 31	1 to 15, 16 to 31
Digital Output	TTL/CMOS (One impulse per N vanes, N = 1 to 31)	
Analog Output	0.5 to 4.5V	
Temperature	-40°C to +85°C	
Supply Voltage	9 to 30 volts DC	8 to 30 volts DC

# System Overview



## Sensors

1G Sensors (interchangeable passive sensors)				Description		
<b>New H-types for higher temperature and higher sensitivity: -40°C to +270°C</b>		Traditional type: -40°C to +250°C		Sensor length/ Thread length	Diameter	Cable length
Part No.	Product	Part No.	Product			
220180003	PT-H-SM5.3	220150008	PT-SM5.3	60mm / 54mm	M5 x 0.8	1.5m
220180004	PT-H-SM5.5	220150006	PT-SM5.5	46mm / 40mm	M5 x 0.8	1.5m
220180005	PT-H-SM5.6	220150012	PT-SM5.6	75mm / 69mm	M5 x 0.8	1.5m
220180006	PT-H-SM5F.2	220150004	PT-SM5F.2	41mm / 25mm	M5 x 0.5	1.5m
220180007	PT-H-SM5F.2	220150014	PT-SM5F.3	56mm / 40mm	M5 x 0.5	1.5m
220180008	PT-H-SM5F.5	220150016	PT-SM5F.5	76mm / 60mm	M5 x 0.5	1.5m

## Accessories

Part No.	Product	Description	
221030002	PTCM ATI V1.1	New reduced sized Controller/Signal Conditioning box with standard interference	
221040002	PTCM-L ATI V1.1	New reduced sized Controller/Signal Conditioning box with LEMO interface connector	
202300004	PICOTURN-BM V6.2	Controller with BNC output connectors for 8-30V power supply	
220320001	PTCM-1.5-nc	System interface power cable, open ends	1.5 m length
220320002	PTCM-3.0-nc	System interface power cable, open ends	3.0 m length
220320003	PTCM-1.5-BNC	System interface power cable, BNC connectors for signals, banana jack connectors for power	1.5m length
220120001	Extension Cable	SMB-SMB, for sensors	1.5m length
220320004	PTCM-L	System Cable LEMO open ended	1.5m length
220030002	PTSM 5F.x Clamping nut	For fine thread sensors-SM5F.x	

Accurate Technologies Inc. is continually improving its products and reserves the right to alter the specifications of its products at any time without notice. ATI has made every reasonable effort to ensure the accuracy of the information in this product catalog, but does not guarantee that it is error-free or accurate. ATI does not make any warranty or guarantee as to the information contained herein.