FOG & MEMS combined IMU

NEW

Accuracy for full autonomous driving

FOG & MEMS combined IMU incorporates 3-axis gyro (i-FOG for Z axis, MEMS gyro for X and Y axis) and accelerometers, which measure angular velocity and acceleration. In addition, attitude (roll & pitch) and heading (yaw) is calculated.
An external GNSS module is connected to IMU; with position and speed data, IMU can be used as GNSS / INS / VS navigation.
The IP65 waterproof type has been newly added to the lineup.

Fiber Optic Gyro i-FOG

Heading 0.1°/h

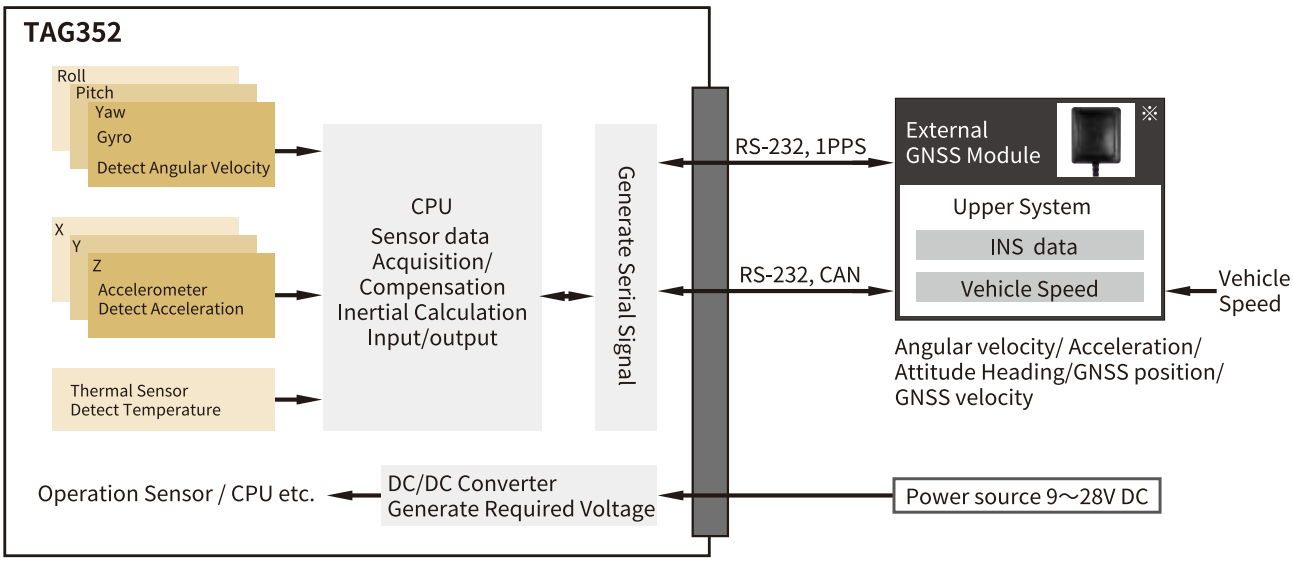
MEMS IMU

Attitude 0.1°

IP65

WATER PROOF

Functional block diagram



※ External GNSS Module including cable and antenna is not attached to the product. If required, GNSS module should be prepared by customer.

■ Connectable GNSS Module: KGM-810GRB1_PS_917/Position
Regarding the inquiries or purchases, please contact to our sales representative.

PART NUMBER

FOG & MEMS combined IMU

TAG352N 2□□□

Calculation	Accelerometer	Custom
2：GNSS / INS / VS combined Navigation	0：Accelerometer±3G 1：Accelerometer±6G	00：Standard Others : Exclusive

PERFORMANCE

FOG & MEMS combined IMU

Item	Specification	Remark
Dimension	160×100×85 mm	Waterproof (IP65)
Mass	1500g Max	
Power supply voltage	9～28V DC	
Interface / Baud rate	RS232C：115.2 kbps（Fixed） CAN：500kbps（Initial setting）	
Output Cycle	RS232C：50Hz CAN：50Hz	
Gyro Range	± 200deg/sec	
Gyro Bias	Z axis ：0.1 deg/h rms X,Y axis：0.2 deg/s rms	
Gyro Scale Factor Error	Z axis：50ppm FS rms X,Y axis：0.2% FS rms	SF：Scale Factor FS：Full Scale

Item	Specification	Remark
Acceleration Range	± 3G / ± 6G	
Acceleration Bias	5mG rms	
Acceleration Scale Factor Error	0.2%FS rms	
Static Accuracy (Roll & Pitch)	0.1deg rms	Room temp.
	0.2deg rms	Ambient temp.
In-run Drift (Yaw)	0.0001deg/s rms	
Operation temp. range	-20～+60°C	
Vibration	29.4m/sec^2 rms (5Hz ～ 2kHz) (3G rms)	Random vibration
Shock	20G 10ms	

FUNCTION

FOG & MEMS combined IMU

Item	Remark
Vehicle Speed (VS) Input I/F	RS232 / CAN
Power Protection Circuit	✓
GNSS Input I/F	✓
CAN cable termination process	—

USER CONFIGURABLE COMMANDS

FOG & MEMS combined IMU

Function	Explanation
Alignment Compensation	If mounting surface is tilting, its attitude angle can be recognized as a zero (horizontal).
CAN Format, CAN ID allocation	CAN format (standard/extended) and CAN ID allocation can be changed.

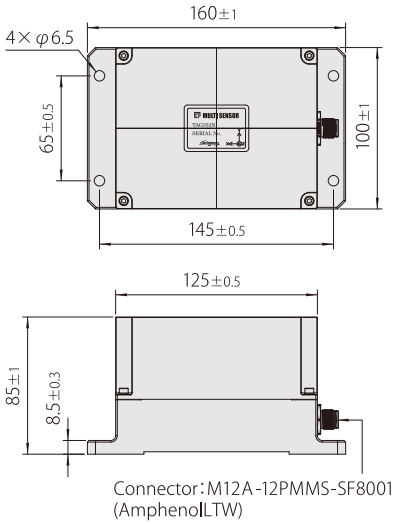
There are a lot of other commands except for the above-mentioned. The customer can change various settings. Please refer to the specification for the details.

OUTLINE DRAWING

Dimension：mm

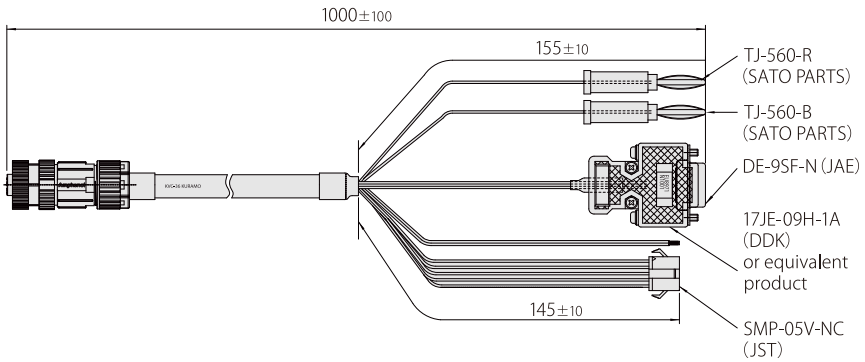
FOG & MEMS combined IMU

TAG352



Connector：M12A-12PMMS-SF8001
(AmphenolLTW)

Interface Cable EU8971N1001 (sold separately)



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MEMS IMU：
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