



# AET40B

## Torque Sensor

### AET40B

The disc torque sensor adopts the latest German technology. The disc flange mounting structure eliminates the bearings. The axial distance is only 1/5 of the standard shaft output sensor. The power and load ends are rigidly connected. Therefore, it can obtain high precision and long-term stability. This series of sensors are suitable for all kinds of laboratories and industrial environments. Both power supply and measurement signals adopt non-contact wireless transmission, ideal for long-term, high-speed environments without any maintenance, and speed measurement can be added for different applications.

#### Technical Features:

- Short axial dimension, double-sided flange structure
- Bearingless, high-speed, long-term operation
- Both static and dynamic torque can be measured
- Rigid connection with power and load shaft, accurate measurement
- Two-way torque measurement without repeated zeroing

#### Application

- Test bench applications
- Engine, dynamometer and electric motor test bench
- Wheel load simulation test bench
- Gearboxes and pumps

参数表 AET40B

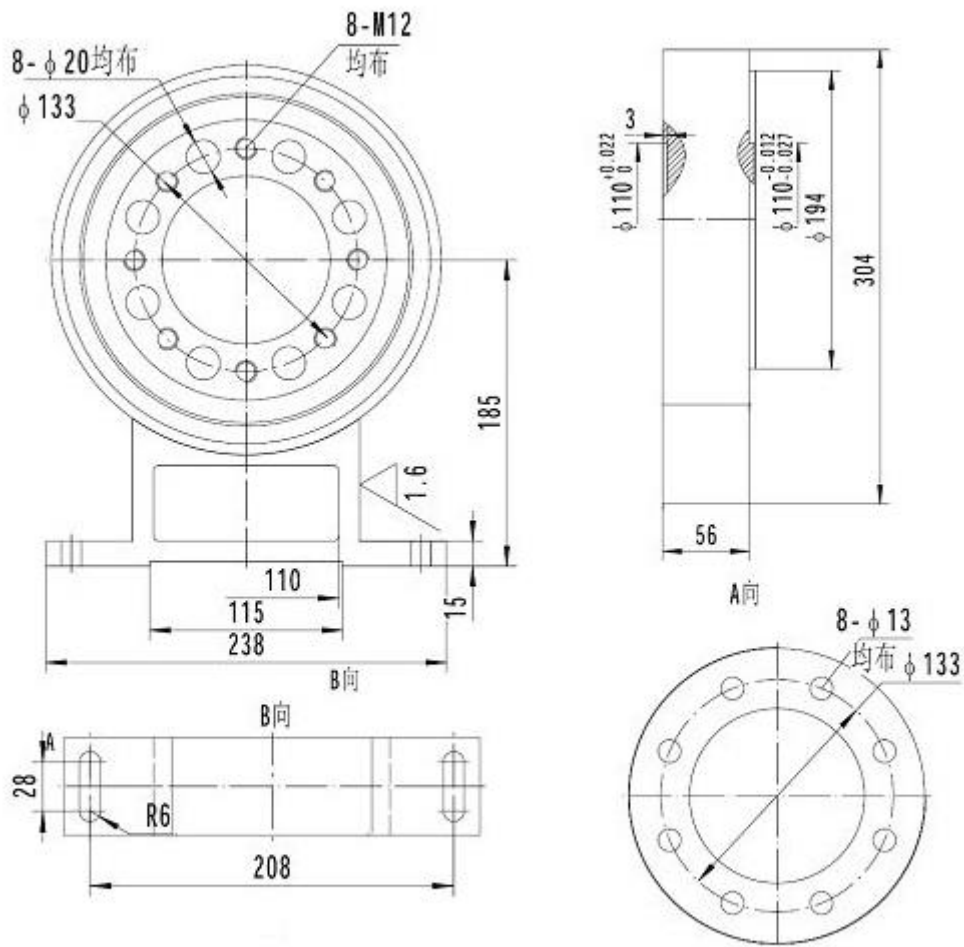
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## Design Specification



500 to 5000 N.m external dimensions

For more measurements, please contact customer services

The size of this picture is for reference only. The detailed size is subject to the order.

## Data Specification

* Model	AET40B	
* Accuracy class	J1: $\pm 0.1\%F.S$ J2: 0.2%F.S J3 $\pm 0.3\%F.S$ , J4 $\pm 0.3\%F.S$	
* Torque Range	Nm	0 ~ $\pm 50N.m$ - $\pm 10000N.m$ (choose) Maximum custom made: 25000N.m

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* Excitation Voltage		D1: ±12VDC, D2: ±15VDC, D3: 24VDC, with load: >250mA						
* Maximum permitted speed	rpm	A1:0-3000rpm A2: 0-6000rpm A3: 0-8000rpm A4: 0-10000rpm, A5: 0-12000rpm, A6 : custom made						
* Transmission Type		Y1 : Integrated transmitter, Y2 : Split transmitter						
* Output Signal		S1: 5-15KHz S2: 4-20mA S3: 1-5V S4: 1-10V S5: 0-±5V S6: 0-±10V						
* Speed output		No speed output, Z1: 60pulse/revolution						
Sensitivity error	%	< ±0.2						
Temperature error / 10 °C	%	< ±0.05						
Rated output temperature influence	%	< ±0.1						
Zero balance temperature effect	%	< ±0.1						
Linear deviation, including hysteresis	%	< ±0.1						
Relative standard deviation of repeatability DIN 1319	%	< ±0.05						
Reference temperature	°C[°F]	+23[+73.4]						
Standard temperature range	°C[°F]	+10...+60[+50...+140]						
Operating temperature range	°C[°F]	-10...+60[+14...+140]						
Storage temperature range	°C[°F]	-50...+70[-13...+158]						
Static limit load	%	150						
Static breaking load	%	300						
Bending limit moment <sup>1)</sup>	N m	0.23						
Axial limit force <sup>1)</sup>	kN	0.34	0.93	1.2	2.3	6	11	23
Lateral limit force <sup>1)</sup>	N	5.7	1.1	0.6	1.9	2.5	5.5	8.8
Torsional angle at rated torque	°	0.85	18.2	9	26	50	80	125
Moment of inertia	kgm <sup>2</sup> x 10 <sup>-3</sup>	0.000003						
Response Frequency		Sensor: ≥ 1KHz , Transmitter : ≥500Hz						
Environment Temperature		-40C ~ 85°C						
Protection grade EN60529		IP50						
Insulation resistance		≥200MΩ (100VDC)						
Sensor material		Alloy Steel/Stainless steel/Aluminum						

Model selection Description: : AET40B/ (0 ~ ±1000N.m)S1A2D1J2Y1

- Item marked with \* is required for type selection.
- For special requirements, please contact the sales engineer for customization.
- Each type of irregular stress is allowed only under its given limit value, such as bending moment, lateral load, axial load, or exceeding rated speed.

For example, if there is 30% bending moment and 30% lateral load, only 40% axial load is allowed, provided that the rated torque is not exceeded. Therefore, a measurement error of 1% of the rated torque may occur under the maximum overload.

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**Accessories:**

**Connecting cable q197a, length 6 m**

Keep the changes.

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