



Capacitive Accelerometer



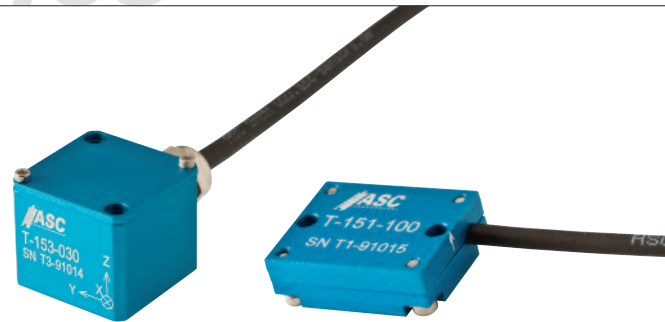
ASC T-151 / ASC T-153

ASC T-151

- Uniaxial
- Amplified Output
- Aluminium Housing
- High Temperature

ASC T-153

- Triaxial
- Amplified Output
- Aluminium Housing
- High Temperature



Features

- Range: 2g to 100g
- High Shock Resistant
- Operating Temperature 150° C
- Harsh Environment (Shock, Vibration, Temperature)

Capacitive MEMS Technology

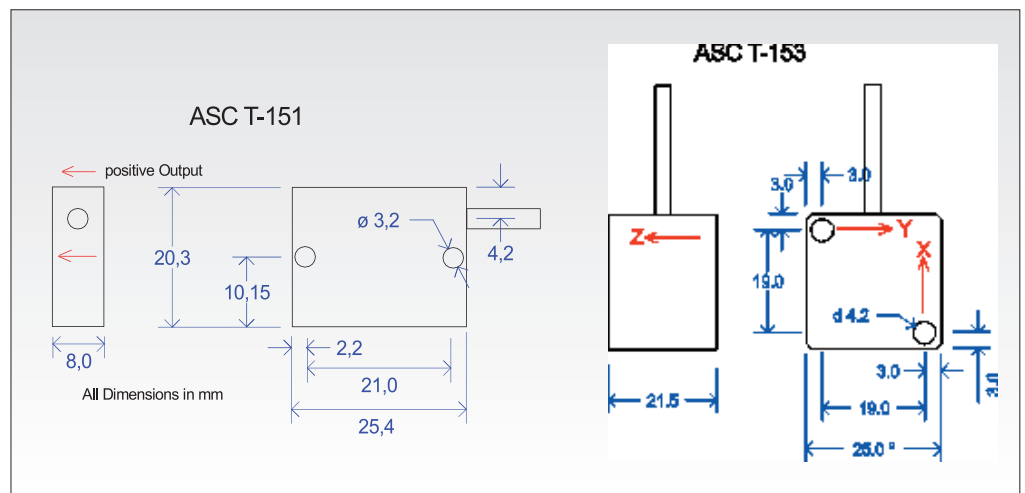
The accelerometers are based on a capacitive MEMS technology and can be used in a low frequency response up from 0 Hz. Inside the sensor element, the seismic mass is connected with two conductive capacitor plates. If the seismic mass oscillates between the two capacitor plates the capacitance will change. This capacitance change is converted via an ASIC (Application Specific Integrated Circuit) into an analog signal.

Options

- customized cable length
- customized connector

Applications

- Measurement-While-Drilling (MWD)
- Train Engineering
- Automotive
- Environment
- Aerospace
- Engineering



Description

The **ASC T-151** and **ASC T-153** are capacitive accelerometers designed for operating temperatures from -25 °C to +150 °C. These two **ASC models** were specially developed for applications that require a very high operating temperature and also high shock resistance.

Based on this modern technology, the **ASC T-151** and the **ASC T-153** can both withstand high shocks of 5000 g. The finely graduated measuring ranges provide the suitable sensor for any application. Low ambient noise enables optimal signal resolution.

Applications for the **ASC T-151** and **ASC T-153** include Measurement While Drilling (MWD), tunnel drilling, and even applications in testing laboratories with climatic chambers in the industrial and automotive sectors.

General Technical Data

Supply Voltage	5 VDC const.
Current Consumption	max. 2 mAmp
zero g output	2.5 VDC
Damping	0.7 typical
Linearity	< 0.8 %
Long-term stability	1 %/year max.
Transvers Sensitivity typ.	< 3 %
Shock resistant	5000g
Temperature drift signale	120 ppm/° C typ.
Operating Temperature	-40° C to +150° C
Storage Temperature	-40° C to +160° C

Individual Technical Data

ASC T-151	Sensitivity	Frequency +/- 5%	Bias temperature coefficient
Range 2g	1000 mV/g	0-150 Hz	0.2 mg/° C typ.
Range 5g	400 mV/g	0-150 Hz	0.4 mg/° C typ.
Range 10g	200 mV/g	0-800 Hz	0.8 mg/° C typ.
Range 30g	66 mV/g	0-1000 Hz	2.5 mg/° C typ.
Range 50g	40 mV/g	0-1000 Hz	4 mg/° C typ..
Range 100g	20 mV/g	0-1000 Hz	8 mg/° C typ.

ASC T-153	Sensitivity	Frequency +/- 5%	Bias temperature coefficient
Range 2g	1000 mV/g	0-150 Hz	0.2 mg/° C typ.
Range 5g	400 mV/g	0-150 Hz	0.4 mg/° C typ.
Range 10g	200 mV/g	0-800 Hz	0.8 mg/° C typ.
Range 30g	66 mV/g	0-1000 Hz	2.5 mg/° C typ.
Range 50g	40 mV/g	0-1000 Hz	4 mg/° C typ.
Range 100g	20 mV/g	0-1000 Hz	8 mg/° C typ.

At 5 VDC Supply and 25 °C

	Weight	Material	Dimensions
Housing			
ASC T-151:	10 gram	Aluminum, hard anodized	25.4 mm x 20.3 mm x 8.0 mm
ASCT-153:	28 gram	Aluminum hard anodized	25.0 mm x 25.0 mm x 21.5 mm
Cable	12 gram/meter	Polyurethane (PUR)	diameter 3.0 mm

Cable Code:

ASC T-151

Red	Supply +
Black	Supply -
Green	Signal +
White	Signal -

ASC T-153

Red	Supply +
Black	Supply -
White	Signal x-axis
Yellow	Signal y-axis
Green	Signal z-axis

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Calibration

■ Sinusoidal Calibration

Calibration Data incl.:

- Sensitivity
- Frequency
- Offset
- Phase

Order Information ASC T151-XXX-1XX

1 2 3 4

- 1 Model: T-151 (uniaxial)
Model: T-153 (triaxial)
- 2 Range: e.g. 002 is 2 g
- 3 Cable: Length in Meter
- 4 Connector and Pinout /
„A“ is for No Connector

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