

# ASC OS 115LN

ASC Offshore Accelerometer  
 ASC OS 115LN: Uniaxial  
 Low Noise  
 Amplified Output  
 Stainless Steel Housing

ASC Offshore Accelerometer  
 ASC OS 215LN: Biaxial  
 ASC OS 315LN: Triaxial  
 Low Noise  
 Amplified Output  
 Stainless Steel Housing



## Features

- Range 2g to 400g
- Uni-, Bi- and Triaxial
- Low Noise
- Protection Class IP68
- 10 Meter Water Depth
- Salt Water Resistant
- High Shock Resistant
- Gas Damping
- DC Response
- Excellent Bias Stability
- Excellent Scale Factor Stability

## Options

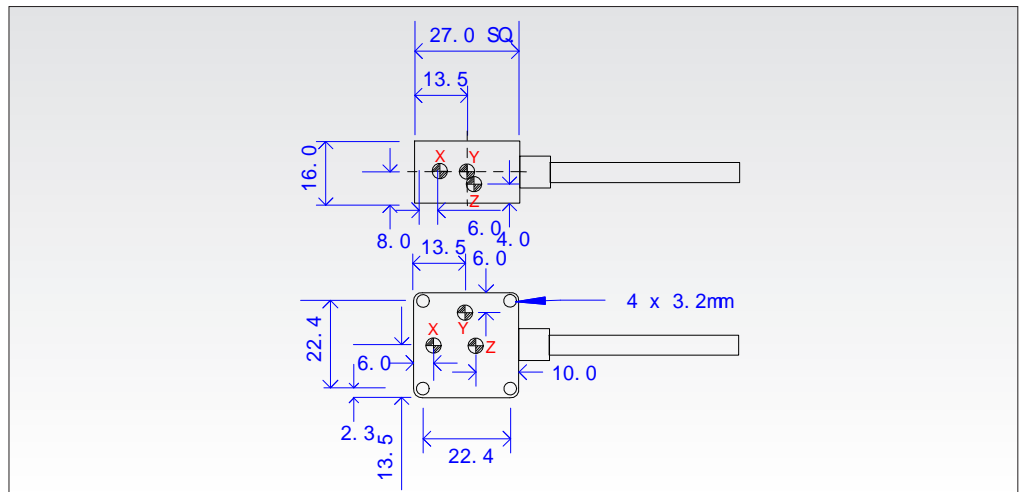
- Single-Ended Mode
- Differential Mode
- Customized Cable Length
- Customized Connector
- ASC TEDS Sensor ID Module
- Dallas IC

## Applications

- Wind Energy
- Marine
- Automotive
- Environment
- Aerospace
- Engineering

## 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.



## Description

The models **ASC OS 115LN**, **ASC OS 215LN** and **ASC OS 315LN** have been developed for the demanding requirements of offshore applications. The highly robust housing and the connecting cables are suitable for permanent immersion in salt water and are designed for 10 meter water depth.

These ASC accelerometers therefore benefit from the high stability of the chip technology with a low noise level and a low bias and an excellent scale factor temperature coefficient.

The **ASC OS 115LN**, **ASC OS 215LN** and **ASC OS 315LN** are over a wide temperature range fully compensated and factory calibrated. Because capacitive technology is used, extremely small measuring ranges are possible. The amplified output is easy to use with a data acquisition unit. The signal is independent from the power between +8 VDC to +30 VDC.

A very high flexible and rugged cable provides a simple mounting. The **ASC OS 115LN**, **ASC OS 215LN** and **ASC OS 315LN** are equipped with 1 meter cable as standard.

## General Technical Data

Supply Voltage	8 VDC - 30 VDC
Linearity	0.5 % typ. FSO
Damping Ratio	0.7 typ.
Transvers Sensitivity	2 % typ.
Zero g Output 2g and 5g	+/- 150 mV typ.
Zero g Output 10g and higher	+/- 75 mV typ.
Output Impedance	90 Ohm
TC Zero (-20 °C to 80 °C)	1 % typ. FSO
TC Span (-20 °C to 80 °C)	3 % typ. FSO
Shock Resistant	5000 g
Operating Temperature	-40 °C to +100 °C
Storage Temperature	-55 °C to +125 °C

## Calibration

- Sinusoidal

## Calibration Data incl.:

- Sensitivity
- Frequency
- Offset
- Phase

## Accelerometer Models

- ASC OS 115LN (uniaxial)
- ASC OS 215LN (biaxial)
- ASC OS 315LN (triaxial)

## Order Information

### ASC OS 115LN-XXX-1XX

1 2 3 4

- 1 Model: ASC OS 115LN: Uniax,
- 2 Range: e.g. 050 is 50g
- 3 Cable: Length in Meter
- 4 Connector and Pinout /  
„A“ is for No Connector

## Individual Technical Data

	Sensitivity	Frequency +/- 5%	Noise	TC Zero
Range +/-2g	2000 mV/g	250 Hz typ.	5 µg/√Hz	0.2 mg/°C typ.
Range +/-5g	800 mV/g	300 Hz typ.	7 µg/√Hz	0.5 mg/°C typ.
Range +/-10g	400 mV/g	500 Hz typ.	10 µg/√Hz	0.5 mg/°C typ.
Range +/-25g	160 mV/g	1000 Hz typ.	25 µg/√Hz	1.25 mg/°C typ.
Range +/-50g	80 mV/g	1300 Hz typ.	50 µg/√Hz	2.5 mg/°C typ.
Range +/-100g	40 mV/g	1500 Hz typ.	100 µg/√Hz	5.0 mg/°C typ.
Range +/-200g	20 mV/g	1700 Hz typ.	200 µg/√Hz	10 mg/°C typ.
Range +/-400g	10 mV/g	1700 Hz typ.	400 µg/√Hz	20 mg/°C typ.

At 10 VDC Supply and 25 °C

	Weight	Material	Dimensions
<b>Housing</b>	68 gram	Stainless Steel	27.0 mm x 27.0 mm x 16.0 mm

### Cable

8 Wire System	22 gram/meter	AWG 28, Polyurethane (PUR)	Diameter 3.6 mm
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### Cable Code:

#### 4 Wire System (Uniaxial):

Red	Supply +
Brown	Supply -
Green	Signal x-axis
White	Signal y-axis

#### 6 Wire System (Biaxial):

Red	Supply +
Brown	Supply -
White	Signal + x-axis
Grey	Signal - x-axis
Yellow	Signal + y-axis
Pink	Signal - y-axis

#### 8 Wire System (Triaxial):

Red	Supply + 8 to 30 VDC
Brown	Supply -
White	Signal + x-axis
Grey	Signal - x-axis
Yellow	Signal + y-axis
Pink	Signal - y-axis
Green	Signal + z-axis
Blue	Signal - z-axis

## ASC GmbH

### Advanced Sensors Calibration

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