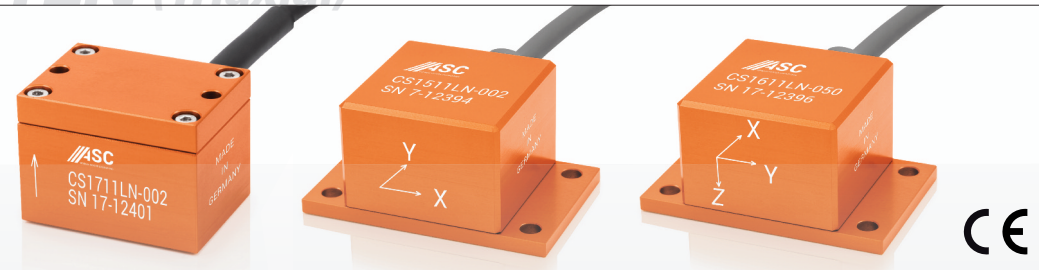
ASC Current Output Accelerometers

ASC CS-1711LN (Uniaxial)
ASC CS-1511LN (Biaxial)
ASC CS-1611LN (Triaxial)

- Uniaxial / Biaxial / Triaxial
- Anodised Aluminium
- IP67
- Made in Germany



ASC CS-1711LN (Uniaxial) ASC CS-1511LN (Biaxial) ASC CS-1611LN (Triaxial)

CE

Features

- 4-20mA Current Output
- Low noise
- ±2g, ±5g, ±10g and ±50g Ranges
- Excellent Immunity against EMI
- Loss-free Signal Transmission over long distances

Options

- Customised Cable Length
- DAkkS Certified Calibration
- Protection Class IP68

Applications

- Bridge Monitoring
- Seismic Applications
- Geology
- Wind Energy
- Process Control
- Predictive Maintenance

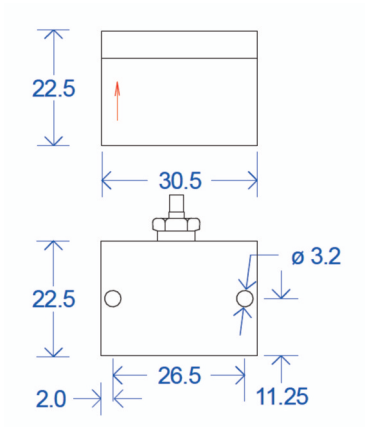
4-20mA Technology

ASC's Current Output sensors are based on the capacitive MEMS sensing principle. Using a built-in voltage to current converter, the analog voltage output from the capacitive sensor is transformed into a 4-20mA current output. The output signal span is ±8mA centered about 12mA bias (zero-g offset). The accelerometer thus outputs a 4-20mA current signal that is proportional to the overall acceleration and the sensor can readily interface to the existing PLCs, process control and predictive maintenance equipment.

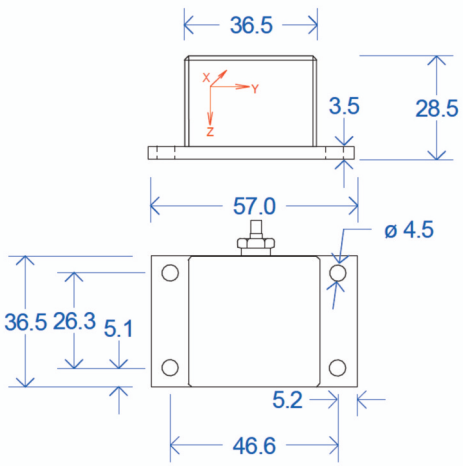
Description

ASC's current output sensors, CS series, are available in the LN version (low-noise). These sensors are used typically in industrial environments withstrong electromagnetic interference and in applications demanding no loss in transmission of acceleration data over long distances. The ASC CS series features an anodised aluminium housing, which is light-weight and provides case isolation against ground loops. The sensorsensitivity and bias is extremely stable over a wide temperature range from -20°C to +70°C. The CS series is available in uniaxial (ASC CS-1711LN), biaxial (ASC CS-1511LN) and triaxial (ASC CS-1611LN) configurations.

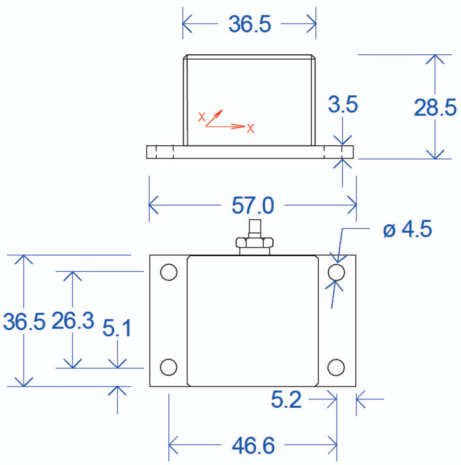
Uniaxial 17XX



Biaxial 15XX



Triaxial 16XX



All dimensions are in mm

Typical Specifications

LOW-NOISE MODELS: UNIAXIAL ASC CS-1711LN ; BIAXIAL: ASC CS-1511LN ; TRIAXIAL: ASC CS-1611LN

DYNAMIC

		Measurement Range (±g)			
		±2g	±5g	±10g	±50g
Sensitivity	mA/g	4	1.6	0.8	0.16
Frequency response: ±5%	Hz	100		300	650
Amplitude non-linearity	% FSO	<1			
Transverse sensitivity	%	<3			
Shock limit	±g	1000		2000	
Recovery time	ms	1			

ELECTRICAL

Excitation voltage	V DC	8 to 30			
Zero acceleration output	mA	12			
Output Impedance	Ω	100			
Isolation		Case Isolated			
Spectral noise (typical)	µg/√Hz	10	15	20	100
Broadband noise (±5% frequency range, typical)	µV	0.4	0.2	0.3	0.4

ENVIRONMENTAL

Temperature coefficient of sensitivity	%/°C	0.02
Operating temperature range	°C	-20 to +70
Storage temperature range	°C	-30 to +80
Sealing		IP67

PHYSICAL

Sensing element		MEMS Capacitive
Case material		Anodised Aluminium
Connector		Cable gland (Binder / Comtronic)
Mounting		M3 / M5 Screws
Weight (without cable)	gram	Uniaxial: 27 Biaxial: 35 Triaxial: 65
Cable		Uniaxial: 2m, PVC (2 x 0.5mm²) Biaxial: 2m, PVC (4 x 2 x 0.22mm²) Triaxial: 2m, PVC (6 x 0.25mm²)

FACTORY CALIBRATION (SUPPLIED WITH THE SENSOR)

Low-noise series: ASC CS-1711LN; ASC CS-1511LN; ASC CS-1611LN

Range	±2g	±5g	±10g	±50g
Frequency Response	1Hz to 100Hz		10Hz to 300Hz	10Hz to 650Hz

CALIBRATION DIN ISO 17025 (ORDER SEPARATELY)*

Low-noise series: ASC CS-1711LN; ASC CS-1511LN; ASC CS-1611LN

Range	±2g	±5g	±10g	±50g
Frequency Response	0.5Hz to 150Hz		10Hz to 500Hz	10Hz to 1.6kHz

CABLE CODE / PIN CONFIGURATION

ASC CS-1711LN

Uniaxial, 3-wire	*Supply +*
	Supply -
	Signal

ASC CS-1511LN	*X-Axis*	*Y-Axis*
	Supply +	*Supply +*
12-wiring-System	*Supply -*	*Supply -*
	Signal	*Signal +*

ASC CS-1611LN	*X-Axis*	*Y-Axis*	*Z-Axis*
	Supply +	*Supply +*	*Supply +*
12-wiring-System	*Supply -*	*Supply -*	*Supply -*
	Signal	*Signal +*	*Signal +*

ORDERING INFORMATION

Model	Range	Cable length	Connector	Protection class
ASC CS-1711LN	XXX	YYY	A: open-ended cable (no connector at the DAQ end)	IPXX
	002: ±2g	050: 50m		IP67 (standard)
ASC CS-1511LN	005: ±5g	100: 100m	Contact factory for all available	IP68
	010: ±10g	150: 150m	connector options such as Lemo,	
ASC CS-1611LN	050: ±50g	200: 200m	BNC etc.	

QUALITY

1) ASC is ISO 9001:2015 certified

2) The Deutsche Akkreditierungsstelle GmbH (DAkkS) has awarded to our calibration laboratory the DIN EN ISO/IEC 17025:2005 accreditation for calibrations and has confirmed our competence to perform calibrations in the field of mechanical acceleration measurements.

** accredited by the German accreditation body (Deutsche Akkreditierungsstelle, DAkkS) to DIN EN ISO / IEC 17025; the pictured DAkkS-ILAC logo refers exclusively to the accredited service*

ASC GmbH · *Advanced Sensors & Calibration*

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