DiSens MD

Digital Accelerometer

- *Triaxial Accelerometer*
- *Digital Output: EtherCAT*
- *Daisy Chaining*
- *Protection Class IP20*
- *Software Package included*

ASC DiSens® MD

The ASC DiSens® series is a novel ASC sensor solution with digital interfaces. It combines high-quality sensors with an integrated data acquisition system, so that separate data acquisition is no longer necessary.

Due to the transmission of digital data, many interferences no longer play a role, which is particularly important for long cable lengths. The series begins with the new MD model, a triaxial digital accelerometer. The sensor has 2g, 4g and 8g measurement ranges, which are set via the integrated software.

The acceleration values are transmitted as raw data via the EtherCAT protocol to a host system. There they are processed by a separate analysis software. With an active power supply, up to 12 devices can be connected via daisy chaining.

The included DEWESoft X3 software package provides many advantages for the daily test and measurement work such as time savings and easy recording, analysis and reporting.

Features

- *Measurement Ranges: ±2g, ±4, ±8g*
- *DC Response*
- *High Resolution*
- *EtherCAT*
- *Noise Density: 25 µg/srt(Hz)*
- *High Shock Limit*

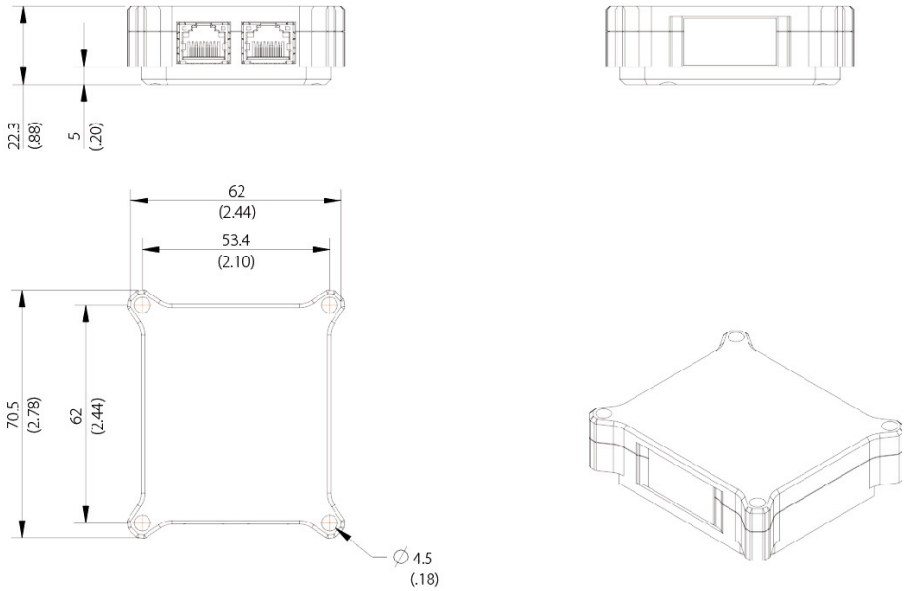
Options

- *Customised Cable Length*

Applications

- *Structural Health Monitoring*
- *Bridge Monitoring*
- *Seismic Measurements*
- *Mobile Network Antenna Structural Monitoring*
- *Vibration Monitoring on Construction Machines*
- *Condition Monitoring on Machines and Equipment*

Mechanical Drawing



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Typical Specifications

ASC DiSens® MD

Measurement Range ***±2g , ±4g, ±8g (to be set via the integrated software)***

SPECIFICATIONS OF THE MEMS ACCELEROMETER

	Min.	Typ.	Max.	Unit
-3 dB bandwith		1000		Hz
Noise density (±2g)		25		µg√Hz
Residual noise (±2g @ 50Hz bandwith)		100		µg RMS
Residual noise (±2g @ 125Hz bandwith)		150		µg RMS
Offset error	-75	±25	+75	mg
Offset temp. drift (-40°C to +125°C)	-0.15	±0.02	0.15	mg/degC
Sensitivity temp. drift (-40°C to +125°C)		±0.01		%/degC
Lineartity error (-1g to +1g)		0.1		%FS
Crossaxis sensitivity	-1		+1	%
Sample rate			4	kHz

GENERAL SPECIFICATIONS OF THE ASC DISENS MD

Digital Interface	EtherCAT
Interface Connectors	RJ45
Power Consumption	1300 mW
Supply Voltage	12-48 V
Operating Temperature	-20 to +60 °C
IP Rating	IP20

PHYSICAL

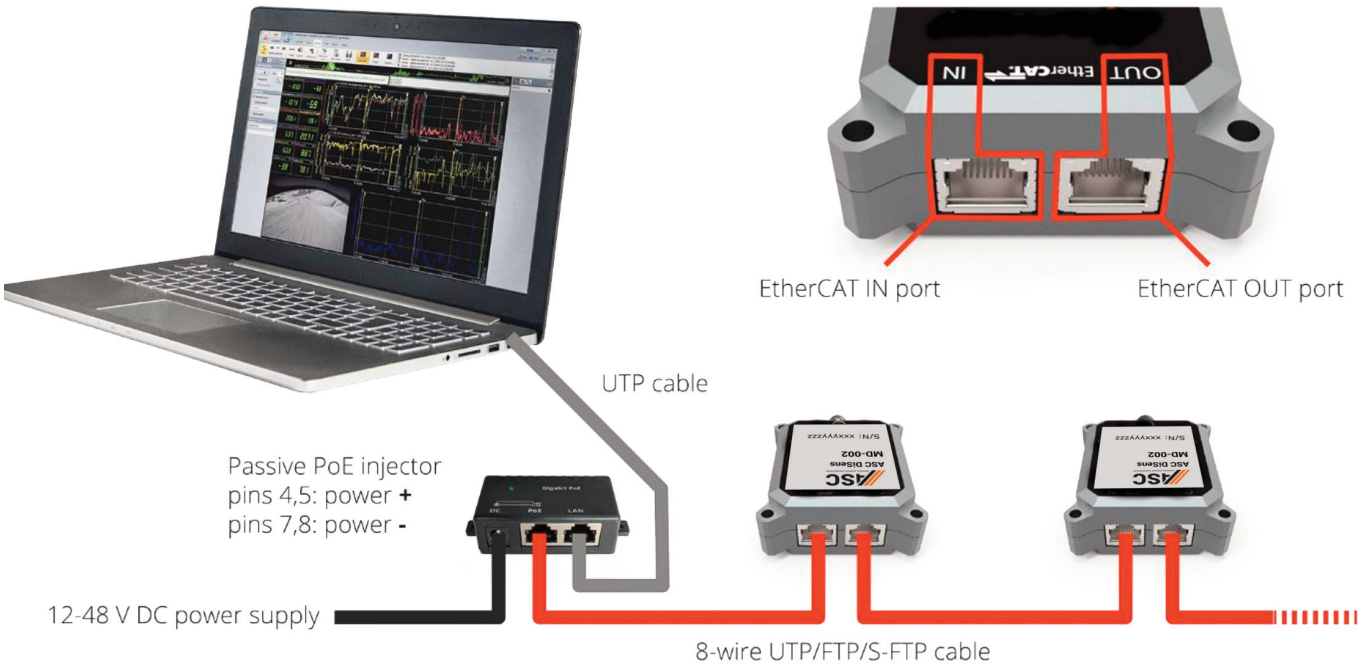
Case material	Aluminium
Mounting	4 x M4 screws
Weight (without cable)	105 gram
Cable	SFTP, CAT5e, CAT6

Typical Specifications

ASC DiSens® MD

INSTALLATION: DAISY CHAINING

Devices are daisy chained with a standard network cable. It is recommended that the cable is shielded (SFTP, CAT5e) and has a minimum 24 AWG wire thickness. The cable must have 4 wire pairs. The maximum distance node-to-node is 50m. Passive PoE power injector is necessary for merging the EtherCAT signal and power into a single cable.



Power Supply Voltage	Cable Length (Device-To-Device)	Cable Size	Max. Number of Devices from a Single Power Supply
24V	1 m	AWG 24	8
24V	50 m	AWG 24	4
48V	1 m	AWG 24	12
48V	50 m	AWG 24	10

ORDERING INFORMATION

Model number
ASC DiSens® MD-D3

QUALITY

- *ASC GmbH is ISO 9001:2015 certified.*
- *All ASC products are CE-compliant.*

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