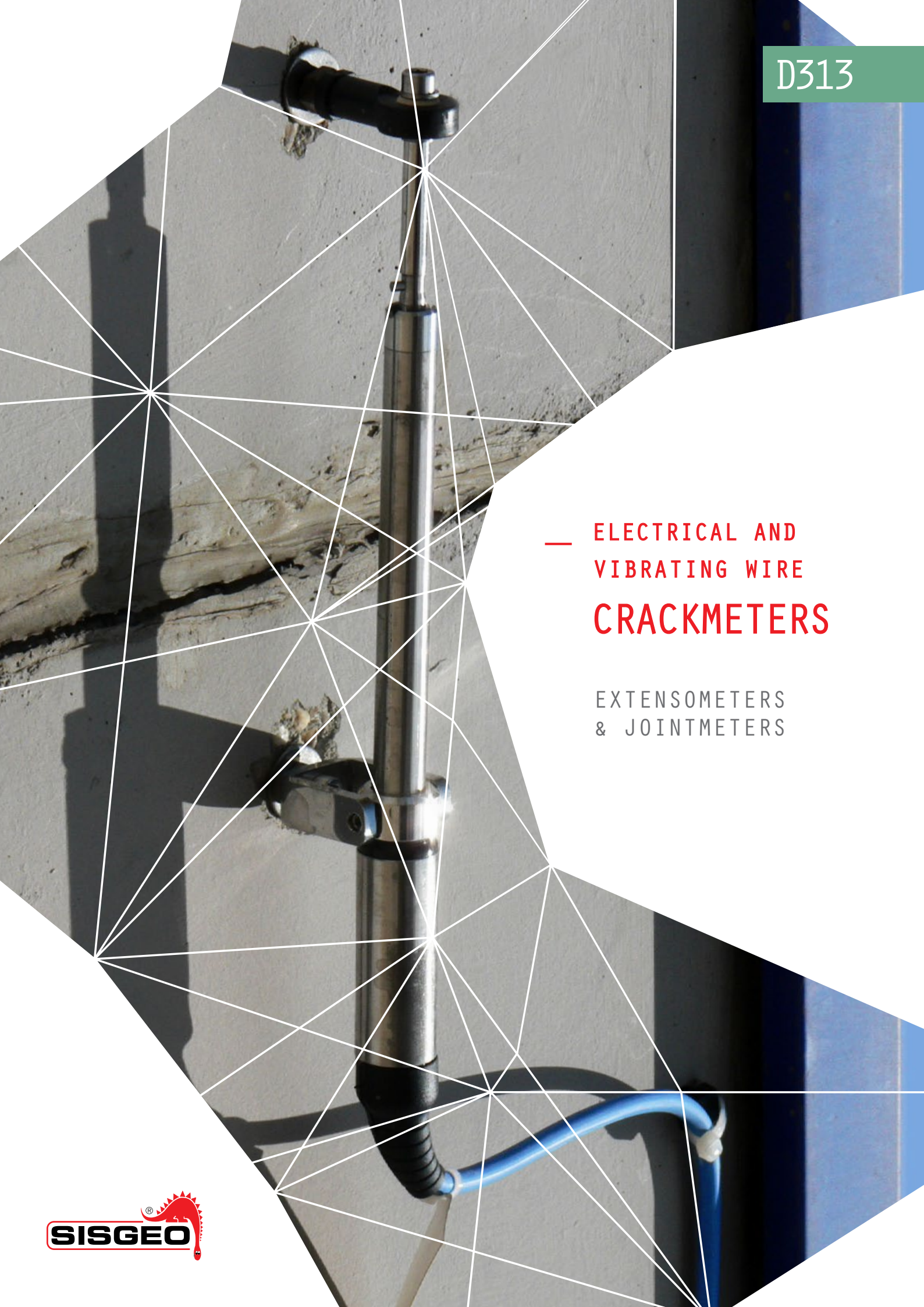


D313

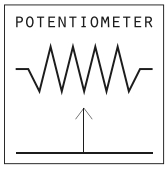
ELECTRICAL AND
VIBRATING WIRE

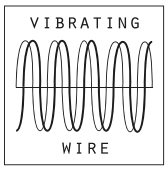
CRACKMETERS

EXTENSOMETERS
& JOINTMETERS

SISGEO®

ELECTRICAL AND VIBRATING WIRE
CRACKMETERS





Crackmeters are intended to monitor movements across surface joints or cracks, mainly in concrete structures or rocks.

Crackmeter consists of a vibrating wire or potentiometer displacement transducer housed in a stainless steel telescopic body with two anchoring points.

These anchors have self-lubrificating ball joints allowing lateral movements up to ±10° in the orthogonal planes (Y - Z axis) not influencing the operation of the jointmeter.

APPLICATIONS

- Cracks on concrete structures or rock
- Structural joints like in concrete dams
- Displacements on pile bearing
- Monitoring of rock faults

FEATURES

- 3-D mounting kit available for triaxial displacement monitoring
- Ball joints allow small lateral movement
- Suitable for long term monitoring

CE *Meet the essential requirements of the EMC Directive 2014/30/EU*

D313_EN_14_07/2019

VIBRATING WIRE CRACKMETERS

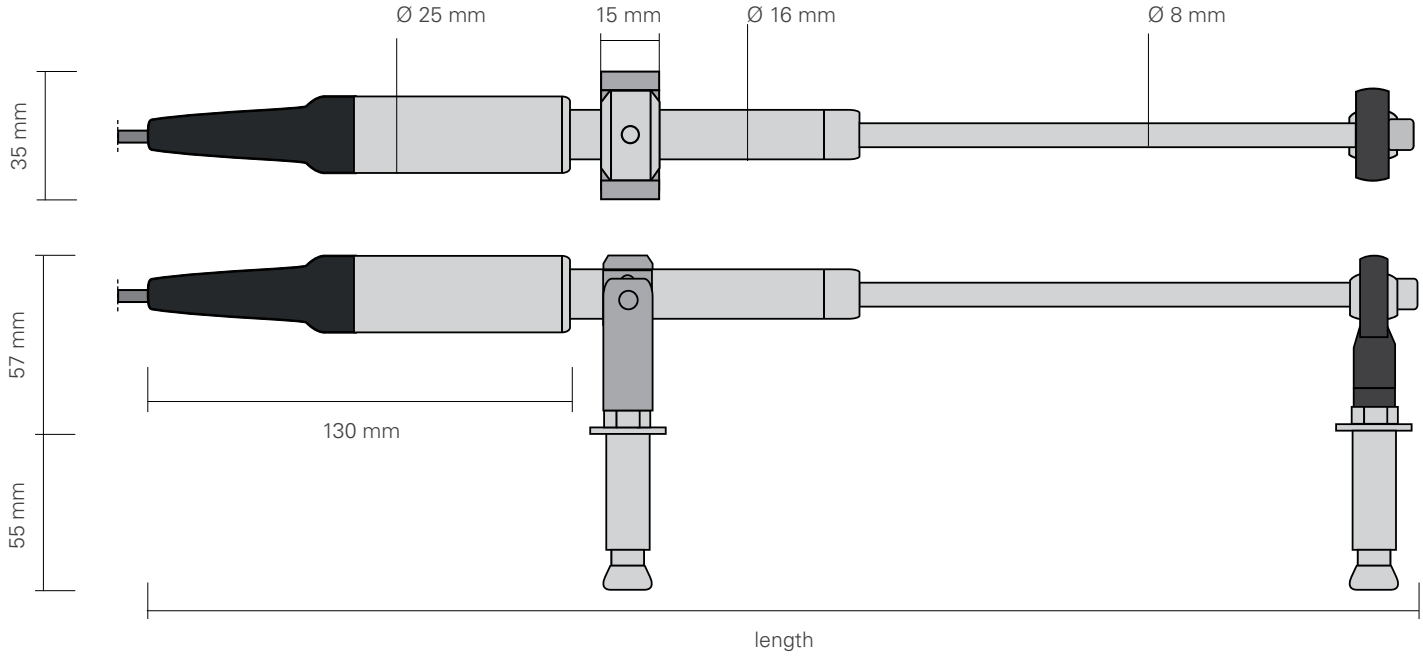
MODEL	0D313S010VW	0D313S025VW	0D313S050VW	0D313S100VW	0D313S150VW
Measurement principle	vibrating wire with built-in thermistor				
Range	0 - 10 mm	0 - 25 mm	0 - 50 mm	0 - 100 mm	0 - 150 mm
Accuracy Pol. MPE[1]	< ±0.50% FS	< ±0.50% FS	< ±0.30% FS	< ±0.30% FS	< ±0.30% FS
Output signal	frequency (displacement), resistance (thermistor)				
Sensitivity [2]	see calibration report				
Displacement resolution	0.02% FS (with Sisgeo readout)				
Typical frequency range [3]	1500 - 2800 Hz				
Power supply	-				
Operating temperature	-20°C +80°C				
Anchors type	expanding shell anchor Ø 14 mm, 55 mm long				
Length (compressed)	285 mm	293 mm	360 mm	460 mm	621 mm
Length (extended)	295 mm	318 mm	410 mm	560 mm	771 mm
Material	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
Weight	0.5 kg	0.5 kg	0.6 kg	0.7 kg	0.8 kg
Protection	IP68 up to 100 kPa (tested in a static condition, upper value on request)				
Signal cable	0WE104K00ZH				
Max. distance to datalogger [4]	1000 m (for more information see FAQ#77)				

(1) MPE is the Maximum Permitted Error on the measuring range (FSR). In the Calibration Report, the accuracies of the gauge are calculated using both linear regression and polynomial correction (≤ Pol. MPE)

(2) Sensitivity is a specific paramenter different for every gauge. The sensitivity is calculated during gauge calibration test and inserted into the calibration report. (3) The expressed frequency range could have a ±10% variation

(4) Refer to FAQ section of Sisgeo website:www.sisgeo.com/assistance/faq.html

PHYSICAL FEATURES



D313_EN_14_07/2019

ELECTRICAL CRACKMETERS

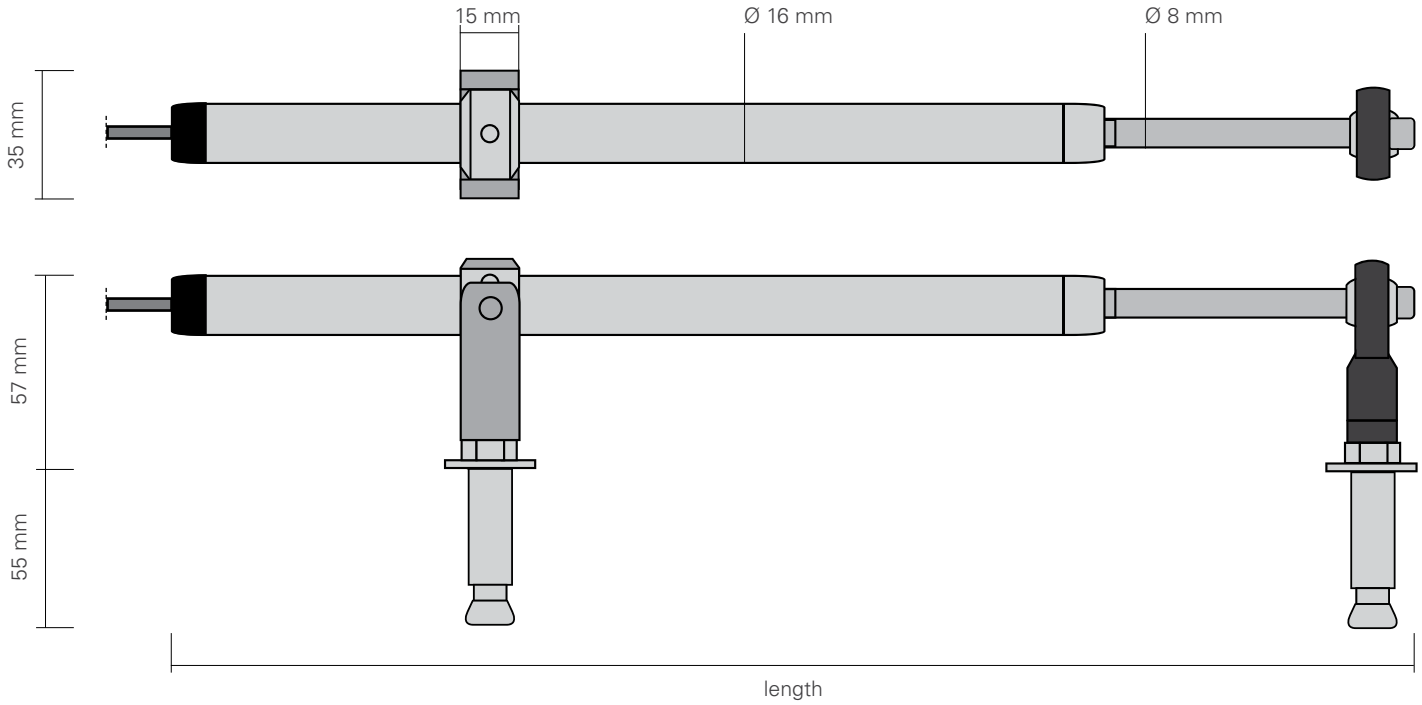
MODEL	0D313SA1000	0D313SA2500	0D313SA5000	0D313SAE100	0D313SAE150	0D313SAE200
Measurement principle	linear potentiometer					
Range	10 mm	25 mm	50 mm	100 mm	150 mm	200 mm
Accuracy Pol. MPE (1)	< ±0.50% FS	< ±0.30% FS	< ±0.20% FS	< ±0.20% FS	< ±0.15% FS	< ±0.15% FS
Output signal	4-20 mA current loop (voltage on request)					
Resolution	0.01 % FS (with Sisgeo readout)					
Power supply	12 - 24 V DC					
Sensitivity (2)	see calibration report					
Operating temp.	-20°C +60°C					
Anchors type	expanding shell anchor Ø 14 mm, 55 mm long					
Length (compressed)	334 mm	334 mm	384 mm	484 mm	584 mm	684 mm
Length (extended)	344 mm	359 mm	434 mm	584 mm	734 mm	884 mm
Material	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
Weight	0.5 kg	0.5 kg	0.6 kg	0.7 kg		0.9 kg
Protection	IP68 up to 100 kPa (tested in a static condition, upper value on request)					
Signal cable	0WE102KEOZH					
Max. distance to datalogger (3)	1000 m (for more information see FAQ#77)					

(1) MPE is the Maximum Permitted Error on the measuring range (FSR). In the Calibration Report, the accuracies of the gauge are calculated using both linear regression and polynomial correction (≤ Pol. MPE)

(2) Sensitivity is a specific paramenter different for every gauge. The sensitivity is calculated during gauge calibration test and inserted into the calibration report.

(3) Refer to FAQ section of Sisgeo website: www.sisgeo.com/faq

PHYSICAL FEATURES



D313_EN_14_07/2019

ACCESSORIES AND SPARE PARTS

Y-AXIS FIXING KIT
OD31Y1DTE00

Y-axis fixing kit is composed by a stainless steel "L" shaped plate (50x50x150 mm) supplied with screws, nuts and expanding shell anchors, allowing jointmeter installation in Y direction.

Z-AXIS FIXING KIT
OD31Z1DTE00

Z-axis fixing kit is composed by two stainless steel "L" shaped plates (50x60x200 mm and 50x50x65 mm) supplied with screws, nuts and expanding shell anchors, allowing jointmeter installation in Z direction.

EXTENSION ROD
OD313A15000

Stainless steel extesion rod for installation of anchors 150 mm further apart.

JUNCTION BOX
OEPD000000

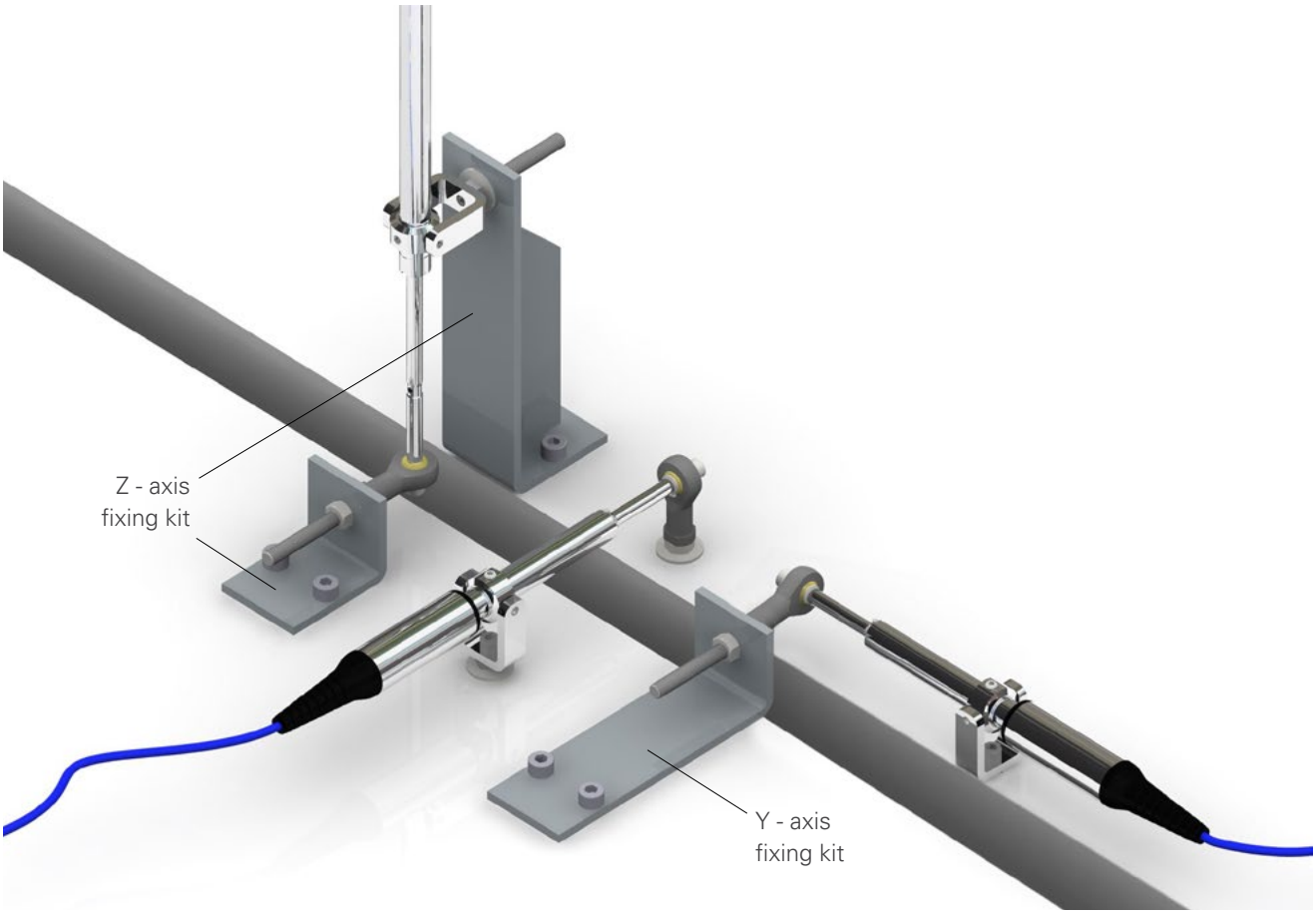
IP67 plastic junction box, available in different models to connect up to 10 crackmeters cables.

8 PAIRS MULTICORE CABLE
OWE1160LSZH

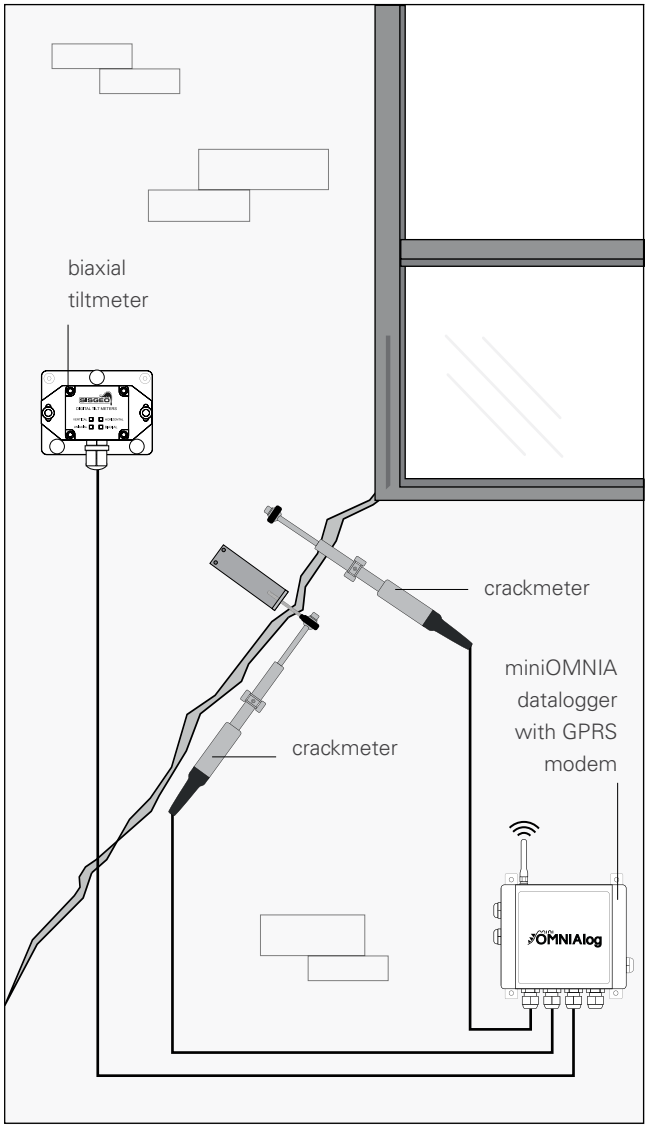
Multicore cable (16 wires, 24 AWG) with LSZH M1 external jacket for grouping up to 4 vibrating wire jointmeters or 8 electrical jointmeters.

16 PAIRS MULTICORE CABLE
OWE1320LSZH

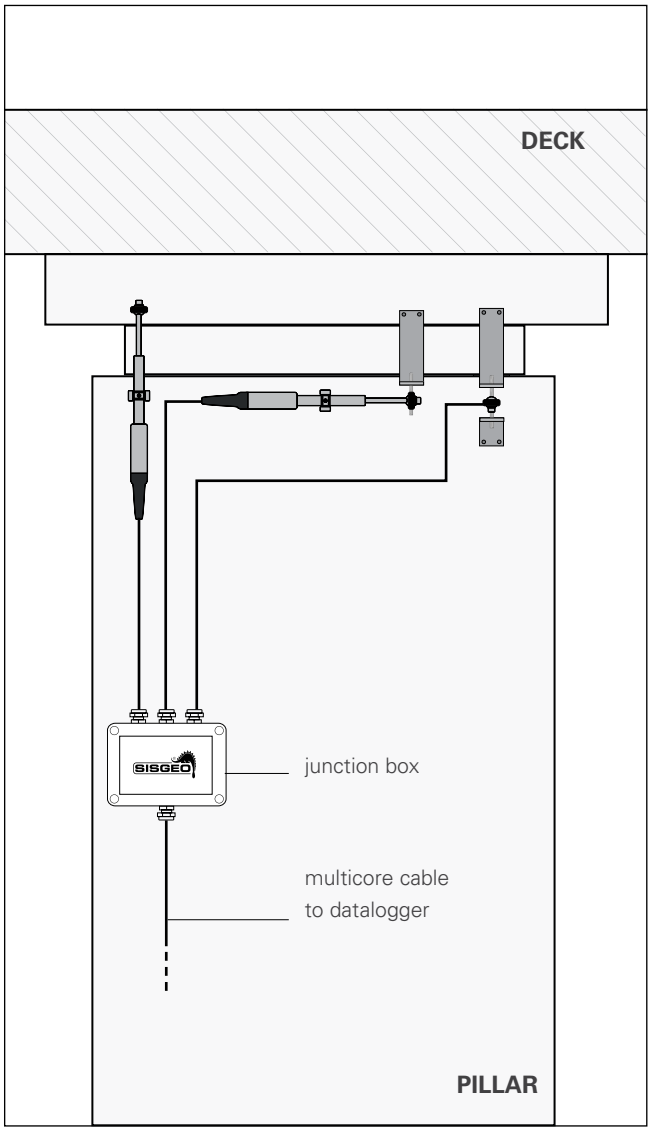
Multicore cable (32 wires, 24 AWG) with LSZH M1 external jacket for grouping up to 4 vibrating wire jointmeters or 8 electrical jointmeters.



ANALOGUE WIRELESS STRUCTURAL MONITORING



EXAMPLE OF 3-D APPLICATION PILE BEARING DISPLACEMENT



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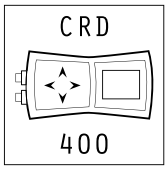

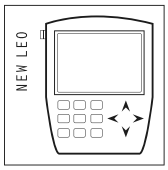

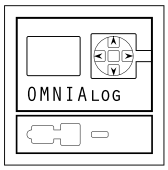

Refer to separate datasheets for further information.

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TECHNICAL ASSISTANCE

SISGEO offers customers e-mail and phone assistance to ensure proper use of instruments and readout and to maximize performance of the system.

For more information, email us: *assistance@sisgeo.com*