Velocity Transducer
CV 211

Characteristics

- Vibration Monitoring for low frequencies
- Hydraulic and steam turbine application
- Vertical to horizontal operation
- Self-generating transducer
- Fully Sealed
- Radial or axial cable exit

General

The velocity transducer CV 211 is suited to the special requirements of hydraulic turbomachinery in an environment with low speed range, between 60 and 1000 rpm.
The relatively high output signal reduces the additional effort for the signal transmission especially over longer distances. The usable frequency range without linearization is between 10 and 1000 Hz, the frequency range can be extended to 3 Hz through frequency linearization.
Attention should be paid to the nominal resonant frequency of the measuring system which is at 8 Hz.

The velocity transducer is a very sensitive vibration sensor with a rugged design that is amongst others oil-proof, waterproof and vacuum resistant. A stainless steel case permits use for very harsh industrial environments.

Functional description

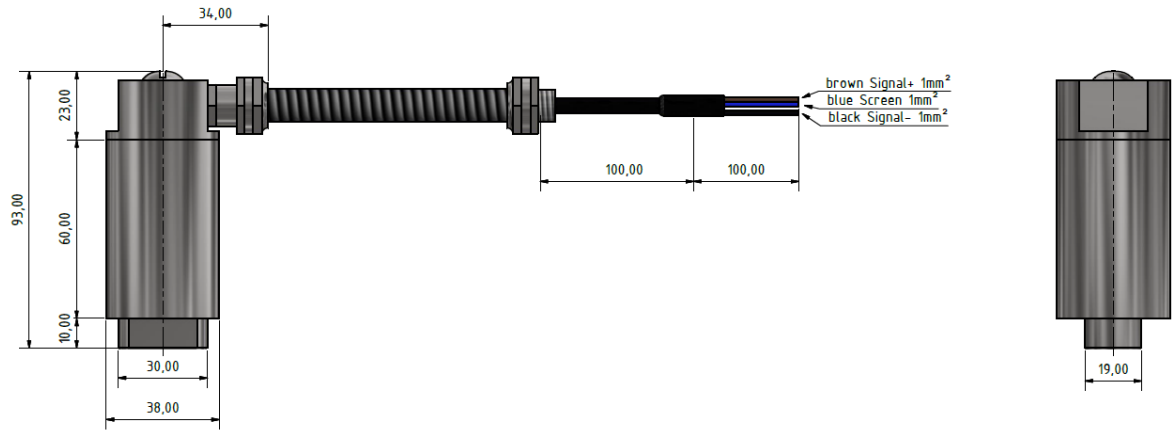
The velocity transducer CV211 is based on the electrodynamic principle. The sensing element of the transducer is a coil moving around a permanent magnet, which produces a voltage directly proportional to the vibration velocity. The signal is generated without external power source.

Technical Data

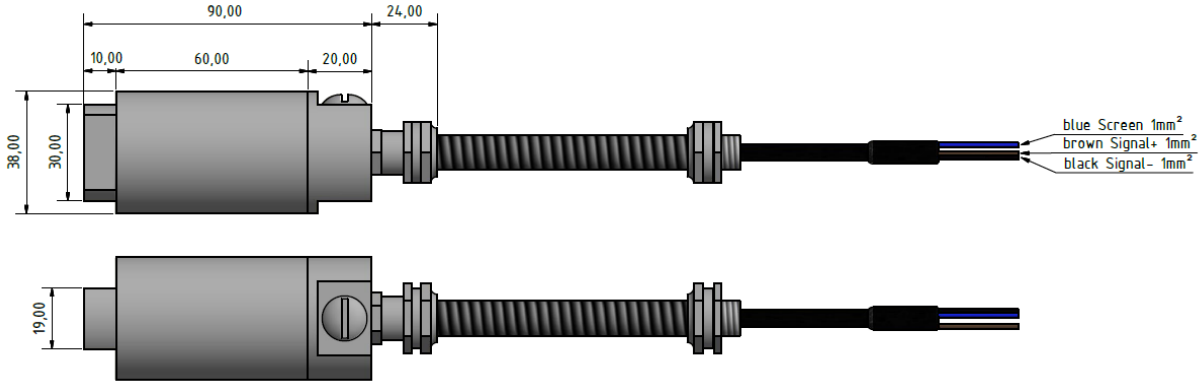
Measuring principle	electrodynamic; no external power source required
Measuring direction	Vertical or horizontal (please take into account when ordering)
Signal transmission	2-wire system insulated from casing
Frequency range	10 … 1000 Hz 3 … 1000 Hz with external Frequency linearization
Output signal	23 mV/mm/s RMS +/- 10 %
Transverse sensitivity	< 5 %
Coil resistance	300 Ohm
Maximum displacement	2 mm p - p
Nominal resonant frequency	8 Hz +/- 0,5 Hz
maximum ambient temperature	- 65 to + 120 °C (case) - 25 to + 80 °C (flexible metal sheathe) - 55 to + 105 °C (lead)
Protection Class	IP 66 according to IEC529 standard (DIN 40050)
Housing material	Stainless steel casing 1.4305
Dimensions	93 x 38 mm
Weight	approx. 600 g, without cable
Mounting	Mounting base M10x1.5, 10mm deep, key width 19
Connection cable	Liycy 2 x AWG 20, shielded Outer diameter 5,1 mm ± 0,15 mm Minimum bending radius 75 mm Screen not connected to housing unit
Cable protection	Protective tube galvanized steel, insulated, black Outer diameter 11 mm Minimum bending radius 50 mm

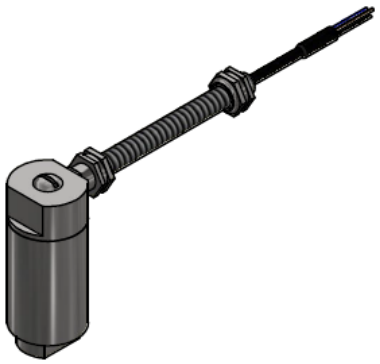
Drawing

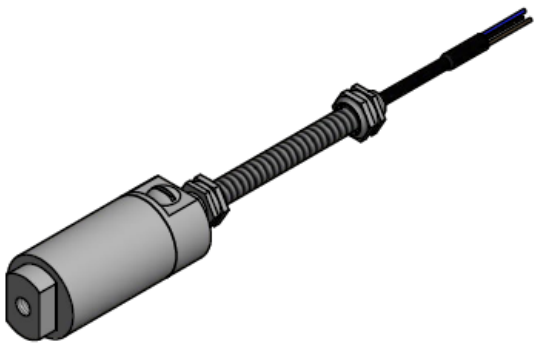
radial



axial







Order Information

IST – CV211 – X1 – X2 – X3 – X4

Measuring direction (X1)	
Horizontal	H
Vertical	V

Cable Exit (X2)	
Axial	A
Radial	R

	Cable length (X3)
030	3m
050	5m
100	10m
200	20m
999	Special requests

	Cable protection length (X4)
000	0m (without protection)
030	3m
050	5m
100	10m
200	20m
999	Special requests

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