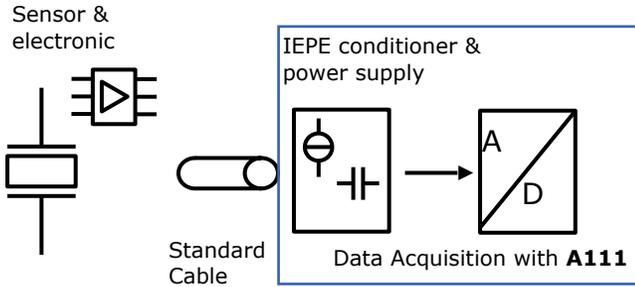


IEPE (PiezoStar, Piezotron, DeltaTron, ICP®, ISOTRON®)
(Integrated Electronics PiezoElectric)

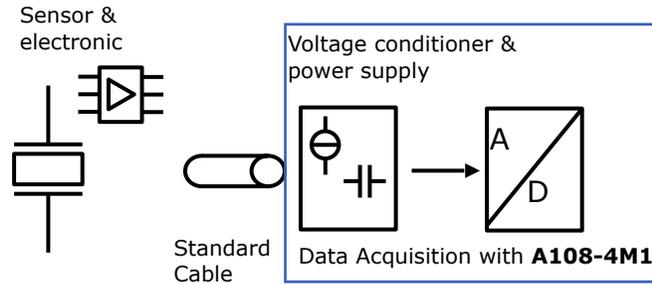
Q.Series X A111



- Sensor contains internal charge to voltage converter
- Standard cable for sensor connection
- DAQ system with integrated IEPE power supply (e.g. 4mA const.) required for operation
- Only dynamic measurements possible
- Measuring range is fixed
- Temperature range limited with integrated electronics

MEMS (K-Beam)
(Micro Electro Mechanical System)

Q.Series X A108-2M3 & A108-4M1

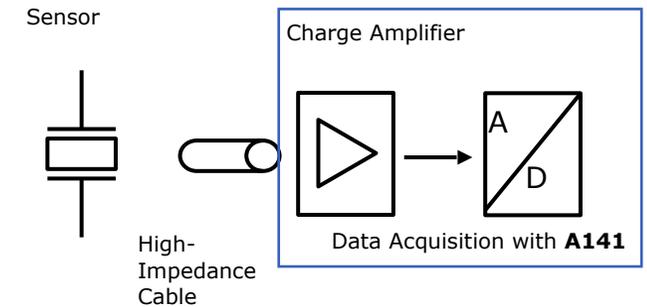


- Sensor contains internal charge to voltage converter
- Standard cable for sensor connection
- DAQ system with integrated power supply (e.g. 10-30V unregulated) required for operation
- Quasi-static (DC) measurements possible
- Measuring range is fixed
- Temperature range limited with integrated electronics

PE
(PiezoElectric)

Q.Series X A141

Gantner
instruments



- Sensor does not contain electronics
- Very wide temperature range
- Very broad measuring range
- Quasi-static up to very dynamic measurements possible
- High impedance cable required
- Charge amplifier required