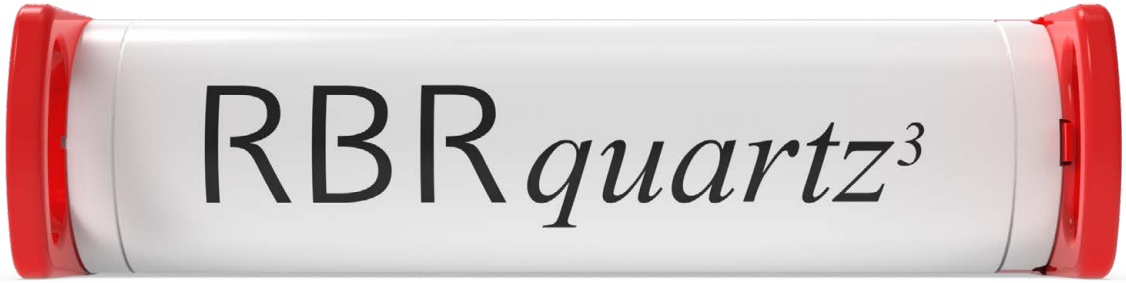


RBR

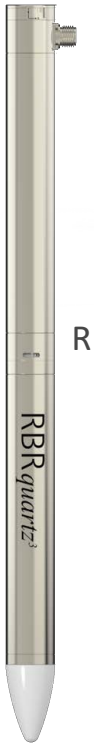
rbr-global.com

Introducing the RBR*quartz*³ Q|plus pressure logger

Greg Johnson, PhD
President, RBR

April 2021

The RBR*quartz*³ family

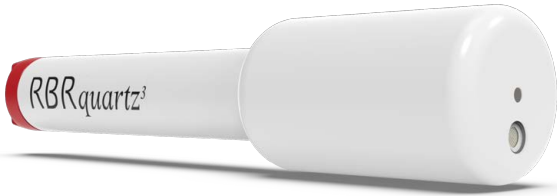


RBR*quartz* ³ APT

RBR*quartz* ³ BPR

RBR*quartz* ³ BPR|zero

Deep BPRs



RBR*quartz* ³ Q

RBR*quartz* ³ Q|plus

Shallow

RBR

Impetus to develop the RBR*quartz*^{3} Q|plus

Long-term high accuracy and resolution measurements for sea-level, wave, and tide observations

Q|plus key features

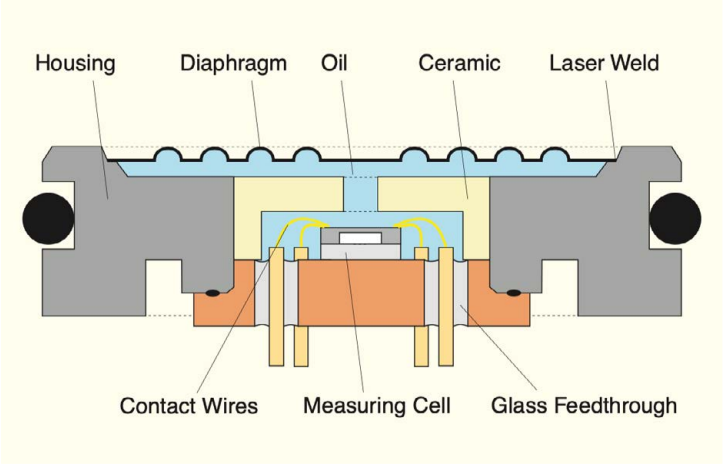
- Quartz pressure sensor
- Measurement specs
- Physical specs
- Long-term deployment
- Ease of use

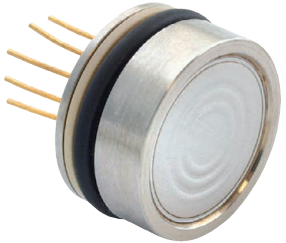
RBR

Quartz pressure sensor

Compare: standard piezo-resistive pressure gauges

- Economical
- Moderate accuracy
- Moderate resolution





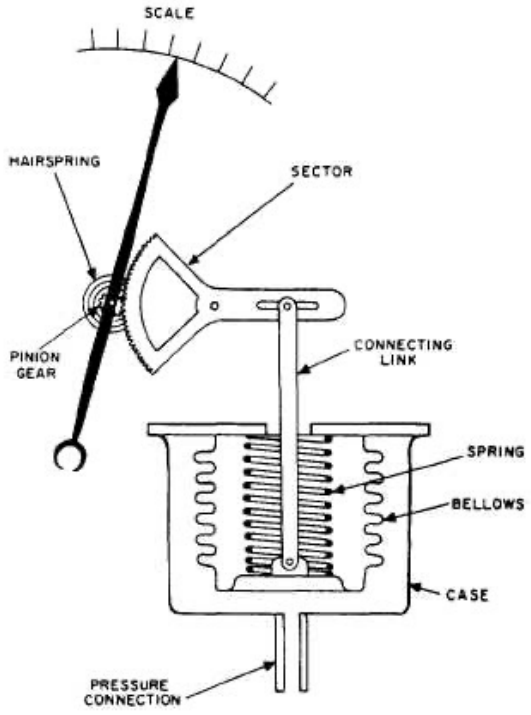
RBR

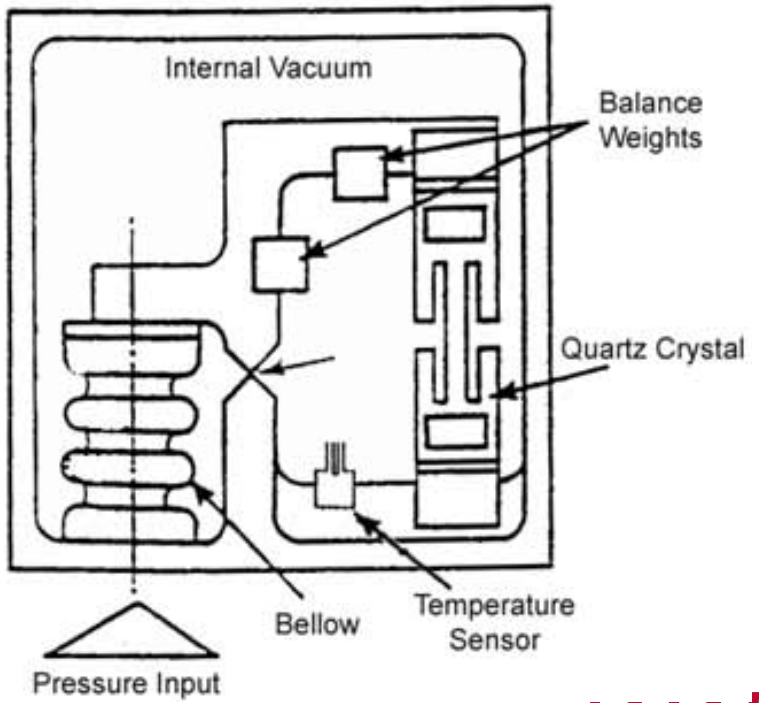
Compare: quartz pressure gauges

- Less economical
- High accuracy
- Resolution a function of integration time

RBR

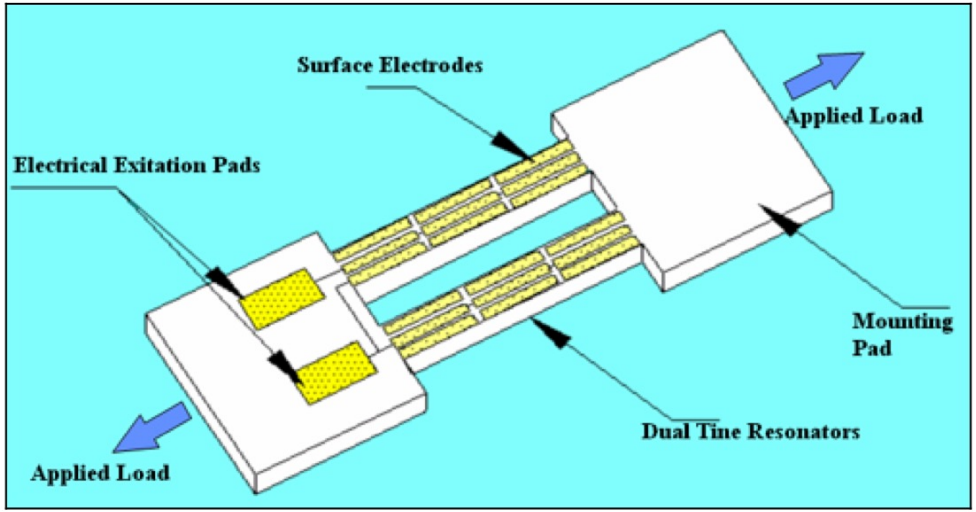
Bellows quartz transducer – accurate high-pressure measurements



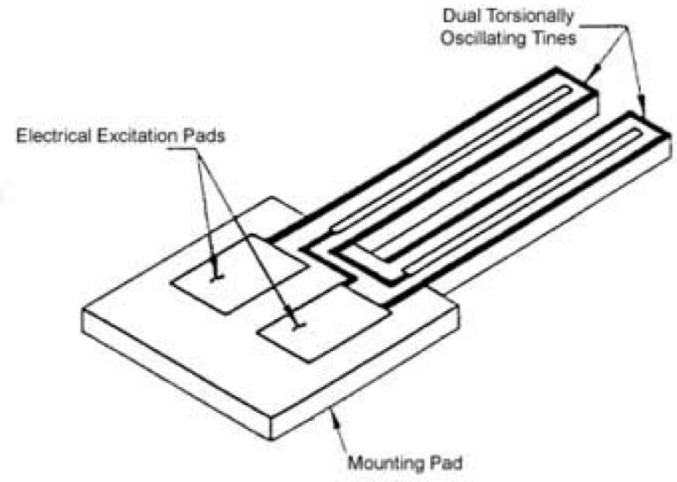


RBR

Quartz crystal sensors



Force-Sensing Quartz Crystal



Temperature-Sensing Quartz Crystal

RBR

Measurement specifications

RBR*quartz*³ Q|plus measurement specifications

Depth	
Range:	10 / 20 / 55 / 125 / 190 / 260 dbar
Initial accuracy:	±0.01% FS (full scale)
Resolution:	100ppb (at 16Hz sampling rate)

Marine temperature	
Range:	-5 to 35°C
Accuracy:	±0.002°C
Time constant:	30s (embedded)
Typical stability:	±0.002°C/year

RBR

Physical specifications

RBR*quartz*³ Q|plus physical specifications

Physical	
Internal power:	24 D cells
External power:	4.5-30 VDC
Communication:	USB-C or RS-232/485
Size:	563mm x Ø140mm
Weight (with batteries):	11.7kg in air; 2.8kg in water

RBR

Long term deployments

RBR*quartz*³ deployment endurance

Speed	Burst samples	Interval	Battery	Deployment time	Samples
4Hz	4096	120 min	Lithium thionyl chloride	~ 5 years	88M
			Alkaline	~ 5 years	88M
1s	512	30 min	Lithium thionyl chloride	~ 10 years	88M
			Alkaline	~ 4 years	33M
1s	-	Continuous	Lithium thionyl chloride	~ 3 years	88M
			Alkaline	~ 1 year	33M

RBR

Ease of use

RBR*quartz*³ ease of use

RBR

Thank you!

Contact us

rbr-global.com

info@rbr-global.com

+1 613 599 8900

RBR