

QV/02 In-line Charge to Voltage Converter

x 0.1, x 1 and x 10 gain options.

In-line charge to voltage converters provide users with the ability to use charge accelerometers with all their benefits of high temperature, a robust build, whilst also able to use the built in IEPE signal conditioning power available in many off-the-shelf vibration controller/analysers and data acquisition front ends.

This miniature two wire charge/voltage converter; low impedance line driver able to maintain data integrity over distances up to several hundred meters. Weighing in at just 20.6gm and only 40mm in length the QV/02 works up to 125°C with microdot to BNC connections.

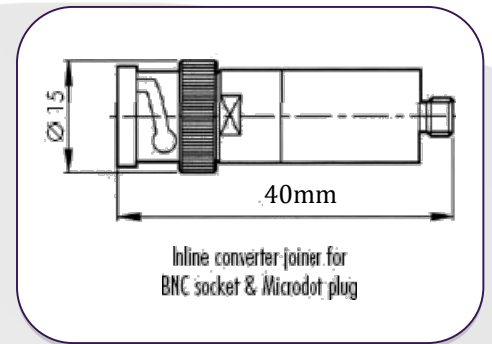
The QV range can be supplied with a number of different gain settings which are factory set, x0.1, x1 or x10.

The QV can be installed anywhere in the signal line between the accelerometer and the acquisition front end using low noise cable between the QV and the accelerometer to minimise triboelectric noise, however it is recommended to keep cable lengths as short as possible between QV and accelerometer to minimise noise and capacitive loading.

Voltage sensitivity can be calculated from:
 $(\text{pC/g sensitivity}) \times (\text{QV gain}) = \text{Voltage sensitivity}$
 e.g. $(30\text{pC/g}) \times (\text{x1 gain}) = 30\text{mV/g output}$



QV/02



Options:

Gain 0.1mV/pC
 Gain 1mV/pC
 Gain 10mV/pC

Cable Requirements:

Please ensure low noise cables are selected to use between the signal conditioning unit and charge amplifier.

Type	QV/02/0.1	QV/02/1	QV/02/10
Gain, mV/pC±2% @500Hz	0.1	1	10
Max input charge	70nC	7nC	0.7nC
Input capacitive loading, nF/1% gain reduction	1	1	1
Noise level, pC r.t.i. i/p cap, 1nf	0.03	0.01	0.005
Peak O/P voltage	7VAC		
Bandwidth (-3dB)	1Hz / 100kHz	1.5Hz / 100kHz	5Hz / 100kHz
Startup time, secs	≤1-25	≤1-25	≤1-25
Supply voltage	+18V / 35VDC for 7VAC pk. O/P		
Supply current	2-20mA		
Operating temperature range	-50°C / +125°C		
Case material	Stainless Steel		
Case seal	Epoxy		
Weight	20.6gm		
I/P, O/P connectors	Microdot I/P, BNC Output		

Please note: For information and reference only. Data should not be used as pass/fail criteria for calibration purposes

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DJB Iss.4.2020



ISO 9001 – 00025363

A UK company with UK-based manufacturing, assembly and calibration in-house.