DAQP-CHARGE-B

Isolated static and dynamic charge module

- *Input ranges:* *±100 to ±1 000 000 pC*
- *Bandwidth:* *100 kHz*
- *Isolation:* *350 V_{DC}*
- *Signal connection:* *BNC socket*

DAQP-CHARGE-B

Module specifications

	DAQP-CHARGE-B	
Input ranges	±100, ±500, ±2 000, ±10 000, ±40 000, ±200 000, ±1 000 000 pC	
Range selection	Push button or software	
Gain accuracy	0.5 % of range (1 % of range for 100 and 500 pC)	
Gain linearity	±0.05 %	
Bandwidth (-3 dB)	100 kHz (±1.5 dB @ f0)	
Filters (lowpass)	10 Hz, 30 Hz, 100 Hz, 300 Hz, 1 kHz, 3 kHz, 10 kHz, 30 kHz, 100 kHz (±2 dB @ f0)	
Filter selection	Push button or software	
Filter characteristics	Bessel or Butterworth (software programmable) 40 dB / decade (12 dB / octave)	
Coupling	AC or DC software selectable	
Time constant / Highpass filter 100 pC to 2000 pC 2001 pC to 40000 pC 40001 pC to 200 kpC	AC coupled 2 sec / 0.7 Hz 40 sec / 3.9 mHz 1000 sec / 0.16 mHz	DC coupled @ 25°C; max. 60 % relative humidity >20000 sec >50000 sec >70000 sec
Drift input current @ 25 °C	< ±0.03 pC/s	
Temperature range storage	-30 °C to +85 °C (-22 °F to 185 °F)	
Temperature range operating	-5 °C to +60 °C (23 °F to 140 °F)	
Relative humidity	0 to 60 % at 60 °C (140 °F), non-condensing	
Offset drift	50 ppm of Range/°K	
Amplifier reset	Push button or software	
Offset after reset	±2 mV or ±1 pC (greater value is valid)	
Typ. SNR @ max. bandwidth Range 100 pC Range > 2000 pC	 76 dB (82 dB @ 30 kHz / 85 dB @ 10 kHz) 81 dB (89 dB @ 30 kHz / 93 dB @ 10 kHz)	
Ouput noise @ 100 kHz @ 30 kHz	 0.3 mV_{RMS} + 0.01 pC_{RMS} 0.12 mV_{RMS} + 0.008 pC_{RMS}	
Cable noise	< 10^{-5} pC_{RMS}/pF	
CMR	< 0.02 pC/V (difference between input and output ground)	
Isolation	350 V_{DC}	
Input overvoltage protection	1 kV ESD	
Output voltage	±5 V	
RS-485 interface	Yes	
Power supply voltage	±9 V_{DC} (±1 %)	
Power consumption	1.5 W to 3.5 W (depending on signal range and frequency)	