DURAG GROUP

5705
Faraday Cup Electrometer (FCE)

The reliable reference for nanoparticle counting

- SI traceable reference
- No consumables

GRIMM AEROSOL TECHNIK

Features

- All in one, ready to use solution together with GRIMM 5706 DMA controller
- Fast response time and data sampling rate up to 16 Hz
- Detection of positively and negatively charged particles
- Capable of handling various flowrates
- Sensitivity: 0.1 fA at 1 Hz
- Rinsing air design to minimize leakage currents

Benefits

- SI traceable reference
- High precision at low and high currents
- No consumables
- Rugged, compact and reliable
- GRIMM 5475 nano software for Counters

Technical data

Detector type	Faraday Cup Electrometer
Sensitivity	0.1 fA at 1 Hz
Noise level	0.35 fA
Maximum current	± 4 000 fA
Maximum particle concentration	1.5 x 10^6 singly charged p/cm^3
Response time	t_{10} … t_{90}: 200 ms
Feedback resistor	1 TΩ ± 10% (measured with an accuracy of 1%)
Sample flow rate	1 … 5 l/min
Rinsing air flow rate	0.6 l/min

Power supply	12 VDC ± 10% (< 100 mA)
Output	3x ± 0 … 10 V
Gains	G1 = ± 4 fA/V G2 = ± 40 fA/V G3 = ± 400 fA/V
Operating conditions	▪ Ambient temperature: 0 … 40 °C (32 … 104 °F) ▪ Ambient humidity: 0 … 95% RH, non-condensing ▪ Absolute pressure range: 600 … 1 100 mbar
Dimensions (h x w x d)	19 x 9 x 9 cm (7.5 x 3.5 x 3.5 inch)
Weight	1.36 kg (3.0 lbs)

FCE in SPMPS+E setup

FCE in SMPS+E with ESS setup

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