Integrated Detector for
Reduction and Oxidation

Specifications INTRO

General specifications

Power: 100-120/220-240 VAC, 50/60 Hz, max. 150 W
Operating mode: DC
Cell potential: between -1.5 and +1.5 V
Integrator: max/min range 10 µA/100 nA, max 10 or 1 V output
Recorder: max/min range 10 µA/100 pA, max 10 or 1 V output
autozero, maximum compensation:
oxidative mode: 8.5 or 35 nA (att 1); 850 or 3500 nA (att 100)
reductive mode: 85 or 120 nA (att 1); 8500/12000 nA (att 100)
offset: continuously adjustable between -0.15 and +0.15 V
event marker: 1 or 0.1 V
Oven: 100 W, length 40 cm, stable from 5°C above ambient, max 47.5°C, accuracy better than 0.5°C, stability better than 0.1°C; accommodates flow cell, column and the following options: Rheodyne injector, SSI pulse dampener and bulkhead unions
Resolution display: cell potential (1 mV), output voltage (10 mV), oven temperature (0.1°C) cell current (1, 0.1, 0.01 or 0.001 nA)
Noise: better than 3 pA with load of 0.5 µF (+ 300 MOhm) and 0.1 s filter, with 1 s better than 1 pA

Front panel

Frames
V_{cell}: cell on/off, ox/red indication, cell potential up and down
Display: V_{cell}, V_{out}, °C, I_{cell}, $I_{cell,HR}$
Heater: off, 25 - 47.5°C in 2.5°C increments, on/heating indication
Zero: on/set/off indication, mark
Filter: 0.1 - 5 s in 1, 2, 5 increments
Range: 0.01 - 10 nA/V, or 1 - 1000 nA/V in 1, 2, 5 increments, att 100 indication

Rear panel

Mains
Recorder (adjustable offset)
Integrator
I/O connector
Cell on, cell off, mark, zero on/set, zero off, range x1/x100, common, load/inject, T_{oven} (10 mV/°C), common
Dip switches
Recorder: max 10 or 1 V
Zero: low or high
Integrator: max 10 or 1 V
Mark: 1 or 0.1 V

VT-03 flow cell

Confined wall-jet design, working volume determined by spacer thickness and working electrode (WE) diameter
Spacers: 25, 50 or 120 µm, stackable
WE diameters: 0.5, 0.75, 1.00, 1.90, 2.00, 2.54, **2.74** and 3.00 mm
Cell volumes: 0.005 µl minimum
WE materials: glassy carbon, Pt, Au, Ag and Cu
Reference electrode: long-life Ag/AgCl, fully serviceable
Auxiliary electrode: stainless steel
Wetted materials/parts: Kel-F, FEP, Viton, working, auxiliary and reference electrode

Physical specifications

Dimensions: 44 (L) x 19 (W) x 26 (H) cm = 17.3" x 7.5" x 10.2"
Weight: 10.9 kg (24.0 lbs.)