

For sensitive and selective measurement in complex matrices

The image shows a Thermo Scientific UniMate 3000 UHPLC system. It is a compact, rectangular laboratory instrument with a white top and black base. On the left side, there is a control panel with the Thermo Scientific logo, three status LEDs (POWER, CONNECTED, STOP), and a blue LCD display. The display shows various parameters including flow rate (1.000 mL/min), pressure (11.1 MPa), and temperature (30.0 °C). The right side of the unit features the 'UniMate 3000' model name and the 'UHPLC' logo.

- **Front-panel display** – for easy monitoring of detector status to maximize uptime
- **Operating Modes** – select direct current (DC) or pulse (PAD) for flexibility
- **Four independent cell bays** – permit optimized fluidic configurations to maximize chromatographic performance, support multi-channel operation with up to 8 independent electrode channels
- **Integrated temperature controlled column compartment** – provides accurate column temperature control for reproducible chromatographic results without the need for a separate column oven

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Specifications

Detection Type	Electrochemical	
Operating Mode	Direct current (DC)	Pulse (PAD)
Potential Control	Up to 8 channels (maximum of 4 dual channel DC potentiostat modules supported – Thermo Scientific™ Chromeleon™ CDS Ver. 6.8 or 7.2 required)	Single channel (pulse potentiostat module required)
DC Potential Range	± 3300 mV settable in 1 mV steps (acceptable range determined by sensor type)	± 3.300 mV settable in 1 mV steps (per pulse segment)
Signal Range	10 pA to 100 µA	10 pA to 100 µA
Automatic Gain Ranging	Supported	Not supported
Noise Filtering	Advanced multi-level digital filtering	Settable: None, Low, Medium, High
Typical Noise	< 750 fA (0.75 pA) SimulatorRS	< 2 % of full-scale range
Data Output	200 Hz	
Autozero	Supported	
Column Compartment	Adjustable from ambient +5 °C to 40 °C	
Relay Outputs	Contact closure (3) to external devices	
Inputs	TTL (3): Cells OFF, Autozero and External Start	
Display	Multi-line LCD display indicates active system parameters, three LEDs for status monitoring	
Software Control	Chromeleon CDS (Release 7.2 SR-1 or Release 6.8 SR-13 required). Additional driver connection kits support operation through Waters Empower™ and Agilent OpenLab™ CDS software.	
PC Connection	All detector functions controllable via USB 2.0 through Chromeleon CDS system (cable provided)	
Rear Interface	AC plug, power switch, USB port, Digital I/O (3- TTL Inputs, 3- Relay Outputs)	
Power Requirements	85-260 V, 50/60 Hz, max. 150 W	
Dimensions	19(H) × 42(W) × 51(D) cm (7.6 × 16.5 × 20 in)	
Weight	12.5 kg (27.5 lbs) with 1 dual potentiostat module	
Certifications	UL, CUL, CE and cTUV	



Ordering information

Product	Cat. No.
UltiMate 3000 Electrochemical Detector (ECD-3000RS), potentiostat module(s) are chosen separately.	5070.0010
Options (choose from options list below)	
Dual channel DC potentiostat module (ordered separately)	6070.1400
Single channel Pulse potentiostat module (ordered separately)	6070.1420
Thermo Scientific™ nanoViper™ Fingertight Fittings Capillary Kit, EC System with ECD-3000RS	6041.5105
Thermo Scientific™ Biocompatible Viper™ Capillary Kit (MP35N), for UltiMate 3000 System with ECD-3000RS detector	6041.5107
Electrochemical Cells (choose cell from the list below)	
6011RS ultra Coulometric Analytical Cell for ECD-3000RS detector	6070.2400
6041RS ultra Amperometric Analytical Cell for ECD-3000RS detector	6070.3000
Working Electrodes (choose a working electrode from the list below)	
Glassy carbon, high efficiency, for 6041RS cell	6070.3200
Boron-doped diamond, for 6041RS cell	6070.3100
Gold, for 6041RS cell	6070.3300
Platinum, thin-film kit, for 6041RS cell	6070.3510

Find out more at thermofisher.com/ECdetection

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