

Secure and Precise

Plug & Play Sensors for Pharma



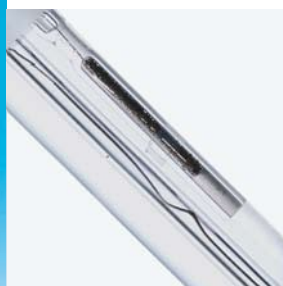
Security thanks to the Sensor Chip

Connect the Plug & Play electrode to the Excellence titrator and it is automatically recognized and ready for use. Electrode type, serial number, calibration data and validity period as well as working life stored in the Sensor Chip are automatically read-in and tracked in the Audit Trail of LabX titration PC software.



Utmost flexibility in pH measurement

Accurately measure pH in low-conductivity pharma water with the DGi117-Water, achieve reliable results quickly in demanding non-aqueous titrations of active substances with the DGi116-Solvent.



Ruggedness and durability

No contamination of the ceramic junction in sulfide or protein containing media or in Tris buffers thanks to the ARGENTHAL™ reference system plus silver ion trap in the DGi115-SC and DGi102-Mini.



Application versatility

Thanks to the pH glass membrane reference system redox titrations according to Pharmacopeia regulations with the DMI147-SC can be easily performed. Avoid waste of sample with the comprehensive portfolio of micro and semi-micro pH and metal electrodes.

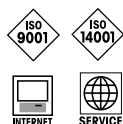


The new Plug & Play electrodes for titrations in Pharma

Safely located in the electrode head, the Sensor Chip of the new pH and metal electrodes stores all relevant sensor data. The sensor is unambiguously recognized by the Excellence titrator for immediate use. You are always sure that you are using the correct electrode in proper condition. The new Plug & Play electrodes provide utmost security, application versatility as well as ruggedness and durability to cope with the demanding applications in Pharma.

Selected Plug & Play sensors for titrations in Pharma

Electrode	Description	Features	Application examples
DGi117-Water	Plug & Play combined pH electrode with ground-glass sleeve junction and integrated temperature sensor for direct pH measurement and acid/base titrations with temperature measurement in aqueous solutions of low ion conductivity and low buffer capacity.	<ul style="list-style-type: none"> • Sensor Chip • Double junction construction • Fixed ground glass sleeve junction • Integrated Pt1000 temperature sensor • ARGENTHAL™ reference system for increased life span and heat resistance • Maintenance-free inner electrolyte (3 mol/L KCl electrolyte gel) • Variable bridge electrolyte to adapt electrode performance to the sample matrix (standard 1 mol/L KCl) • High performance gold shielding against electrostatic effects • Spherical glass membrane of low resistance 	<ul style="list-style-type: none"> • Acid-base titrations with temperature measurement in low conductivity water and low buffer capacity • pH measurement of Pharma water in stage 3 according to USP 26 <645>
DGi116-Solvent	Plug & Play combined glass pH electrode with a movable easy-to-clean sleeve junction for acid/base titrations in non-aqueous media.	<ul style="list-style-type: none"> • Sensor Chip • Movable glass sleeve junction • ARGENTHAL™/LiCl reference system • Refillable reference electrolyte: 1 mol/L LiCl in ethanol • High performance gold shielding against electrostatic effects • Spherical glass membrane of low resistance 	<ul style="list-style-type: none"> • Titrations using perchloric acid, cyclohexylamine and alcoholic HCl as titrants • Titrations using alcoholic KOH, NaOH, TBAOH and Na-methylate as titrants
DMi147-SC	Plug & Play combined platinum ring electrode for redox titrations at constant pH.	<ul style="list-style-type: none"> • Sensor Chip • Pure platinum ring sensing element • Maintenance-free reference system (bulb pH glass membrane) 	<ul style="list-style-type: none"> • Bromatometric, iodometric and cerimetric titrations according to European Pharmacopeia and USP
DMi148-SC	Plug & Play combined silver ring electrode for precipitation titrations at constant pH.	<ul style="list-style-type: none"> • Sensor Chip • Pure silver ring sensing element • Maintenance-free reference system (bulb pH glass membrane) 	<ul style="list-style-type: none"> • Chloride in physiological solutions for dialysis or infusions
DGi102-Mini	Combined semi-micro glass pH electrode with a ceramic frit for direct pH measurement and acid/base titrations in aqueous medium. A robust mini-electrode for small sample volumes.	<ul style="list-style-type: none"> • Ceramic frit junction • Movable sleeve adapter for position adjustment • ARGENTHAL™ reference system for increased life span and heat resistance, which requires only an AgCl-free 3 mol/L KCl electrolyte • Silver ion trap to ensure that the electrolyte is absolutely free from silver ions. This prevents contamination of the sleeve junction by silver sulfide 	<ul style="list-style-type: none"> • For small sample volumes, precious samples and micro titrations in order to avoid excess of waste



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