



Smart Storm

Unit 16, Llys y Fedwen, Parc Menai Business Park, Bangor, Gwynedd, LL57 4BL, United Kingdom
Tel: +44 (0) 1422 363462 www.smartstormgroup.com sales@smartstormgroup.com

Combination Ion Selective Electrodes



Smart Storm solid state ISE technology allows all sensors to be solid state and flexible enough to be manufactured in any size or form. With a maintenance, free reference system making sure that all our combination ISEs are easy to use with a long lifetime. Perfect for field work.

Ammonia Combination ISE



The direction Ammonia combination ISE is a traditional pH glass sensor with a refillable membrane cap.

This electrode does not have the solid-state advantage of the Ammonium ISE 3051 but is able to detect dissolved Ammonia down to around 50ppb. For successful operation NaOH ISAB should be added to the samples and standards to ensure all the Ammonium is converted to NH_3 . The analysis is best done in 100ml conical flasks to reduce the loss of NH_3 gas. In principle, the Ammonia penetrates the membrane and causes a change in the pH of the internal solution locally at the interface. This pH change is directly proportional to NH_3 concentration. Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



Specification:

Body Type	Polymer body with replaceable membrane caps.
Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.02-17000ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Hydrazine
length	155mm
pH range	11-13pH
Potential Drift	2mV per Day
Reference Type	Single Junction Ag/AgCl
Resistance at 25 Deg C	< 5 MOhm
Temperature range	5-50 Degrees C



Ammonium Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Ammonium sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Ammonium electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.9-9000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Calcium, Potassium, Sodium
length	155mm
pH range	0-8.5
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Barium Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Barium sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Barium electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

Each EDT Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	1.4-13,700 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Potassium, Sodium, Strontium
length	155mm
pH range	3-10 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Bromide Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Bromide Sensor is a crystalline material which can be polished when the slope decreases over its lifetime. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry to prolong its lifetime. Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.4-81,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Cyanide, Iodide
length	155mm
pH range	1 - 12 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Cadmium Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Cadmium Sensor is a crystalline material which can be polished when the slope decreases over its lifetime. This will rejuvenate the sensor and give a longer useful life. The sensor should be stored dry with its protective cap in place.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.1-11,200 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Copper Mercury, Silver
length	155mm
pH range	3-7 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Chloride Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Chloride Sensor is a crystalline material which can be polished when the slope decreases over time. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry to with its protective cap on.

Each EDT Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	1-35,500 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Iodide, Bromide, Cyanide Sulphide
length	155mm
pH range	1-12
Potential Drift	2mV per Day
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Copper Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Cupric Sensor is a crystalline material which can be polished when the slope decreases over its lifetime. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with the protective cap on.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.006-64000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Mercury, Silver, Sulphide
length	155mm
pH range	2-7 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Cyanide Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Cyanide Sensor is a crystalline material which can be polished when the slope decreases with use. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with its protective cap on.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.03-260 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Bromide, Iodide
length	155mm
pH range	11-13 pH
Potential Drift	2mV per Day
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Fluoride Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.

The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that EDT direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.



Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279090
Concentration Range	0.02-1900 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Hydroxide
length	155mm
pH range	4-8 pH
Potential Drift	2mV per Day
Reference Type	Single Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Iodide Combination Ion Selective Electrode



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Iodide Sensor is a crystalline material which can be polished when the slope decreases over time. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with its protective cap in place.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.06-127,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Cyanide
length	155mm
pH range	2-12 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Lead Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Lead Sensor is a crystalline material which can be polished when the slope decreases over time. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with its protective cap in place.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.2-20,800 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Mercury, Silver, Copper
length	155mm
pH range	3-7 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Mercury Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Mercury Sensor is a crystalline material which can be polished when the slope decreases over time. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with its protective cap in place.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.2-201,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Silver
length	155mm
pH range	0-2 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Nitrate Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Nitrate sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Nitrate electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that EDT direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.4-62,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Chloride, Nitrite
length	155mm
pH range	2-11 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Nitrite Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Nitrite sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Nitrite electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that EDT direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.5-460 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Cyanide
length	155mm
pH range	4.6-8 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Perchlorate Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Perchlorate sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Perchlorate electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.2-95,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Iodide, Thiocyanate, Nitrate
length	155mm
pH range	0-11 pH
Potential Drift	2mV per Day
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Potassium Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Potassium sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Potassium electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.04-39,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Caesium, Ammonium
length	155mm
pH range	1-9 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Silver Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Silver Sensor is a crystalline material which can be polished when the slope decreases with use. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with the protective cap in place.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that EDT direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.01-107,900 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Mercury
length	155mm
pH range	1-9 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Sodium PVC Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Sodium sensor is PVC based with a solid-state mount and does not degenerate during storage unlike conventional Sodium electrodes. The lack of internal solution means that submersion is also possible as the sensor does not flex under reasonable pressure.

This Sodium ISE is ideal for use in Food Laboratories where Glass electrodes are not appropriate.



Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.

The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that EDT direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	1-35000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Bromide, Cyanide, Iodide
length	155mm
pH range	1-12
Potential Drift	2mV per Day
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Sodium Glass Combination ISE



The Smart Storm Direction Sodium ISE is a glass based 12mm bodied electrode which is sensitive to Sodium levels down to ppb levels.

This ISE operates in the same way as a traditional combination pH electrode except the bulb glass is ultra-sensitive to changes in Sodium concentration.

An important consideration is that the pH of standards and samples need to be in the range pH9-12. If low level Sodium work is to be performed the pH should be 12 as the glass bulb is still sensitive to Hydrogen Ions which should be minimised.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.002-69,000 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Lithium, Potassium, Barium, pH
length	155mm
pH range	9-12 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Sulphide Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof.

The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Sulphide Sensor is a crystalline material which can be polished when the slope decreases with use. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with its protective cap in place.

Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.



The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	0.003-32,000ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Mercury, Silver
length	155mm
pH range	13-14 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



Thiocyanate Combination ISE



Smart Storm direction electrodes are rugged solid state sensors with built in driTEK Teflon double junction references that do not require filling solutions, membrane replacements or operator maintenance.

These combination ISEs can be stored dry and are submersible and waterproof. The solid-state sensor and maintenance free reference makes these electrodes ideal for both laboratory and field work. The Epoxy tubular body provides complete protection to the electrode which allows these sensors to be used in field applications by unskilled operators.

The Thiocyanate Sensor is a crystalline material which can be polished when the slope decreases with use. This will rejuvenate the sensor and give a longer lifetime. The sensor should be stored dry with its protective cap in place.



Each Combination ISE has a 1 metre cable and a BNC connector (other connectors available on request) allowing use on all types of pH/ION meter including laboratory bench and research models.

The solid-state sensors have a huge advantage over conventional ISEs in that there is no internal fill solution to degenerate the sensor this means that EDT direction combination ISEs have an unrivalled lifetime and a very low cost of ownership.

Specification:

Cable length	1000mm
Cap Diameter	16mm
Commodity Code	90279050
Concentration Range	1-5800 ppm
Connector	BNC
Diameter	12mm
Endpoint time	Typically, 10-60 seconds
Interferences	Sulphide, Bromide, Chloride, Iodide
length	155mm
pH range	2-12 pH
Potential Drift	2mV per Day
Reference Type	Double Junction
Resistance at 25 Deg C	< 2.5 MOhm
Temperature range	5-50 Degrees C



INDEX:

Page 2.	Ammonia Combination ISE
Page 4.	Ammonium Combination ISE
Page 6.	Barium Combination ISE
Page 8.	Bromide Combination ISE
Page 10.	Cadmium Combination ISE
Page 12.	Chloride Combination ISE
Page 14.	Copper Combination ISE
Page 16.	Cyanide Combination ISE
Page 18.	Fluoride Combination ISE
Page 20.	Iodide Combination ISE
Page 22.	Lead Combination ISE
Page 24.	Mercury Combination ISE
Page 26.	Nitrate Combination ISE
Page 28.	Nitrite Combination ISE
Page 30.	Pechlorate Combination ISE
Page 32.	Potassium Combination ISE
Page 34.	Silver Combination ISE
Page 36.	Sodium PVC Combination ISE
Page 38.	Sodium Glass Combination ISE
Page 40.	Sulphide Combination ISE
Page 42.	Thiocyanate Combination ISE



Notes:

