

## Ion Selective Electrodes

B&C Electronics offers a wide range of Ion Selective Electrodes including:

1. Polymer Membrane Electrodes
2. Solid State Electrodes
3. Gas Sensing Electrodes
4. Glass Membrane Electrodes

Ion Selective Electrodes are available as half-cells (mono) or as glass or epoxy combination electrodes. Measurements with half-cell electrodes require the use of an additional reference electrode.

Ask our sales department in order to select the suitable ISE for continuous operation with our IC 7685 - IC 7685.010 Ion Concentration Controller.



Electrode	P/N	Director Measurement Range		Slope mV/Decade at (25 °C)	pH Range	Temperature Range °C		Response time sec.	Interferences (95%, in 1x10 <sup>-2</sup> M)
		Molar	PPM			continuous	not continuous		
Ammonia (NH <sub>3</sub> )	NH31501	1.0 - 5x10 <sup>-7</sup>	17,000-0.01	56±3	> 11	0-50	-	30	Volatile amines
Ammonium (NH <sub>4</sub> <sup>+</sup> )	NH41501/NH41502	1.0 - 5x10 <sup>-6</sup>	18,000-0.1	56± 2	4-10	0-50	-	30	K <sup>+</sup>
Bromide (Br <sup>-</sup> )	BR01501/BR01502	1.0 - 5x10 <sup>-6</sup>	79,900-0.40	57±2	2-14	0-80	0-100	20	I <sup>-</sup> , CN <sup>-</sup> , S <sub>2</sub> <sup>-</sup> , elevate conc. di Cl <sup>-</sup> , NH <sub>3</sub>
Cadmium (Cd <sup>2+</sup> )	CD21501/CD21502	1x10 <sup>-1</sup> - 1x10 <sup>-7</sup>	11,200-0.01	27±2	2-12	0-80	0-100	20	Ag <sup>+</sup> , Hg <sub>2</sub> <sup>+</sup> , Cu <sub>2</sub> <sup>+</sup> , elevate conc. di Pb <sub>2</sub> <sup>+</sup> , Fe <sub>2</sub> <sup>+</sup>
Calcium (Ca <sup>2+</sup> )	CAL1501/CAL1502	1.0 - 5x10 <sup>-6</sup>	40,000-0.2	27±2	3-10	0-50	-	30	Pb <sub>2</sub> <sup>+</sup> , Hg <sub>2</sub> <sup>+</sup> , Cu <sub>2</sub> <sup>+</sup> , Ni <sub>2</sub> <sup>+</sup>
Carbon dioxide (CO <sub>2</sub> ) (Carbonate CO <sub>3</sub> <sup>2-</sup> )	CO21501	1x10 <sup>-2</sup> - 1x10 <sup>-4</sup>	440-4.4	56±3	4.8-5.2	0-50	-	30	Volatile weak acids
Chloride (Cl <sup>-</sup> )	CL01501/CL01502	1.0 - 5x10 <sup>-6</sup>	35,500-1.8	56±2	2-12	0-80	-	20	S <sub>2</sub> <sup>-</sup> , I <sup>-</sup> , CN <sup>-</sup> , Br <sup>-</sup> ,
Copper (Cu <sup>2+</sup> )	CU01501/CU01502	1x10 <sup>-1</sup> - 1x10 <sup>-8</sup>	6,350-6.4x10 <sup>-4</sup>	27±2	0-12	0-80	0-100	20	Ag <sup>+</sup> , Hg <sub>2</sub> <sup>+</sup> , elevate conc. di Cl <sup>-</sup> , Br <sup>-</sup> , Fe <sub>2</sub> <sup>+</sup>
Cyanide (CN <sup>-</sup> )	CNO1501/CNO1502	1x10 <sup>-2</sup> - 5x10 <sup>-6</sup>	260-0.13	57±2	11-13	0-80	0-100	20	S <sub>2</sub> <sup>-</sup> , I <sup>-</sup> , Br <sup>-</sup> , Cl <sup>-</sup>
Fluoride (F <sup>-</sup> )	F001501/F001502	Saturated - 1x10 <sup>-6</sup>	Saturated -0;02	57±2	5-8	0-80	0-100	20	OH <sup>-</sup>
Fluoroborate (BF <sub>4</sub> <sup>-</sup> )	BF45101 BF41502	1.0 - 7x10 <sup>-6</sup>	10,800-0,1 (as B)	57±2 56±2	2.5-11	0-50	-	30	Cl O <sub>4</sub> <sup>-</sup> , I, CN <sup>-</sup>
Iodide (I <sup>-</sup> )	I001501/I001502	1.0 - 5x10 <sup>-8</sup>	127,000-6x10 <sup>-3</sup>	57±2	0-14	0-80	0-100	20	S <sub>2</sub> <sup>-</sup> , CN <sup>-</sup> , NH <sub>3</sub> , S <sub>2</sub> O <sub>3</sub> <sup>2-</sup> , Cl <sup>-</sup> , Br <sup>-</sup>
Lead (Pb <sub>2</sub> <sup>+</sup> )	PB21501/PB21502	1x10 <sup>-1</sup> - 1x10 <sup>-6</sup>	20,700-0.2	25±2	3-8	0-80	0-100	20	Ag <sup>+</sup> , Hg <sub>2</sub> <sup>+</sup> , elevate conc. di Cd <sub>2</sub> <sup>+</sup> e di Fe <sub>2</sub> <sup>+</sup>
Lithium (Li <sup>+</sup> )	LIT1501/LIT1502	1.0 - 1x10 <sup>-5</sup>	6,900-0.7	56±2	5-10	0-50	-	30	Na <sup>+</sup> , K <sup>+</sup> , Ca <sub>2</sub> <sup>+</sup>
Nitrate (NO <sub>3</sub> <sup>-</sup> )	NO31501/NO31502	1.0 - 7x10 <sup>-6</sup>	62,000-0.5	57±2	2.5-11	0-50	-	30	Cl O <sub>4</sub> <sup>-</sup> , I, CN <sup>-</sup> , BF <sub>4</sub> <sup>-</sup>
Nitrogen Oxide (NO <sub>x</sub> )	NOX1501	5x10 <sup>-3</sup> - 5x10 <sup>-6</sup>	220-0.2	56±3	1.1-1.7	0-50	-	30	SO <sub>2</sub> - HF, CH <sub>3</sub> COOH
Perchlorate (Cl O <sub>4</sub> <sup>-</sup> )	PER1501/PER1502	1.0 - 7x10 <sup>-6</sup>	98,000-0,7	56±2	2.5-11	0-50	-	30	No significant interference
Potassium (K <sup>+</sup> )	K001501/K001502	1.0 - 1x10 <sup>-6</sup>	39,000-0.04	56±2	2-12	0-40	0-50	30	Cs <sup>+</sup> , NH <sub>4</sub> <sup>+</sup>
Silver/Sulfide (Ag <sup>+</sup> /S <sub>2</sub> <sup>-</sup> )	AGS1501 AGS1502	Ag <sup>+</sup> =1.0 - 1x10 <sup>-7</sup> S <sub>2</sub> <sup>-</sup> =1.0 - 1x10 <sup>-7</sup>	107,900-0.01 32,100-0.003	57±2 27	2-12	0-80	0-100	20	Hg <sub>2</sub> <sup>+</sup> , Hg <sup>+</sup>
Sodium (Na <sup>+</sup> )	NA71501/NA71502	1.0 - 1x10 <sup>-5</sup>	23,000-0.2	56±2	5-12	0-80	-	20	K <sup>+</sup> , Li <sup>+</sup> , H <sup>+</sup> , Ag <sup>+</sup> , Cs <sup>+</sup>
Surfactant (X <sup>+</sup> , X <sup>-</sup> )	SUR1501/SUR1502	5x10 <sup>-2</sup> , 1x10 <sup>-5</sup>	12,000-1.0	for titration	2-12	0-50	-	30	Similar types of Surfactants
Water Hardness (Ca <sub>2</sub> <sup>+</sup> /Mg <sub>2</sub> <sup>+</sup> )	WHA1501/WHA1502	1.0 - 1x10 <sup>-5</sup>	4,000-0.4 (as Ca)	26±3	5-10	0-50	-	20	Cu <sub>2</sub> <sup>+</sup> , Zn <sub>2</sub> <sup>+</sup> , Ni <sub>2</sub> <sup>+</sup> , Fe <sub>2</sub> <sup>+</sup>

Models 1501 are mono, 1502 are combined glass body, 1503 are combined epoxy body. We can also provide sealed sensors with S8 connector.