

- **Highly accurate cell constants 0.05, 0.10 and 1.00**
  - Measurements capability down to 0.055  $\mu\text{S}/\text{cm}$
- **Integral Pt100**
  - Enables automatic temperature compensation
- **316 stainless steel, carbon and epoxy materials**
  - Corrosion-resistant wetted parts
- **Highly accurate cell constant**
  - No in-situ calibration required
- **Insertion, Immersion, Flow-through and Retractable versions**
  - Easy installation and operation



**ABB Conductivity Cells**  
**Powerful technology –**  
**simple operation**

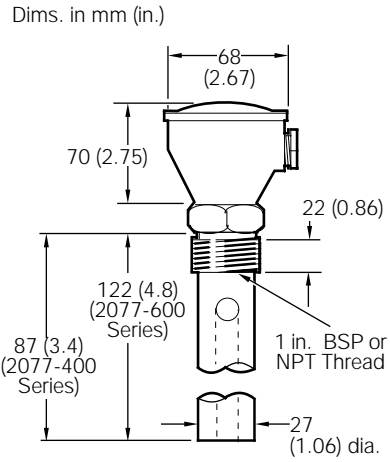
### Graphite Cells – Models 2025, 2045 and 2077

These conductivity measuring cells for flow, screw-in and dip-type mounting are manufactured from epoxy resin and have carbon electrodes. The method of construction and materials used give the cells excellent performance characteristics.

- High durability and impact resistance
- Excellent chemical resistance (6% acids, 8% alkalis).
- Accurate cell constants enabling direct replacement without re-calibration
- Easily cleaned (no other maintenance).

<p><b>Dip Cell Model 2025</b></p> <p>Dims. in mm (in.)</p> <p>Cable Length 4.6 m (15 ft) fitted with bulkhead plug and socket</p> <p>Retaining 'O' Rings</p> <p>Adjustable Mounting Bracket</p> <p>740 (29)</p> <p>68 (2.6)</p> <p>103 (4)</p> <p>27 (1.06) dia.</p> <p>(Model 2025-400 Series)</p> <p>(Model 2025-600 Series)</p>	<p><b>Specification</b></p> <p>Cell constant available 0.1 or 1.0</p> <p>Type Dip type</p> <p>Cell body Loaded epoxy resin</p> <p>Electrode material Carbon</p> <p>Fixing detail Adjustable with bracket provided</p> <p>Maximum press. bar (psi) N/A</p> <p>Maximum temp. 90°C (194°F)</p>	<p><b>Ordering Information</b></p> <p>Order under part number 2025-000</p> <p>Cell constant K = 0.1 4</p> <p>Cell constant K = 1.0 6</p> <p>Non-temperature compensated 0</p> <p>Temperature compensated Pt100 5</p>
<p><b>Flow Cell Model 2045</b></p> <p>Dims. in mm (in.)</p> <p>2 Fixing Screws 44 (1.73) Between Centres</p> <p>Quick release cover on watertight terminal box</p> <p>81 (3.18)</p> <p>25 (1)</p> <p>124 (4.88)</p> <p>1/2 in. BSP Parallel or NPT Thread</p> <p>36 (1.4)</p>	<p><b>Specification</b></p> <p>Cell constant available 0.1 or 1.0</p> <p>Type Flow-line</p> <p>Cell body Loaded epoxy resin</p> <p>Electrode material Carbon</p> <p>Fixing detail Threaded 1/2 in. BSP parallel or NPT</p> <p>Maximum press. bar (psi) 6.6 (100)</p> <p>Maximum temp. 100°C (212°F)</p>	<p><b>Ordering Information</b></p> <p>Order under part number 2045-000</p> <p>Cell constant K = 0.1 4</p> <p>Cell constant K = 1.0 6</p> <p>Threaded 1/2 in. BSP 0</p> <p>Threaded 1/2 in. NPT 8</p> <p>Non-temperature compensated 0</p> <p>Temperature compensated Pt100 5</p>

**...Graphite Cells – Models 2025, 2045 and 2077**

Screw-in Model 2077	Specification	Ordering Information
<p>Dims. in mm (in.)</p> 	<p><b>Cell constant available</b> 0.1 or 1.0</p> <p><b>Type</b> Screw type</p> <p><b>Cell body</b> Loaded epoxy resin</p> <p><b>Electrode material</b> Carbon</p> <p><b>Fixing detail</b> Threaded 1 in. BSP parallel or NPT</p> <p><b>Maximum press. bar (psi)</b> 6.6 (100)</p> <p><b>Maximum temp.</b> 100°C (212°F)</p>	<p>Order under part number 2077-000</p> <p>Cell constant K= 0.1 4</p> <p>Cell constant K = 1.0 6</p> <p>Threaded 1 in. BSP 0</p> <p>Threaded 1 in. NPT 8</p> <p>Non-temperature compensated 0</p> <p>Temperature compensated Pt100 5</p>

### Stainless Steel Cells – Models 2078 and 2085

Stainless steel conductivity cells are accurate, reliable and of rugged construction. The surface of the electrode is prepared specially, eliminating errors due to polarisation. The full range of cells incorporate designs for screw-in and withdrawable configurations. These cells are suitable for a wide variety of applications such as :

- Boiler Feedwater
- Steam Condensate.
- Desalination Plant
- Semi-conductor
- Distillation

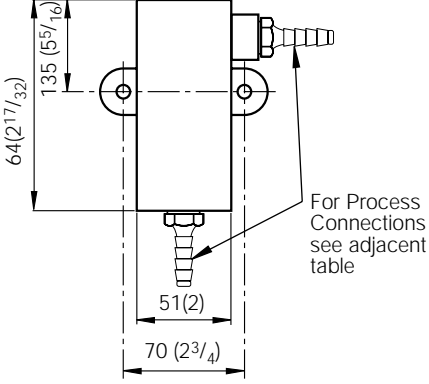
<p><b>Screw-in Model 2078</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Model</th> <th>A mm (in)</th> <th>B mm (in)</th> </tr> </thead> <tbody> <tr> <td>2078-4</td> <td>184 (7.24)</td> <td>102 (4.0)</td> </tr> <tr> <td>2078-3</td> <td>184 (7.24)</td> <td>102 (4.0)</td> </tr> </tbody> </table>	Model	A mm (in)	B mm (in)	2078-4	184 (7.24)	102 (4.0)	2078-3	184 (7.24)	102 (4.0)	<p><b>Specification</b></p> <p><b>Cell constant available</b> 0.05 or 0.1</p> <p><b>Type</b> Screw-in</p> <p><b>Cell body</b> 316 St. Steel</p> <p><b>Electrode material</b> 316 St. Steel</p> <p><b>Fixing detail</b> Threaded 3/4 in. BSP parallel or NPT</p> <p><b>Maximum press. bar (psi)</b> 10.5 (150)</p> <p><b>Maximum temp.</b> 110°C (230°F)</p>	<p><b>Ordering Information</b></p> <p>Order under part number 2078-000</p> <p>Cell constant K = 0.05 3</p> <p>Cell constant K = 0.1 4</p> <p>Threaded 3/4 in. BSP fitted with plug &amp; socket 0</p> <p>Threaded 3/4 in. BSP 1</p> <p>Threaded 3/4 in. NPT 7</p> <p>Threaded 3/4 in. NPT fitted with plug &amp; socket 8</p> <p>Non-temperature compensated 0</p> <p>Temperature compensated Pt100 5</p>
Model	A mm (in)	B mm (in)									
2078-4	184 (7.24)	102 (4.0)									
2078-3	184 (7.24)	102 (4.0)									

**...Stainless Steel Cells - Models 2078 and 2085**

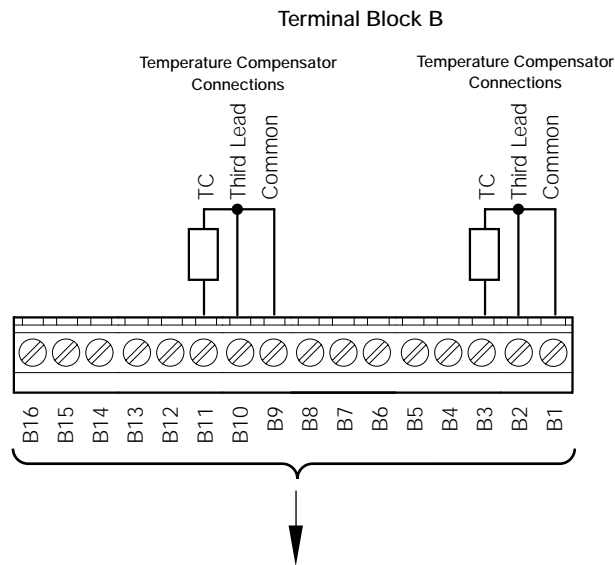
Withdrawable Cell Model 2085	Specification	Ordering Information
<p>Dims. in mm (in.)</p> <p>0.9m (36 in.) Cable length with watertight plug and socket</p> <p>Clearance for Removal 130 (5.1)</p> <p>178 (7) Valve Closed</p> <p>140 (5.5) Valve Open</p> <p>25 (1)</p> <p>1 1/2 in. BSPP</p> <p>89 (3.5)</p> <p>35 (1.38)</p>	<p><b>Cell constant available</b> 0.05 or 0.1</p> <p><b>Type</b> Withdrawable</p> <p><b>Cell body</b> Naval brass and 316 St. Steel</p> <p><b>Electrode material</b> 316 St. Steel</p> <p><b>Fixing detail</b> Used with Model 2089 valve assembly 1 1/2 in. BSP parallel or NPT</p> <p><b>Maximum press. bar (PSI)</b> 10.5 (150)</p> <p><b>Maximum temp.</b> 110°C (230°F)</p>	<p><b>Order under part number</b> 2085-000</p> <p>Cell constant K = 0.05 3</p> <p>Cell constant K = 0.1 4</p> <p>Non-temperature compensated 0</p> <p>Temperature compensated Pt100 5</p> <p>Order withdrawable valve for this cell under part number 2089-800.</p>

### Model 2999 Flow Chambers

A range of stainless steel flow chambers is available for flow applications which require the use of a screw-in type cell (e.g. ultrapure water applications). These are available as the 2999 Series, the most common versions of which are detailed below. Special requirements can be catered for under certain circumstances.

<p>Dims in mm (in.)</p>  <p>For Process Connections see adjacent table</p>	<h4>Ordering Information</h4> <table border="1"> <thead> <tr> <th>Part No.</th> <th>Description</th> <th>Process Connections</th> </tr> </thead> <tbody> <tr> <td>2999-015</td> <td>Flow jacket to fit Model 2078 cell</td> <td>10mm tube connections</td> </tr> <tr> <td>2999-020</td> <td>Flow jacket to fit Model 2078 cell</td> <td>3/8 in. BSP parallel</td> </tr> <tr> <td>2999-025</td> <td>Flow jacket to fit Model 2073/76 cell</td> <td>3/8 in. BSP parallel</td> </tr> <tr> <td>2999-100</td> <td>Flow jacket to fit Model 2271 cell</td> <td>10mm tube connections</td> </tr> <tr> <td>2999-115</td> <td>Flow jacket to fit Model 2072 cell</td> <td>10mm tube connections</td> </tr> <tr> <td>2999-190</td> <td>Flow jacket to fit Model 2078 cell</td> <td>3/8 in. NPT</td> </tr> </tbody> </table> <p><b>Note.</b> This is only a selection of flow chambers available. If your requirements are not listed above, please contact our Sales Department stating your needs as fully as possible.</p>	Part No.	Description	Process Connections	2999-015	Flow jacket to fit Model 2078 cell	10mm tube connections	2999-020	Flow jacket to fit Model 2078 cell	3/8 in. BSP parallel	2999-025	Flow jacket to fit Model 2073/76 cell	3/8 in. BSP parallel	2999-100	Flow jacket to fit Model 2271 cell	10mm tube connections	2999-115	Flow jacket to fit Model 2072 cell	10mm tube connections	2999-190	Flow jacket to fit Model 2078 cell	3/8 in. NPT
Part No.	Description	Process Connections																				
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2999-115	Flow jacket to fit Model 2072 cell	10mm tube connections																				
2999-190	Flow jacket to fit Model 2078 cell	3/8 in. NPT																				

**Electrical Connections**



Terminal Block B		Cell Connections	Cable Attached Cells	Cable Detached Cells
Sensor B	Sensor A			
1	9	Temperature compensator common, Link B1 to B2 & B9 to 10 **	Green	Green / Yellow
2	10	Temperature compensator third lead	Link to 1 or 9	Blue
3	11	Temperature compensator	Yellow	Brown
4	12	Screen	No Connection ++	Two Screens
5	13	Cell (Cell Electrodes)	Red	Red
6	14	Cell (Earth Electrodes)	Blue	Black
7	15	Not used	Not used	Not used
8	16	Not used	Not used	Not used

\*\* When a 2-wire Pt100, Pt1000 or BALCO 3K temperature compensator is fitted.

++ If in an all plastic system which is isolated (not earthed) link to 6 or 14.

**Connections of Cells to AX400 Conductivity Transmitters**

Terminal Block TB2		ABB Sensor Models	
Terminal	Function	2045 and 2077	2025, 2078, 2085, 2089
1	Drive	Red or C-Terminal	Red
2	Sense	None	None
3	Sense	None	None
4	Drive	Black or E-Terminal	Black
5	RTD / TC	Green/Yellow and Blue or T-Terminal	Blue and Green/Yellow
6	RTD / TC	Brown or T-Terminal	Brown
7	Shield (Screen)	None	None
8	Not Used	None	None

**Connections of Cells to TB8xTE Conductivity Transmitters**

*Connections of Cells to AX400 and TB8xTE Conductivity Transmitters*

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