

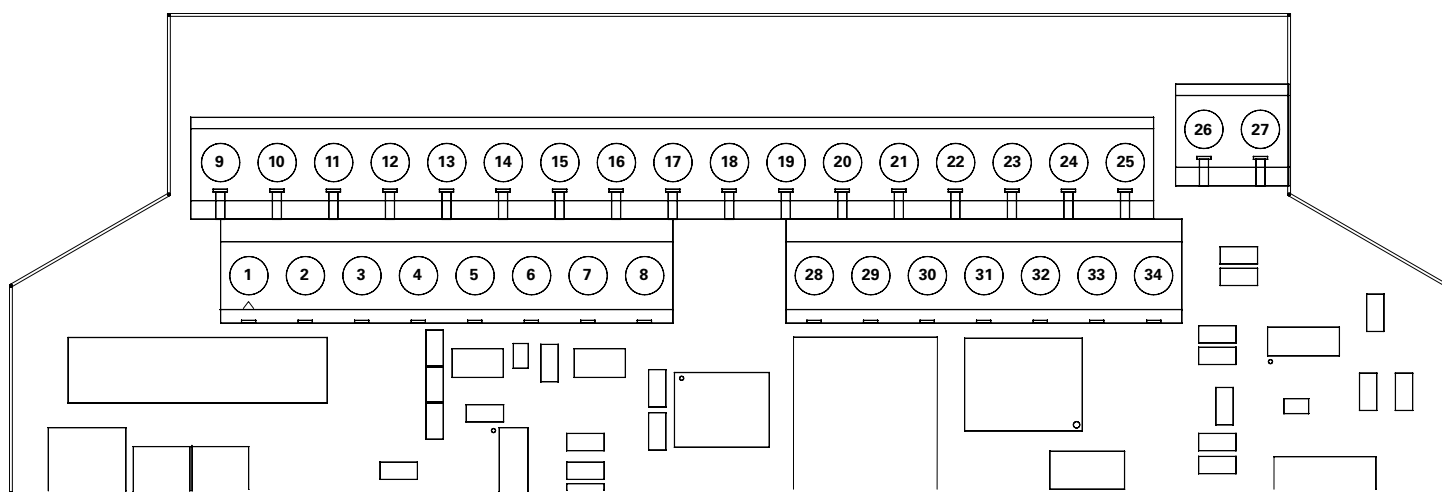
# Thermo Scientific Orion 2100 Series Online Analyzer Terminal Assignments

## Terminal Assignments

The terminal assignments for the 2100 series online analyzers have been updated to allow the operator to add a pH/ORP board or conductivity board to the second channel of their Thermo Scientific Orion 2100 series analyzer.

Terminal Layout		Terminal Layout		Terminal Layout		Terminal Layout	
<b>1</b>	Sout (mA) sensing signal	<b>9</b>	Relay 1	<b>26</b>	Sensing electrode	<b>28</b>	Do not connect
<b>2</b>	GND common ground	<b>10</b>	Relay 1	<b>27</b>	Do not connect	<b>29</b>	Do not connect
<b>3</b>	Tout (mA) temp. signal	<b>11</b>	Relay 2			<b>30</b>	Preamp power
<b>4</b>	Air pump (ISE only)	<b>12</b>	Relay 2			<b>31</b>	Preamp ground
<b>5</b>	Air pump (ISE only)	<b>13</b>	Relay 3			<b>32</b>	Shield
<b>6</b>	Shield ground for conductivity	<b>14</b>	Relay 3			<b>33</b>	Shield
<b>7</b>	Do not connect	<b>15</b>	Do not connect			<b>34</b>	Jumper to pin 26 when using preamp
<b>8</b>	Do not connect	<b>16</b>	Temperature ground				
		<b>17</b>	Temperature drive				
		<b>18</b>	Temperature sense				
		<b>19</b>	Solution ground				
		<b>20</b>	Conductivity drive +				
		<b>21</b>	Conductivity sense +				
		<b>22</b>	Conductivity sense -				
		<b>23</b>	Conductivity drive -				
		<b>24</b>	Reference electrode				
		<b>25</b>	Jumper to pin 24 when using preamp				

## Terminal Assignments on the Analyzer



## Electrode Wiring Assignments

Only use the wiring configurations that are applicable to your analyzer and electrodes. For example, if you are wiring a new Thermo Scientific Orion 2109XP fluoride analyzer with a second channel conductivity board, use the wiring configuration for the ion selective electrode (ISE) to wire the fluoride sensing electrode, the wiring configuration for the reference electrode to wire the fluoride reference electrode, the wiring configuration for the 2100TP temperature probe to wire the ATC probe and the wiring configuration for the 2002CC and 2002SS conductivity probe to wire the conductivity probe.

### Ion Selective Electrode (ISE)

<b>26</b>	Sensing electrode	Connect clear wire
<b>33</b>	Shield	Connect black wire

### Reference Electrode (ISE)

<b>24</b>	Reference electrode	Connect clear wire
<b>32</b>	Shield	Connect black wire

### 2100TP Temperature Probe

16	Temperature ground /thermister	Connect white wire
17	Temperature drive /thermister	Connect green wire
19	Solution ground	Connect red wire

### 2001TM Temperature Probe

16	Temperature ground /thermister	Connect white wire
17	Temperature drive /thermister	Connect green wire, jumper 17 and 18
18	Temperature sense	Jumper to 17
19	Solution ground	Connect red wire

### 2001SC pH Electrode

24	Reference electrode	Connect black wire
26	Sensing electrode	Connect clear wire

### 110250 ORP Electrode

19	Solution ground	Connect black wire
24	Reference electrode	Connect purple wire
26	Sensing electrode	Connect coax center wire

### 2002CC, 2002SS, 2002CC10M and 2002SS10M Conductivity Probes

6	Shield ground for conductivity	Connect clear wire
16	Temperature ground /thermister	Connect white wire
17	Temperature drive /thermister	Connect black wire
20	Conductivity drive +	Connect orange wire
21	Conductivity sense +	Connect red wire
22	Conductivity sense -	Connect green wire
23	Conductivity drive -	Connect blue wire

## Ordering Information

Cat. No.	Description
2102PH	2102PH single channel pH/ORP analyzer only with CD user guide
2102PH1SC	2102PH single channel analyzer ultra pure water (UPW) pH kit – includes analyzer, flow cell, 2001SC ROSS® pH electrode, electrode cable (2001EC), ATC probe, pH buffers (pH 4, 7 and 10) and CD user guide
2102PH2	2102PH dual channel pH/ORP analyzer only with CD user guide
2102PH2SC	2102PH dual channel analyzer ultra pure water (UPW) pH kit – includes analyzer, (2) flow cells, (2) x 2001SC ROSS pH electrodes, (2) electrode cables (2001EC), (2) ATC probes, pH buffers (pH 4, 7 and 10) and CD user guide
2104CD	2104CD single channel conductivity analyzer only with CD user guide
2104CD1SS	2104CD single channel analyzer ultra pure water (UPW) conductivity kit – includes analyzer, 2002SS conductivity cell, flow cell, 100 µS/cm conductivity standard and CD user guide
2104CD2	2104CD dual channel conductivity analyzer only with CD user guide
2104CD2SS	2104CD dual channel analyzer ultra pure water (UPW) conductivity kit, includes analyzer, (2) x 2002SS conductivity cells, (2) flow cells, 100 µS/cm conductivity standard and CD user guide
2109XPEN	Fluoride analyzer with protective enclosure kit – includes analyzer with enclosure, fluoride electrode (100029), reference electrode (100056), ATC probe (2100TP), fluoride standard solutions kit (180940), CD user guide and options kit
2110XPEN	Ammonia analyzer with protective enclosure kit – includes analyzer with enclosure, ammonia electrode (100047), reference electrode (210056), ATC probe (2100TP), ammonia standard solutions kit (181040), CD user guide and options kit
2111LLEN	Low level sodium analyzer with protective enclosure kit – includes analyzer with enclosure, ROSS sodium electrode (210048), ROSS Ultra® reference electrode (210058), ATC probe (2100TP), sodium standard solutions kit (181140), CD user guide and options kit
2111XPEN	Sodium analyzer with protective enclosure kit – includes analyzer with enclosure, sodium electrode (210045), reference electrode (210056), ATC probe (2100TP), sodium standard solutions kits (181140 and 181141), CD user guide and options kit (application package 2111XA, 2111XD or 2111XC must be purchased separately)
2117XPEN	Chloride analyzer with protective enclosure kit – includes analyzer with enclosure, chloride electrode (100025), reference electrode (100057), ATC probe (2100TP), chloride standard solutions kit (211740), CD user guide and options kit
2118XPEN	Oxygen scavenger analyzer with protective enclosure kit – includes analyzer with enclosure, iodide electrode (100022), reference electrode (100056), ATC probe (2100TP), CD user guide and options kit
2120XPEN	Calcium hardness analyzer with protective enclosure kit – includes analyzer with enclosure, calcium electrode (100049), reference electrode (100056), ATC probe (2100TP), calcium standard solutions kit (182040), CD user guide and options kit
2100PH2	Second channel add-on board for pH/ORP
2100CD2	Second channel add-on board for conductivity

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264039-001 Rev. A 08-09

