

## Series 7773 Meridian® Electrode Multi-Electrode Mounting (used for pH, Orp and Specific Ion)

## Model Selection Guide

- Flow or immersion configuration
- Can be configured to use w. 9782, APT2000/4000 analyzers
- Preamp can transmit up to 3005 m (1000ft)
- Quick disconnect cabling
- See Product Spec 70-82-03-03 for further detail

In Line Flow Style

Immersion Style

### Instructions

- Select the desired key number. The arrow to the right marks the selection available
- Make one selection per table, using the column below the proper arrow.  
A dot (•) denotes unrestricted availability. A letter denotes restricted availability.  
Restrictions follow Table V.

Key Number      I      II      III      IV      V

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

KEY NUMBER	Description	Selection	Availability
7773	Electrode Mounting	07773	↓

**TABLE I - Preamp (without ultrasonic cleaner) - Selection depends on analyzer or transmitter used**

Instrument Used	Preamp		
<b>All glass pH direct connection instruments including:</b> 9782-02 Analyzer, 7082-3_, -71 Analyzer, APT2000 Transmitter, APT4000 Analyzer. (Includes 12 ft. (3,66m) coaxial cable (31040849) and 12 ft. (3,66m) 3- conductor cable (31337633).	None - Preamp internal to instrument	20	•
<b>All ORP direct connection instruments including:</b> 9782-02 Analyzer, 7082-3_, -71 Analyzer, APT2000 Transmitter, APT4000 Analyzer (customer supplied 2-conductor cable - 8 pin terminal board in electrode assembly for cable connections).	None - Preamp internal to instrument	30	•
All Honeywell (L&N) microprocessor based instruments for glass pH measurements. Also for ORP with 7084.	31022283 glass/ORP electrode preamp module (external preamp)	60	•

TABLE II - Mounting/Material of Construction		07773 Selection	↙
Mounting	Material of Construction		
Immersion	Polypropylene	2	•
	Ryton	6	•
	316 Stainless Steel	4	•
In-line (includes P/N 31324438 mounting kit)	Polypropylene	1	•
	Ryton	7	•
	316 Stainless Steel Flow Chamber w/polypropylene cover	5	•
	316 Stainless Steel	3	•

**TABLE III - Select Combination Type or Separate Measuring and Reference Electrodes**  
**Electrode Options (Combination Electrodes)**

Electrode Type	Temp. Range	Connector	Part Number		
None				00	•
Meridian - pH <b>Note 1</b>	10 to 100°C	screw cap	31117486	40	d
ORP (gold) <b>Notes 1 and 3</b>	-5 to 110°C	12' tinned	31020749	50	e
Meridian pH and ORP (gold) <b>Note 3</b>	10 to 100°C/ -5 to 110°C	screw cap / 12' tinned	31117486 / 31020749	59	f
ORP (platinum) <b>Notes 1 and 3</b>	40 to 110°C	12' tinned	31020751	60	e
Meridian pH and ORP (platinum) <b>Note 3</b>	10 to 100°C/ -5 to 110°C	screw cap / 12' tinned	31117486 / 31020751	69	f

**Electrode Options (Separate Measuring/Reference)**

Reference	Electrode Type	Temp. Range	Measuring Electrode P/N	Connector		
Gel Filled/ Ryton Body (P/N 31117481)  6" spade lug	Glass - pH	-5 to 40°C	31117389	screw cap	21	d
	Glass - pH	10 to 80°C	31117390	screw cap	22	d
	Glass - pH	40 to 110°C	31117391	screw cap	23	d
	ORP (gold)- <b>Note 3</b>	-5 to 110°C	31117419	6" spade lug	24	e
	ORP (platinum) <b>Note 3</b>	-5 to 110°C	31117418	6" spade lug	26	e
	Antimony - pH <b>Note 4</b>	5 to 75°C	31117399	screw cap	27	h
Gel Filled/Ryton Body Double Junction (P/N 31035832)  6" Spade lug <b>Note 5</b>	Glass - pH	-5 to 40°C	31117389	screw cap	41	d
	Glass - pH	10 to 80°C	31117390	screw cap	42	d
	Glass - pH	40 to 110°C	31117391	screw cap	43	d
	ORP (gold)- <b>Note 3</b>	-5 to 110°C	31117419	6" spade lug	44	e
	ORP (platinum) <b>Note 3</b>	-5 to 110°C	31117418	6" spade lug	46	e
	Antimony - pH <b>Note 4</b>	5 to 75°C	31117399	screw cap	47	h
Flowing Junction Kit (P/N 31035974) including electrode (P/N 31008712)  6" spade lug	Glass - pH	-5 to 40°C	31117389	screw cap	61	d
	Glass - pH	10 to 80°C	31117390	screw cap	62	d
	Glass - pH	40 to 110°C	31117391	screw cap	63	d
	ORP (gold)- <b>Note 3</b>	-5 to 110°C	31117419	6" spade lug	64	e
	ORP (platinum) <b>Note 3</b>	-5 to 110°C	31117418	6" spade lug	66	e
	Antimony - pH <b>Note 4</b>	5 to 75°C	31117399	screw cap	67	h

**TABLE IV - Automatic Temperature Compensators**

Material	Part Number	Selection	07773 ↓
None <b>Note 2</b>		0	•
Plug for ATC hole for ORP measurements, Durafet electrode or fixed temperature compensation.	31109068	1	•
Ryton (8550 ohms, $\mu$ processor instr.)	31022289	5	k
Glass (8550 ohms, $\mu$ processor instr.)	31022291	6	k

**TABLE V - OPTIONS**

Tagging	Linen Customer I.D. Tag, limit to 3 lines, 22 spaces per line.	L	•
	Stainless Steel Customer I.D. Tag, limit to 3 lines, 22 spaces per line.	S	•
Certificate of Calibration	Yes	10	•
O-ring Material	Ethylene Propylene	301	•

**Note 1:** Also includes (1) 31109068 plug for support holes.

**Note 2:** The support bracket has three holes in it that must be filled; depending on the selection of electrodes and/or ATC options another plug may be needed. If required, make selection "1" in Table IV.

**Note 3:** Gold is generally used in applications containing cyanide; platinum for all others

**Note 4:** Recommended for acidic processes containing fluorides that attack glass

**Note 5:** Double junctions are used in applications where reference electrode fouling can occur

**RESTRICTIONS**

Restriction Letter								Available Only With		Not Available With	
b	d	e	f	g	h	k	m	Table	Selection	Table	Selection
■								Select only one option from this group.			
	■									I	30, 40, 70, 80 90, 95
		■						I	30, 60		
			■						20, 62 (microprocessor units only)		
				■				I	40, 70, 80, 90, 95		
					■			I	20, 60 (microprocessor units only)		
						■		I	20, 30, 40, 60, 70 (microprocessor units only)		
							■	I	40, 80, 90, 95		

## Series 7773

## Accessories and Replacement Parts

Honeywell Proprietary

Note: For replacement electrodes see Replacement Electrodes Price List, Page RE-1 & 2.

Description	Part Number
Directions - Durafet I & Meredian	70-82-25-34
pH Buffer Solutions (one pint)	
4.01	31103001
6.86	31103002
9.18	31103003
Waterproof Junction Box for 6-conductor cable, incls terminal block strip	31316260
Cable - 2 Conductor for ORP connections to instrument (18 gage, PVC, Belden 9740)	31833070
Cable-12 ft.(3,66m), 3-conductor for connection from terminal board 31316464 to preamp	31337633
Cable grip-for preamp-to-instrument cables (3/4" NPT connection and 0.25" grommet hole)	31074354
Cable-6 conductor for connection between preamp and instrument (Table 1 - 10, 12, 50, 52, 60, 62)	31834088
Cable-2 conductor for ATC connection between junction box and instrument	31835002
Shorting cable for ORP or checking preamp	31040874
Silicone grease tube	31090011
Resistor (721.5 @ 25°C) for fixed temperature compensation with analog instruments	233026
External Preamp for withdrawn analog instruments and direct input Speedomax	31101316
External Preamp for microprocessor based instruments	31022283

### **Steps to Selecting a Specific Ion Electrode Mounting**

In addition to pH there are a number of other ions that can be measured by electrodes that are manufactured with membranes that are specific to that particular ion concentration. Honeywell offers three electrodes for specific ion measurements - sodium, fluoride, and chloride. These electrodes can be mounted in the 7773 pH assembly for either immersion or in-line mounting. This assembly provides a housing for mounting a measuring electrode, reference electrode, and temperature sensor. In addition, the preamplifier is also mounted in the assembly. A 7082 or 9782 Specific Ion Analyzer is used to display the measurement, provide output and relay capability, and perform calibration.

Other specific ion measurements can be made using other suppliers' electrodes. Among these are ammonia, bromide, cadmium, cyanide, iodide, lead, potassium, silver, and water hardness, to name a few. The ability to make these other ion measurements must be pre-qualified based on electrode documentation from the supplier.

A complete specific ion measuring loop consists of a measuring electrode, reference electrode, temperature sensor, preamplifier in a mounting assembly, and an analyzer. Below is the procedure to catalog a complete loop:

#### **Electrode Mounting Assembly, Preamplifier, and Temperature Sensor**

07773 - 60 - \_ - 00 - 5 - (Tag Option)

- |   |  |
|---|--|
| 1 | In-line, polypropylene                                     |
| 2 | Immersion, polypropylene                                   |
| 3 | In-line, stainless steel                                   |
| 4 | Immersion, stainless steel                                 |
| 5 | In-line, stainless steel flow chamber, polypropylene cover |

Refer to MSG 51-52-16-33 (AE-7) for complete pricing and explanation of table selections and tagging options.

#### **Electrodes**

Honeywell can supply the following measuring electrodes:

<u>P/N</u>	<u>Type</u>
31003639	<u>Sodium</u>
31117485	Fluoride
31117402	Chloride

Honeywell recommends the following reference electrodes:

<u>P/N</u>	<u>Type</u>	<u>Service</u>
31117481	Single Junction, KCl filled	Fluoride
31035832	Double Junction	Chloride
31117304	Single Junction, Calomel filled	Sodium

Refer to Replacement Electrodes, Section 2, Page RE-1, for electrode pricing.

For other ion measurements omit the P/Ns for the measuring electrodes and order from outside supplier. The reference electrode selection for another suppliers measuring electrode should be based on the suppliers recommendations. Order the appropriate reference electrodes, based on this recommendation, from Honeywell.

### **Cable**

Cable connections from the electrode to the preamplifier are done in the 7773 housing using cables supplied with the electrodes. An additional cable needs to be ordered to make the connections between the preamplifier and the analyzer. This cable is ordered by the foot and is P/N 834023.

If using another supplier's measuring electrode it may be necessary to modify the connections within the 7773 mounting. For these modifications it is recommended that the customer purchase two additional items. The first is a shorting cable, P/N 31040874 and the second is an extra terminal, P/N 31316441.

Current prices for the cables and terminal are available on the order entry system.

### **Analyzer**

Model 9782S - 0M - XX - EXXX0 - BD

Refer to MSG 51-52-16-44, when available, for Table II and III options for the "X"s and pricing.