For detailed instructions see UDA2182 Universal Dual Analyzer Product Manual 70-82-25-119.

Step 1. Model Number Interpretation

Write your analyzer model number in the boxes. Then refer to Tables I, II, III, IV, V and VI, and circle the corresponding options to identify your analyzer's features. A dot indicates the feature is available.

Key Number	–	Table I	–	II	–	III	–	IV	–	V	–	VI

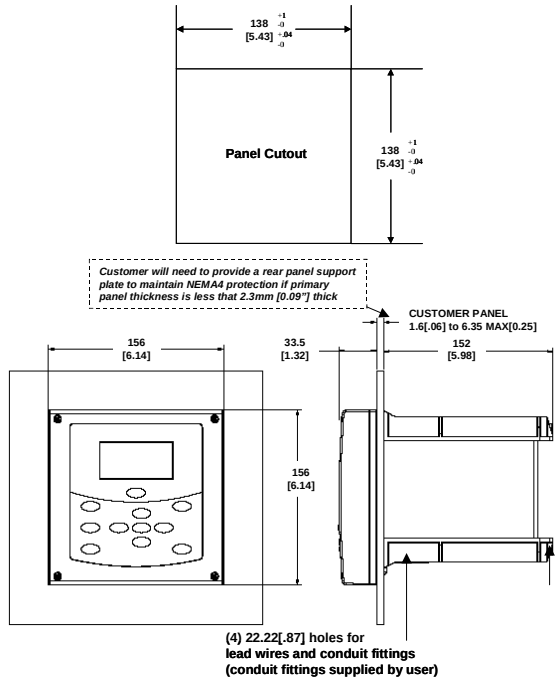
Key Number - Dual Input Analyzer		Stock Part No.	Selection	Availability
Analytical Analyzer		Note 2	UDA2182	↓
TABLE I - Channel Inputs				
Channel 1 Input	None	N/A	NN1	•
	pH/ORP	51453313-501	PH1	•
	pH from Preamp	50009551-501	PA1	•
	Conductivity	51453316-501	CC1	•
	Dissolved Oxygen ppm	51453319-501	DM1	•
	Dissolved Oxygen ppb	51453319-502	DB1	•
TABLE II - Channel Inputs				
Channel 2 Input	None	N/A	NN2	•
	pH/ORP	51453313-501	PH2	•
	pH from Preamp	50009551-501	PA2	•
	Conductivity	51453316-501	CC2	•
	Dissolved Oxygen ppm	51453319-501	DM2	•
	Dissolved Oxygen ppb	51453319-502	DB2	•
TABLE III - Outputs and Relays				
Additional Analog Output & Relays	No Additional Analog Output or Relays	N/A	NN	•
	Additional 4-20 mA/0-20 mA output & 2 additional relays	51453328-501	C3	•

Notes:
Note 1: Advanced Features Include: Auto Clean/Cal, USP Pure Water Functionality and pH and CO2 Concentration from differential conductivity
Note2: Base Unit Stock Part Number depends on Language Option selection:
50003691-501 - English + French, German, Spanish, Italian
50003691-502 - English + Russian, Turkish
50003691-503 - English + Polish, Czech

TABLE IV - Communications		Stock Part No.	Selection	Availability
Communications	None	N/A	N	•
	Ethernet/RS485 Modbus	Note 3	E	•
TABLE V - Options				
Mounting Hardware	None (Panel mounting only)	N/A	0 _ _ _	•
	Pipe and wall mounting hardware	50001023-501	P _ _ _	•
Instruction Books	CD Only (English)	50003501-501	_ 0 _ _	•
	Additional Paper Copy: English	70-82-25-119 & 70-82-25-126	_ E _ _	•
Certificates	None	N/A	_ _ 0 _	•
	Calibration & Conformance	N/A	_ _ C _	•
PID Control/Advanced Features Note1	No	N/A	_ _ _ 0	•
	Yes	N/A	_ _ _ C	
TABLE VI - Language Option		**Stock Part No.**	**Selection**	**Availability**
Language	English + French, German, Spanish and Italian	N/A	EE	•
	English + Russian, Turkish	N/A	RT	•
	English+ Polish, Czech	N/A	PC	•

Notes: Continued
Note 3: Ethernet Communication Card Stock Part Number depends on Language Option selection:
50025563-501 - English + French, German, Spanish, Italian
50025563-502 - English + Russian, Turkish
50025563-503 - English + Polish, Czech

Step 2. Panel Mounting Dimensions



The analyzer can be mounted Vertically or Horizontally on a pipe. Use the bracket and hardware supplied in the mounting kit.

The analyzer can be mounted on a wall. Use the bracket and hardware supplied in the mounting kit.

Each unit has (4) 22.22mm[.87"] dia. holes on the bottom of the unit for lead wires and conduit fittings. The user supplies the conduit fittings.

CAUTION – To avoid damage to the case when connecting to a rigid metallic conduit system, the conduit hub must be connected to the conduit before the hub is connected to the enclosure.

ATTENTION - When installing the unit, you must select fittings that are agency approved (UL/CSA) to insure NEMA 4 integrity

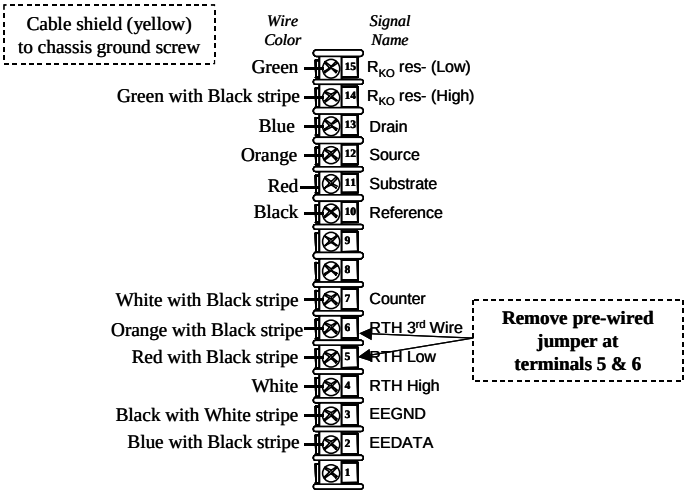
Step 3. Wiring Diagrams

WARNING

- Qualified personnel should perform wiring only.
- A disconnect switch must be installed to break all current carrying conductors. Turn off power before working on conductors. Failure to observe this precaution may result in serious personal injury.
- An external disconnect switch is required for any hazardous voltage connections to the relay outputs.

Direct pH Input Wiring Diagrams

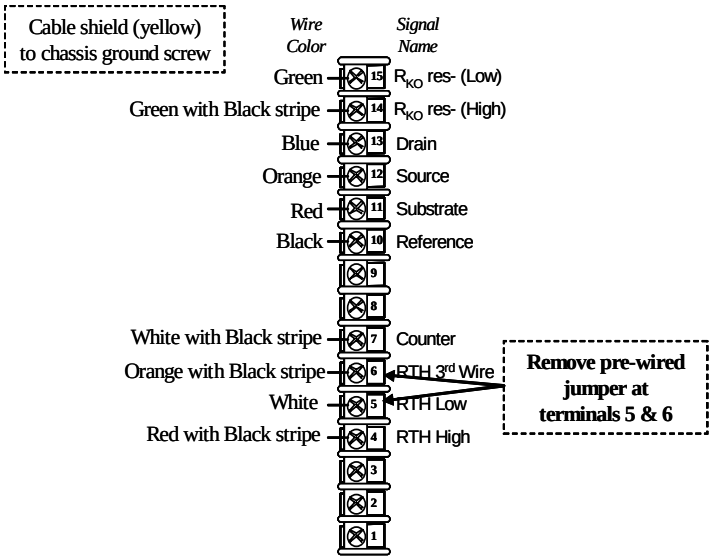
Durafet III



Step 3. Wiring Diagrams, continued

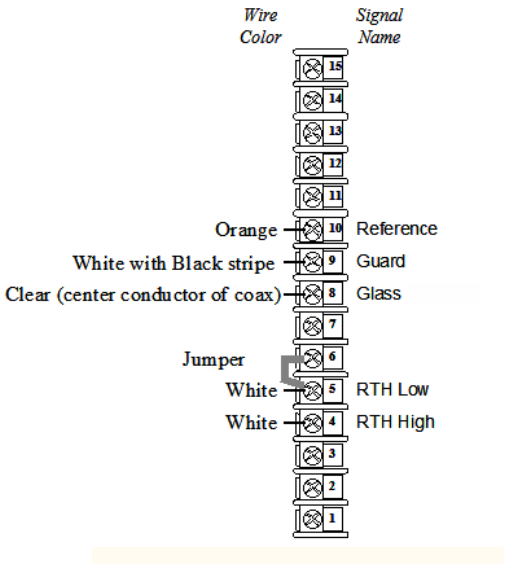
Direct pH Input

Durafet II



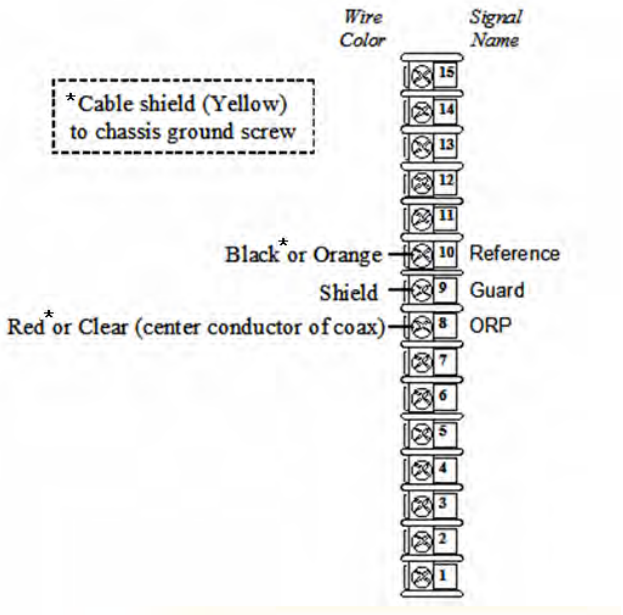
Direct pH Input with integral cable option

Glass Meredian II



Direct ORP (including direct line ORP) Input with integral cable option

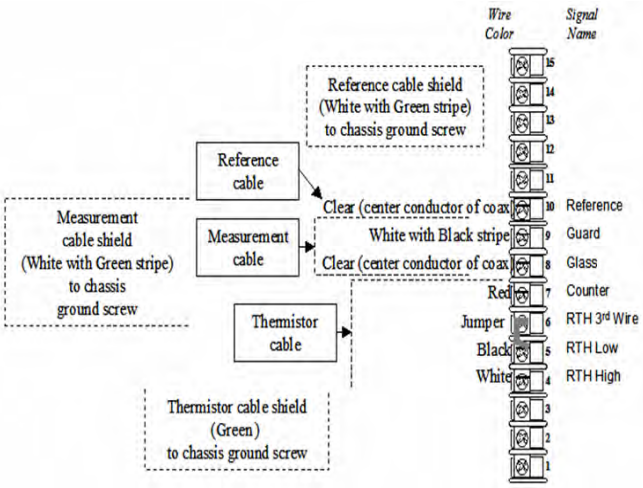
ORP



***Direct Line ORP**

Direct pH Input

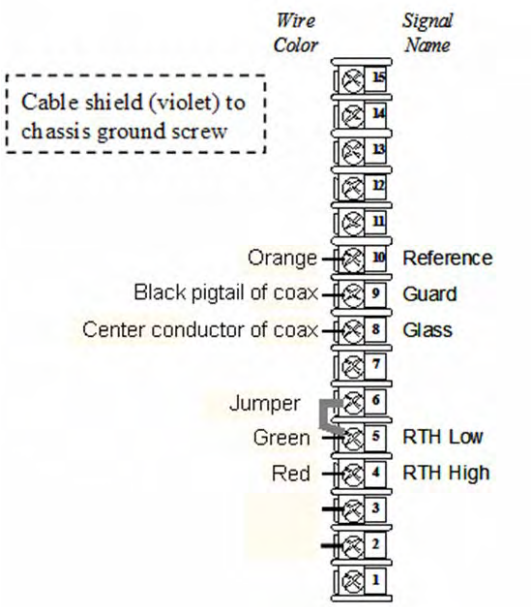
HPW7000



Step 3. Wiring Diagrams, continued

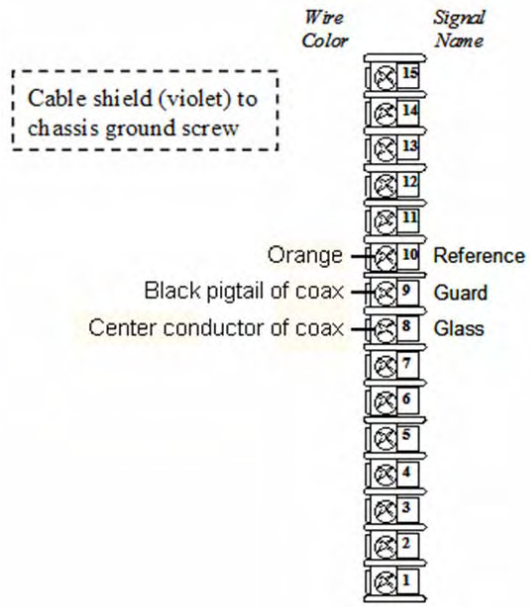
Direct pH Input with quick disconnect cable option

Glass Meredian II



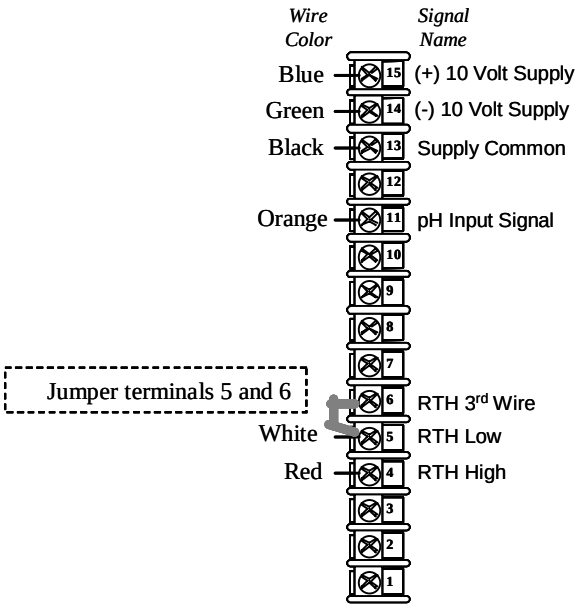
Direct ORP Input with quick disconnect cable option

ORP



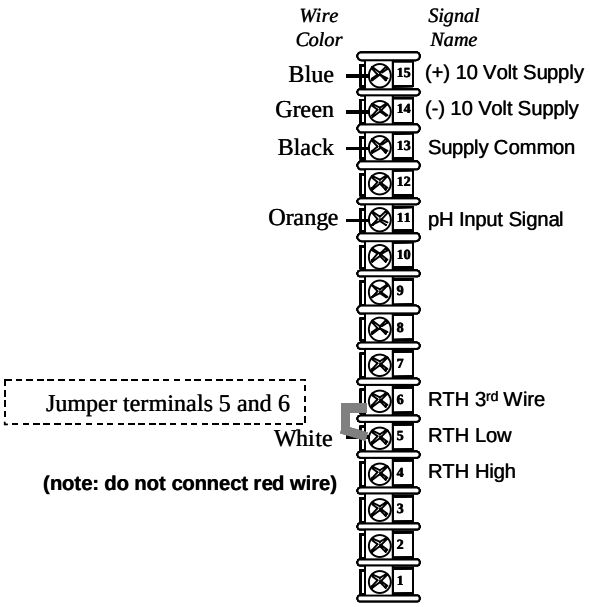
pH Input from External Preamplifier

Glass Meredian External Preamp



pH Input from External Preamplifier

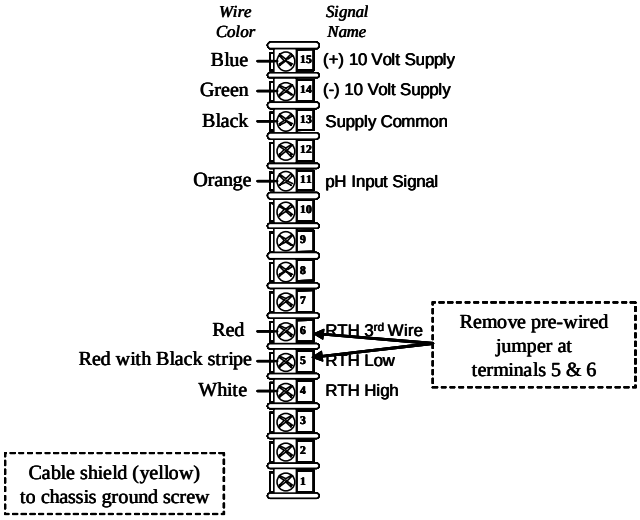
Durafet II External Preamp



Step 3. Wiring Diagrams, continued

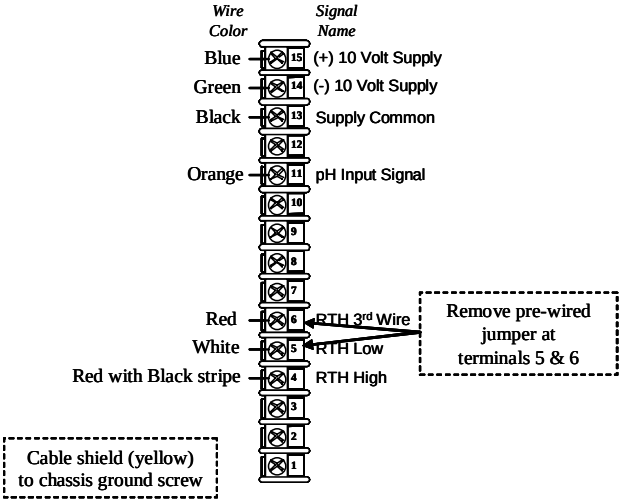
pH Input from Cap Adapter Wiring Diagrams

Durafet II Cap Adapter

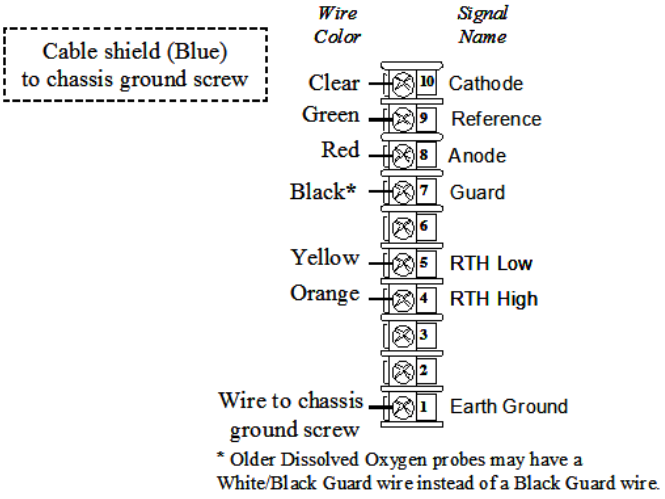


pH Input from Cap Adapter Wiring Diagrams

Durafet III Cap Adapter

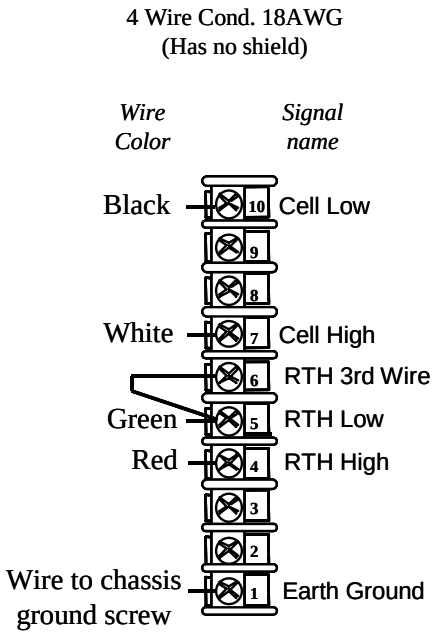


Dissolved Oxygen (with integral cable)



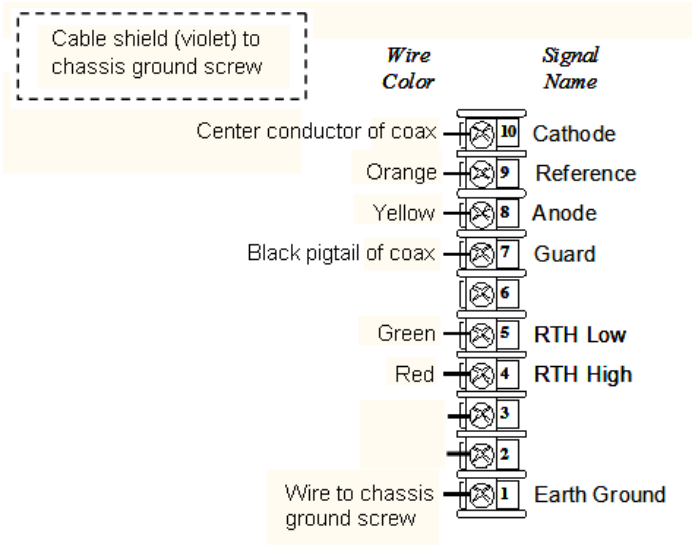
Refer to the Product Manual 70-82-25-119 for connecting and disconnecting sequences

Conductivity (with integral cable)



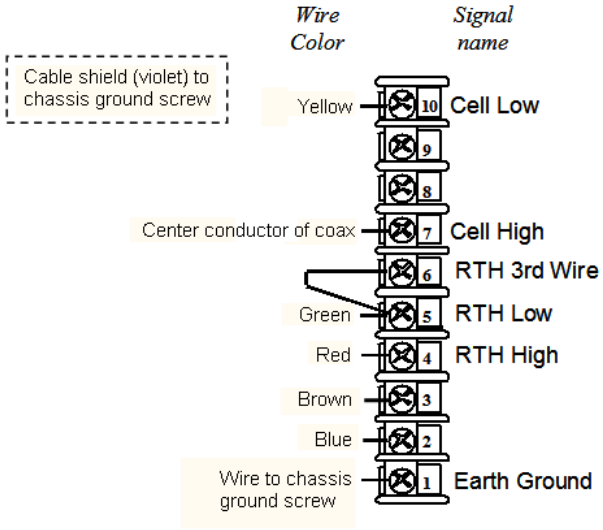
Step 3. Wiring Diagrams (continued)

Dissolved Oxygen (with quick disconnect cable option)

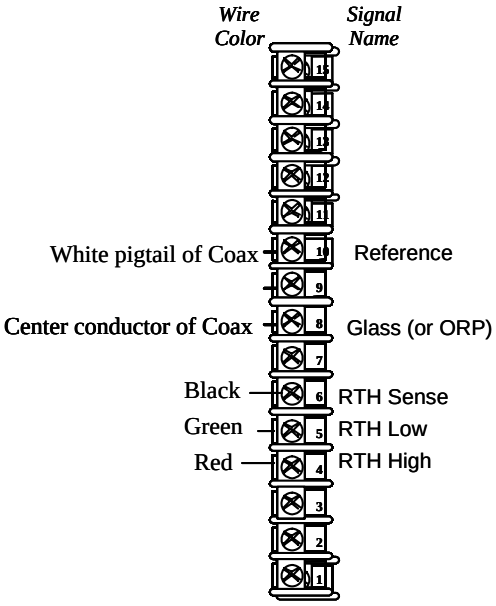


Refer to the Product Manual 70-82-25-119 for connecting and disconnecting sequences

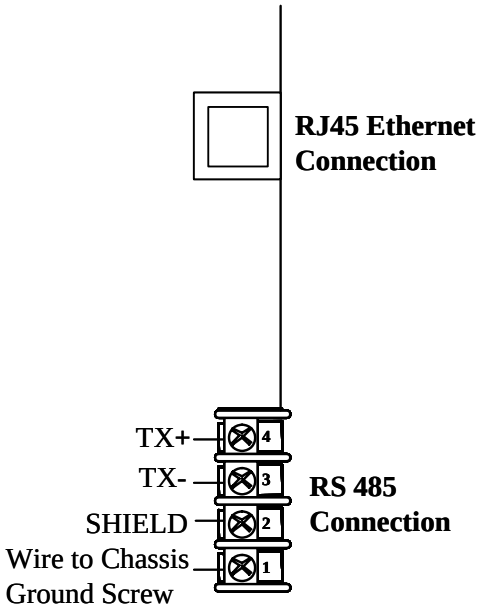
Conductivity (with quick disconnect cable option)



HB Series pH or ORP



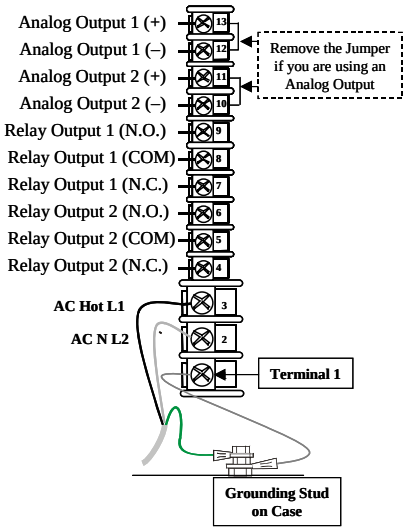
Communications Card



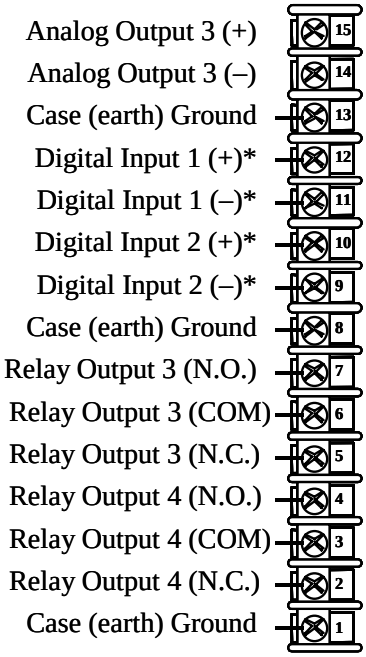
Power Supply and Outputs Wiring Diagrams

Power Supply/Analog Output/Relay Output Card

	***WARNING*** Turn power off at mains before installing AC Power Wiring.
	***WARNING*** The ground terminal must be connected to a reliable earth ground for proper operation and to comply with OSHA and other safety codes If metal conduit is used, connect a bonding wire between conduits. Do not rely upon the conductive coating of the instrument case to provide this connection. Failure to observe this precaution may result in serious personal injury.



Option Card



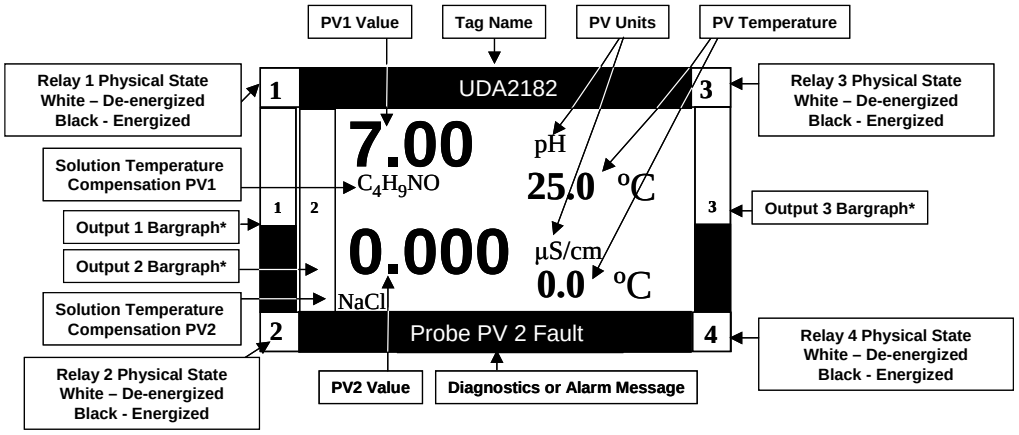
* Contact Closure only

Step 4. Key Navigation and Display

Key	Function
Display	• When process values are on display: Use DISPLAY to cycle between PV Displays, PID Loop Displays, Auto Cycle Displays, Pharma Displays, Cation Display, Status Displays and an Event History Display. • In Setup mode, calibration mode, or calibration edit mode, use DISPLAY to abort current mode and return to the last accessed online display.
Hold	• Engages hold of analog and digital values at their current values and any relays assigned to alarm events or control are deactivated. ATTENTION: This takes precedence over the FAILSAFE function.
Setup	• Selects the configuration main menu when online, in calibration mode, or at a calibration submenu.
Exit	• In configuration menu, exits submenu to parent menu. If at configuration main menu, selects current online display. • In configuration edit mode, aborts editing of current parameter. • When online, acknowledges current alarm event to stop the flashing of the relay indicator and status message area.
Calibrate	• Selects the calibration main screen when online, in configuration mode or at another calibration screen.
▲ or ▼	• When a Setup configuration menu or configuration edit screen is on display: Use Up/Down keys to highlight a different item. • In configuration edit mode, it either selects the parameter character or numerical digit to change or selects an enumerated parameter value: Use Up/Down key to increment the value of the digit at the cursor. Increases/decreases the selected parameter value. • When in display mode, use up/down keys to adjust the contrast on the screen.
◄ or ►	• In configuration edit mode, selects the character or digit to change. • In calibration mode, it selects the next or previous calibration screen. • In Display mode, It selects a single or dual display on a unit with dual input.
Enter	• In configuration menu, selects edit mode for selected parameter. • In configuration edit mode, saves edited parameter selection or value. • In calibration mode, selects parameters to reset and the next calibration screen

Two Input Display

Press Display. You will see:



On the display, the bargraphs are the outputs in Engineering Units, the corner annunciators are the physical relay states.

Single Displays

For **single displays** on a two input unit,

Press ◄► to display a single display for Input 1.

Press ◄► again to display a single display for Input 2.

Press ◄► again to return to a Dual Display.

Step 5. Basic Configuration Procedure

Step	Operation	Press	Result
1	Enter Set Up Mode	Setup	The Main Menu is displayed. Use ▲▼ to scroll and select a setup group (Example – Inputs). The selection will be highlighted.
2	Enter Set Up Group	Enter	The Setup group selected is shown at the top of the screen and will display all the selections within that group. Press ▲▼ to highlight the desired selection.
3	Enter the selection	Enter	The list of parameters for the selection will be displayed. Press ▲▼ to highlight the desired selection.
4	Changing a parameter	Enter	The displayed current value for the parameter is displayed.
5	Change the Value or Selection	Enter ▲▼	The current value for the parameter is displayed. Depending on whether you are changing a text string or a numerical value, follow the " General Rules for Editing" in section 6.3.1 of the manual to make the changes
6	Enter the Value or Selection	Enter	Enters value or selection made into memory after another key is pressed. Repeat the procedure for changing any parameter for any group.
7	To Abort the Changes Made	Exit	Any changes made to a parameter value will revert to the original value before editing.
8	Exit Setup Mode	Exit	Until you see the main Setup screen.

Step 6. Configuration Record Sheet

Enter the value or selection for each prompt on this sheet so you will have a record of how your analyzer was configured.

Note: for details and other configurable parameters, see the UDA2182 manual, document #70-82-25-119.

Sub-menu	Parameter	Selection or Range of Setting	User Selection
Inputs Configuration			
Input 1 or 2 pH/ORP	PV Type	pH Glass; pH HPW; pH Durafet; or ORP	
	Range	Read Only	
	Temp Input (ORP only)	Disable; Enable to allow "Temp Type" selection	
	Temp Type	8550Ω Thermistor; 1000Ω Resistance Temperature Detector; or Manual	
	Temp Value	-10.0 to 110.0ºC or 14.0 to 230.0ºF (Value for "Manual" selection at "Temp Type) See "Maintenance" set up group for units selection	
	Solu Temp Comp (Not ORP)	None; Custom; H_20; NH_3; PO_4; or C_4H_9NO	
	Solution pH/°C (Not ORP)	*(Solu Temp Comp = Custom)* 0.000 to -0.050	
	Bias	-99999 to 99999	
	Failsafe	-99999 to 99999	
	Filter Time	0 to 120	
Input 1 or 2 Preamp pH	PV Type	pH Glass or pH Durafet	
	Range	Read Only	
	Temp Input (ORP only)	Disable; Enable to allow "Temp Type" selection	
	Temp Type	8550Ω Thermistor; 1000Ω Resistance Temperature Detector; or Manual	
	Temp Value	-10.0 to 110.0ºC or 14.0 to 230.0ºF (Value for "Manual" selection at "Temp Type) See "Maintenance" set up group for units selection	
	Solu Temp Comp (Not ORP)	None; Custom; H_20; NH_3; PO_4; or C_4H_9NO	
	Solution pH/°C (Not ORP)	*(Solu Temp Comp = Custom)* 0.000 to -0.050	
	Bias	-99999 to 99999	
	Failsafe	-99999 to 99999	
	Filter Time	0 to 120	
Input 1 or Input 2 Conductivity	PV Type	Conduc µS (NIST default); Conduc mS (ISO default); Concentratn; TDS ppb; TDS ppm; TDS ppt; or Resistivity (Availability dependant on Cell Constant selection)	
	Cell Constant	0.01; 0.1; 1.0; 10.0; 25.0; or 50.0	
	Range	Read Only	
	Cal Factor	0.850 to 1.150	
	TDS Factor (only PV Type TDS)	0.010; 1.000; or 2.000	

Sub-menu	Parameter	Selection or Range of Setting	User Selection
	Temp Type	8550Ω Therm; 1000Ω RTD; Manual	
	Temp Value	-10.0 to 110.0ºC or 14.0 to 230.0ºF (Value for "Manual" selection at "Temp Type) See "Maintenance" set up group for units selection	
	Solu Temp Comp	None; Custom; H_20; NH_3; PO_4; C_4H_9NO; HCl; NaCl; H_2SO_4; or NaOH	
	Wire Len Units	Feet or Meters	
	Wire Len Feet	0 to 1000 ft	
	Wire Len Meters	0 to 304.80	
	Wire Size Units	AWG or Sq mm	
	Wire Size AWG	16 AWG; 18 AWG; 20 AWG; or 22 AWG	
	Wire Size Sq mm	0.33 to 2.08	
	Bias	-9999.00 to 9999.00	
	Failsafe	0.0 to 2000	
	Filter Time	0 to 120	
Input 1 or Input 2 Dissolved Oxygen	PV Type	Pct Sat - percent saturation; DO Concentration	
	Range	Read Only	
	Temp Type	5000Ω Therm; 1000Ω RTD; Manual	
	Temp Value	0 to 60ºC or 32 to 140ºF (Value for "Manual" selection at "Temp Type) See "Maintenance" set up group for units selection	
	Salinity Type	Manual; Conduc Input	
	Salinity ppt	0.00 to 40.00ppt ("Manual" Salinity type only)	
	Pressure Type	Manual; Sensor	
	Pressure mm Hg	500.0 to 800.0 (Manual Pressure type only)	
	Bias	-20.00 to 20.00 PPM (If PPM board installed) -2000 to 2000 PPB (If PPB board installed)	
	Failsafe	0.000 to 20.00 PPM (If PPM board installed) 0.000 to 2000 PPB (If PPB board installed)	
	Filter time	0 to 120.0	
Outputs Configuration			
Output 1 Output 2 Output 3	Source	None; Input 1 PV; Input 1 Temp; Input 2 PV; or Input 2 Temp; Math 1; Math 2; Math 3; Math 4; Switch 1; Switch 2: Control 1; Control 2.	
	High Range	-99999.00 to 99999.00	
	Low Range	-99999.00 to 99999.00	
	Slew Time	0.000 to 999.00	
	mA Range High	0 to 20	
	mA Range Low	0 to 20	
	mA Limit High	0 to 21	
	mA Limit Low	0 to 21	
Relays Configuration			
Relay Types	Relay 1 Type, Relay 2 Type, Relay 3 Type, Relay 4 Type	Digital Output Relay; Time Proportional Output Relay; Frequency Proportional Output; On/Off Control relay	
Digital Output Relay	Digital Source	None; Alarms 1 thru 4; Monitor 1 and Monitor 2; Logic 1 thru 4; Events 1 thru 4; Digital IN 1 and 2; Input 1 and 2 Fault; Out 1, 2, and 3 Fault; Hold; Four Control Alarms.	
	Invert	Enable or Disable	
TPO - Time Proportional Output	Source	None; Input 1 PV; Input 1 Temp; Input 2 PV; or Input 2 Temp; Math 1 thru 4; Switch 1 and 2; Control 1 and 2	
	High Range	-99999 to 99999	
	Low Range	-99999 to 99999	
	Invert	Enable or Disable	
	Cycle Time	1 to 120 seconds	
	Min Off Time	0 to 15 seconds	

Sub-menu	Parameter	Selection or Range of Setting		User Selection
	Min On Time	0 to 15 seconds		
Frequency Proportional Output	Source	None; Input 1 PV; Input 1 Temp; Input 2 PV; or Input 2 Temp; Math 1 thru 4; Switch 1 and 2; Control 1 and 2		
	High Range	-99999 to 99999		
	Low Range	-99999 to 99999		
	Invert	Enable or Disable		
	Cycle Time	1 to 120 seconds		
	On Time	0 to 120 seconds		
On Off Control Relay	Source	None; Input 1 PV; Input 1 Temp; Input 2 PV; or Input 2 Temp; Math 1 thru 4; Switch 1 and 2; Control 1 and 2		
	High Range	-99999 to 99999		
	Low Range	-99999 to 99999		
	Invert	Enable or Disable		
	Cycle Time	1 to 120 seconds		
	On Time	0 to 120 seconds		
Alarms Configuration				
Alarm 1; Alarm 2; Alarm 3 Alarm 4	Source	None; Input 1 PV; Input 1 Temp; Input 2 PV; or Input 2 Temp; Calc Value		
	Type (alarm action)	None; High; Low		
	Setpoint Value	-99999 to 99999.9		
	Alm Hysteresis	0.0 to 9999.99 in engineering units		
	On Delay	0 to 120 seconds		
	Event	None; Event 1; Event 2; Event 3; Event 4		
Momitor 1; Monitor 2	Source	None; Input 1 PV; Input 1 Temp; Input 2 PV; or Input 2 Temp; Calc Value		
	Monitor Type	None; High; Low		
	Setpoint Value	-99999 to 99999.9		
	Hysteresis	0.0 to 9999.99 in engineering units		
	On Delay	0 to 120 seconds		
Communication Configuration				
	IR Front Panel Configuration	Mode	Disable; Enable; Setup; Address	
		Address	0 – 999	
	Modbus Configuration	Word Swap	No; Yes	
	RS485 Configuration	Address	0 – 999	
		Baud Rate	2400; 4800; 9600; 19200; 38400; 57600; 115200	
	Ethernet Configuration	DHCP	No; Yes	
		IP Addr Octet1	1 - 223	
		IP Addr Octet2	0 - 255	
		IP Addr Octet3	0 - 255	
		IP Addr Octet4	0 - 255	
		SbntMsk Octet1	0 - 255	
		SbntMsk Octet2	0 - 255	
		SbntMsk Octet3	0 - 255	
		SbntMsk Octet4	0 - 255	
		Dflt Gtwy Octet1	1 - 223	
		Dflt Gtwy Octet2	0 - 255	
		Dflt Gtwy Octet3	0 - 255	
		Dflt Gtwy Octet4	0 - 255	
		DNS srvr Octet1	1 - 223	
		DNS srvr Octet2	0 - 255	
		DNS srvr Octet3	0 - 255	
		DNS srvr Octet4	0 - 255	

Sub-menu	Parameter	Selection or Range of Setting	User Selection
Maintenance Configuration			
	SW Version	Read Only	
	Input 1 and Input 2 Type	Read Only	
	Language	English; Italiano; Deutsch; Francais; Espanol (Language set EE) English; Russian; Turkish (Language set RT) English; Polish; Czech (Language set PC)	
	Language Set	Read only	
	Tag Name	0 to 21 Characters	
	Password	0000 to 9999 or AAAA to ZZZZ	
	Conductivity Units Type	NIST; ISO	
	Temperature Units	º C; º F	
	Mains Frequency	60 Hz; 50 Hz	
	Display Test	Off; Enable	
	Keypad Test	Off; Enable	
	Output Level	Off; 0%; 25%; 50%; 75%; 100%; Low Limit; High Limit	
	Relay State	Off; Energized; De-energized	
	Unit Reset	Off; Enable	

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Honeywell

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www.honeywell.com/ps

70-82-25-120 Rev.6
January 2009