

Instruction Sheet

PN 51A-399VP/rev.J

January 2011

Model 399VP

General Purpose pH/ORP Sensor

For additional information, please visit our website at

www.emersonprocess.com/raihome/liquid/

SPECIFICATIONS

Sensor Type: General purpose 399VP

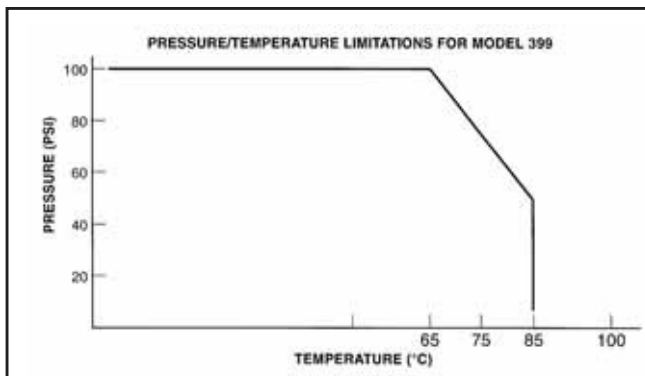
Measured Range: pH: ACCUGLASS 0-14
ORP: -1500 to +1500 mV

Percent Linearity Over pH Range:

	GPLR Hemi Bulb	Flat Bulb
1-2 pH	94%	93%
2-12 pH	99%	98%
12-13 pH	97%	95%
13-14 pH	92%	—

Operating Temperature: 0° to 85°C (32° to 185°F)
Automatic temperature compensation 0° to 85°C (32° to 185°F), Temperature compensation is not required for 399 ORP when used with Models 1060, or 1181 ORP

Maximum Pressure: 790 kPa [abs] (100 psig) at 65°C (see Graph 1 below)



Flow Rate: up to 2 ft/sec

Materials of Construction: Tefzel, glass, ceramic, & Viton

Materials of ORP: Platinum

Process Connections: 1 in. MNPT, 2 places

VP8 Cable: use PN 24281-00

Weight/Shipping Weight: 0.45 kg/0.9 kg (1 lb/2 lb)

- High pH glass provides greater accuracy over 12.5 pH
- HF glass provides improved resistance to hydrofluoric acid up to 300 ppm

WARNING



Before removing the sensor, be absolutely certain that the process pressure is reduced to 0 psig and the process temperature is lowered to a safe level!



MODEL 399VP

Insertion/Submersion Sensor with new VP8 connector (uses mating VP8 cable)

CAUTION

SENSOR/PROCESS APPLICATION COMPATIBILITY

The wetted sensor materials may not be compatible with process composition and operating conditions. Application compatibility is entirely the responsibility of the user.

CAUTION

The solution used during calibration is an acid and should be handled with care. Follow the directions of the acid manufacturer. Wear the proper protective equipment. Do not let the solution come in contact with skin or clothing. If contact with skin is made, immediately rinse with clean water.

ATEX DIRECTIVE

Special Conditions for safe use

1. All pH/ORP sensors have a plastic enclosure which must only be cleaned with a damp cloth to avoid the danger due to a build up of an electrostatic charge.
2. All pH/ORP sensor Models are intended to be in contact with the process fluid and may not meet the 500V r.m.s. a.c. test to earth. This must be taken into consideration at installation.

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WIRING

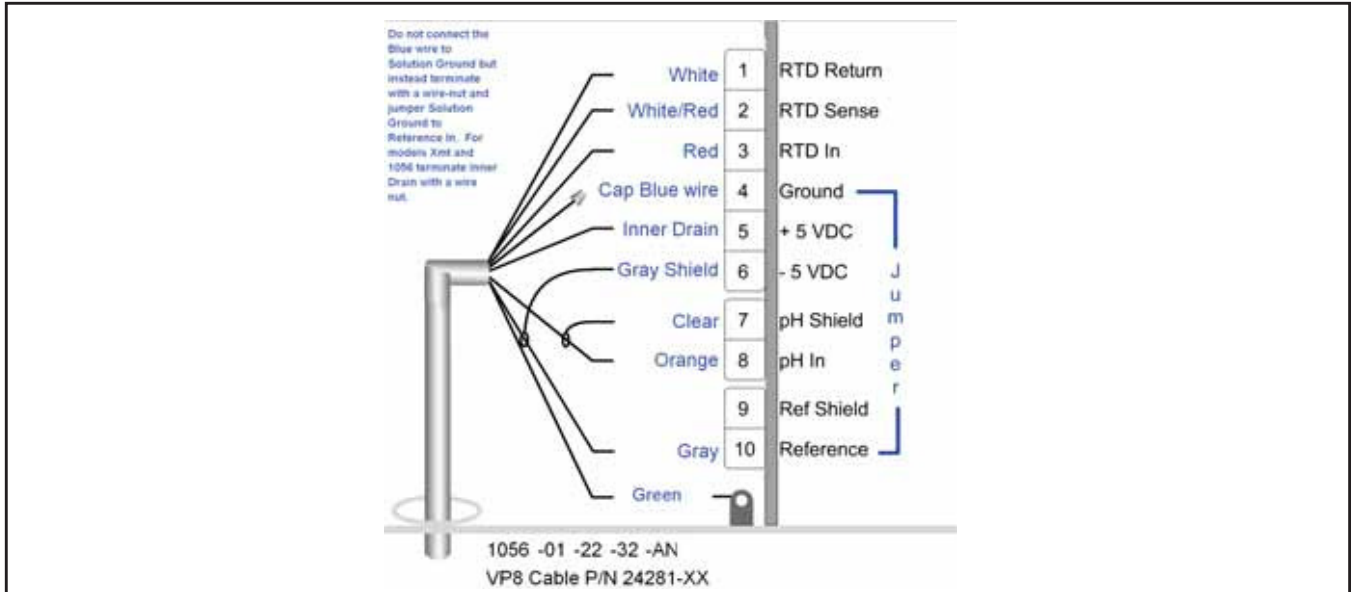


FIGURE 6. Model 1056. This is the standard wiring for VP8 cable assembly. VP8 cable works both with VP8 and VP6 sensor connector. VP8 cable is required for SMART communication.

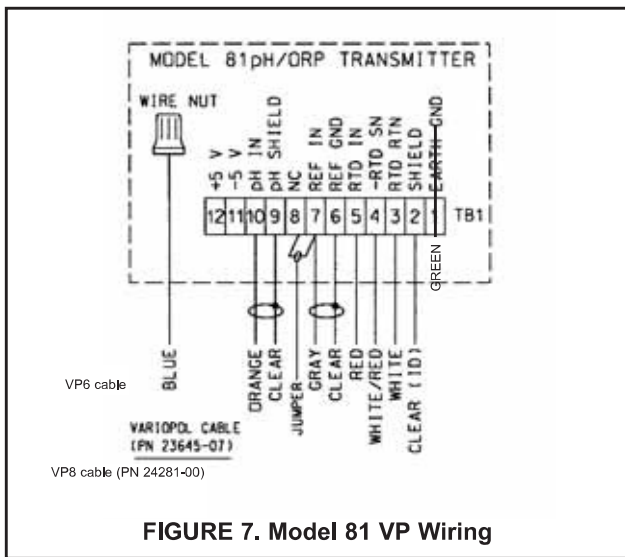


FIGURE 7. Model 81 VP Wiring

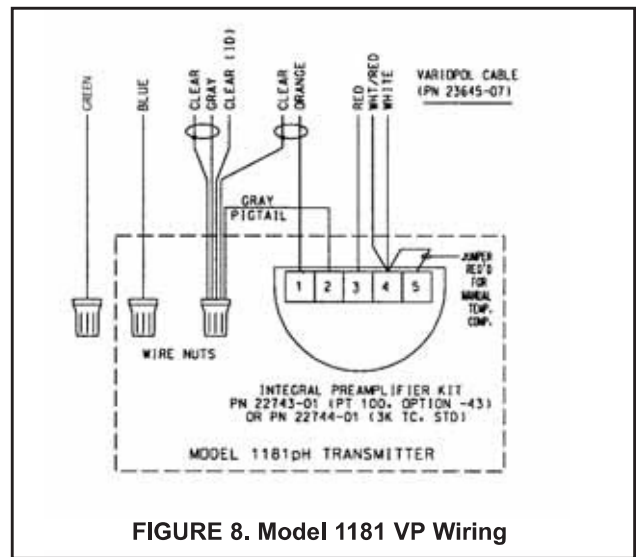


FIGURE 8. Model 1181 VP Wiring

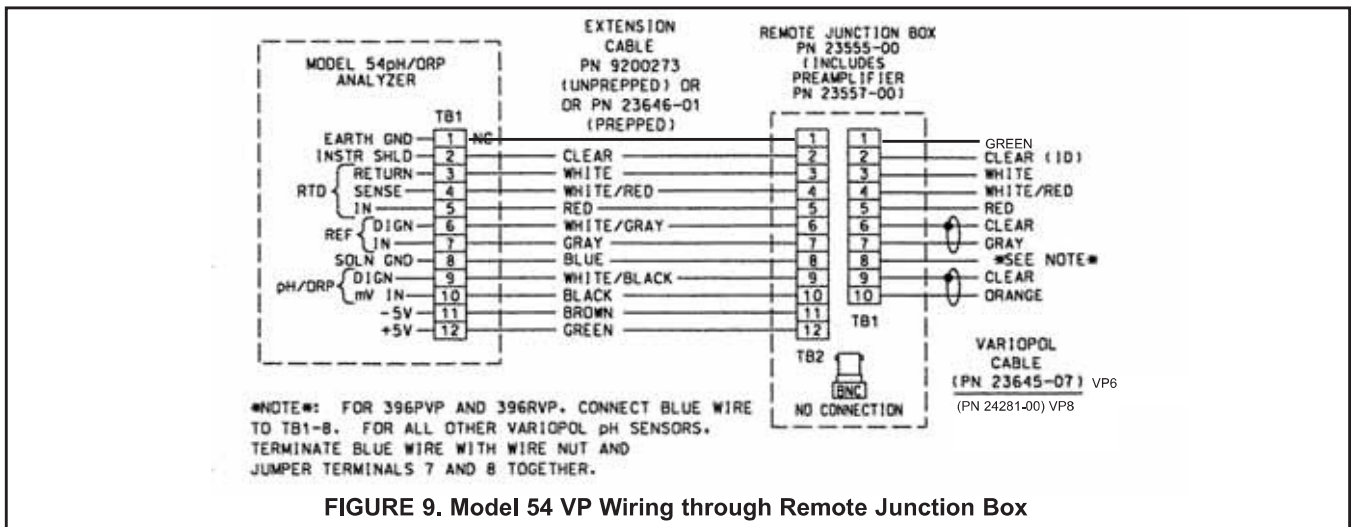


FIGURE 9. Model 54 VP Wiring through Remote Junction Box

ACCESSORIES

PART NUMBER	DESCRIPTION
23645-06	15 ft cable with mating VP6 connector, prepped with BNC on analyzer end
23645-07	15 ft cable with mating VP6 connector, prepped without BNC on analyzer end
24281-00	15 ft. cable with mating VP8 connector
24281-01	25 ft. cable with mating VP8 connector
24281-02	2.5 ft. cable with mating VP8 connector
24281-03	50 ft. cable with mating VP8 connector
24281-04	100 ft. cable with mating VP8 connector
24281-05	4 ft. cable with mating VP8 connector
24281-06	10 ft. cable with mating VP8 connector
24281-07	20 ft. cable with mating VP8 connector
24281-08	30 ft. cable with mating VP8 connector
915240-03	Process tee with NPT connection threads
22719-02	Junction box
12707-00	Jet cleaner
23242-02	Insertion adapter
24091-00	Low flow cell



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