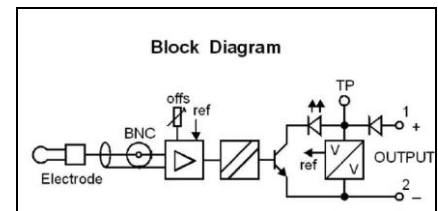




# pH / REDOX TRANSMITTER (v3) BPHT229

## DESCRIPTION

The BpHT229 has been designed for input of the standard combined reference glass electrode, via a BNC socket mounted onto the module front. Remote measurement points no longer require expensive cabling as the transmitter can be mounted close to the process with a low cost 4 - 20mA signal cable transferring the pH signal to control rooms and other locations. Standard output is 4 - 20mA with a minimum supply voltage of 8V. This enables the pHT229 to be used in 12V battery supply systems. Other factory set output configurations are 10 - 50mA loop powered and 0 - 10mA, 0 - 20mA or voltage output in 3-wire connection. The input from the electrode is fully isolated to output to prevent earth loop problems associated with earthed tank systems. Double surge protection is standard with all Series 200 loop powered transmitters to prevent failure due to spikes induced by DC switched inductive loads. The BpHT229 features a high impedance input provides signal reversing (pH), buffering and scaling to cover almost any application. Final non-interacting ZERO and SPAN adjustments are accessible from the front of the module. A front mounted L.E.D. and a test socket verify module function and assist in calibration checks without disconnection of output wires.



## General Specifications

Size:	22.5W x 68H x 109D (mm)
Mounting:	Clip for 35mm DIN-Rail
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	130 g.
Protection class:	IP40.
Accuracy error:	<0.1%.
Linearity error:	<0.1%.
Ambient operating temperature range:	-10...+65°C.
Temperature drift error:	<0.5% within operating range.
Supply voltage:	8 - 40V continuous (50V 30 seconds).
Load for 4 - 20mA output:	$RL \cdot \max = \frac{\text{supply voltage} - 8V}{0.02A} [\Omega]$ .
Load change effect:	0.1% up to RL max.
Response time:	0.2 sec for T <sub>90</sub> .
Internal offset adjust (Zero suppression) :	±50%.
Front Zero adjust:	+20% / -10%.
Front Span adjust:	±25%.
Input range:	+400...-400mV (pH), 0 - 1000mV (ORP).
Input impedance:	10 <sup>12</sup> Ω.
Input/output isolation:	> 2kV r.m.s.
Probe temp. compensation:	None - refer pHT129 for compensation.
Electromagnetic compatibility:	Complies with EN 50081-1, EN 50082-2, EN 61010-1



For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

### TYPE NO. DESIGNATION

#### Output:

1 = 4 - 20mA.	} 2-wire.	*) 6 = 0 - 1V.	} 3-wire
2 = 10 - 50mA.			
*) 3 = 0 - 1mA.	} 3-wire	*) 7 = 0 - 5V, min supply 10.5Vdc	} 0V ref
*) 4 = 0 - 10mA.			
*) 5 = 0 - 20mA.			
		*) 8 = 0 - 10V, min supply 15.5Vdc	
		*) 9 = Other (Specify).	

#### Input:

1 = 0 - 14pH.	6 = Other pH.
2 = 2 - 12pH.	7 = 0 - 1000mV Redox (ORP).
3 = 4 - 10pH.	8 = Other Redox. (Specify)
4 = 5 - 9pH.	*) 9 = Other type of electrode. (Specify)
5 = 6 - 8pH.	

#### Action:

1 = Direct.	2 = Reverse.
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#### Options:

- 0 = None.
- \*) 1 = Remote mounted BNC connector (1m cable).
- \*) = Price Extra.

### Front Control Explanation

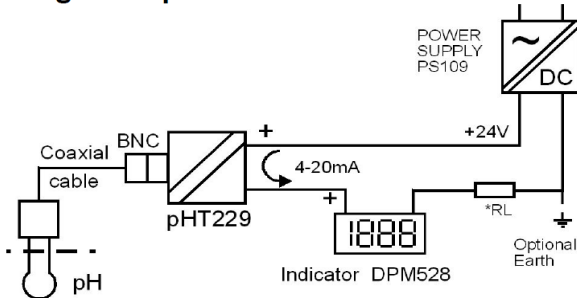
Test socket - output signal access with reference to terminal (1) loop integrity is maintained when digital multimeter Rin <30 Ω is used.

Loop indicator - dim at 4mA, bright at 20mA.

SPAN (slope) adjust 15 turn.

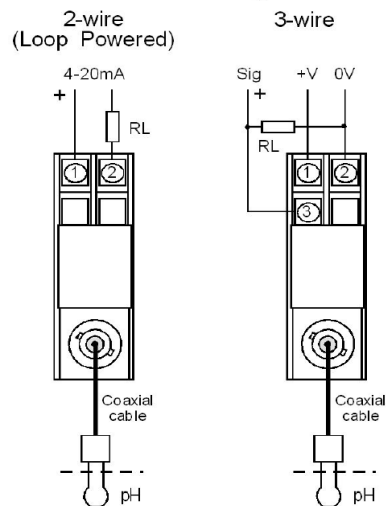
ZERO (offset) adjust 15 turn. Usually 12mA for pH7 = 0mV or 4mA for 0mV Redox

### Wiring Example



Note: RL is input load of PLC, VDS, or other process instrument.

### Connection Diagrams



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