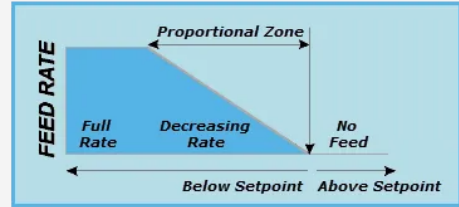


Proportional Control

The Proportional Control mode is recommended only for small bodies of water to prevent overfeeding from oversized feeders. In this mode, the outlet relay is turned ON and OFF at a rate that decreases as the set-point is neared. The rate goes down from 100% ON in a 100-second CYCLE TIME at the edge of the Progressive Zone to 0% at the set-point (see schematic).



Proportional control operates only within the defined Progressive Zone, outside the zone, control reverts to standard ON/OFF mode. The wider the Progressive Zone is, the more slowly and precisely the controller will return to the setpoint. As the width of the Progressive Zone is decreased, the reaction becomes faster and faster until eventually, one gets near the conditions of ON/OFF control. * It should be noted that longer time limits may be required to account for the slower effective feed rates.

pH 7.5 mV															Setpoint	Deadband
50%	40%	30%	25%	20%	15%	12%	10%	8%	6%	5%	4%	3%	2%			
off	off	off	off	off	off	off	off	off	off	off	off	off	off			
0.67	0.83	1.11	1.33	1.67	2.22	2.78	3.33	4.17	5.56	6.67	8.33	11.11	16.67	7.525		
1.33	1.67	2.22	2.67	3.33	4.44	5.56	6.67	8.33	11.11	13.33	16.67	22.22	33.33	7.55		
2.00	2.50	3.33	4.00	5.00	6.67	8.33	10.00	12.50	16.67	20.00	25.00	33.33	50.00	7.575	1%	
2.67	3.33	4.44	5.33	6.67	8.89	11.11	13.33	16.67	22.22	26.67	33.33	44.44	66.67	7.6		
3.33	4.17	5.56	6.67	8.33	11.11	13.89	16.67	20.83	27.78	33.33	41.67	55.56	83.33	7.625		
4.00	5.00	6.67	8.00	10.00	13.33	16.67	20.00	25.00	33.33	40.00	50.00	66.67	100.00	7.65	2%	
4.67	5.83	7.78	9.33	11.67	15.56	19.44	23.33	29.17	38.89	46.67	58.33	77.78		7.675		
5.33	6.67	8.89	10.67	13.33	17.78	22.22	26.67	33.33	44.44	53.33	66.67	88.89		7.7		
6.00	7.50	10.00	12.00	15.00	20.00	25.00	30.00	37.50	50.00	60.00	75.00	100.00		7.725	3%	
6.67	8.33	11.11	13.33	16.67	22.22	27.78	33.33	41.67	55.56	66.67	83.33			7.75		
7.33	9.17	12.22	14.67	18.33	24.44	30.56	36.67	45.83	61.11	73.33	91.67			7.775		
8.00	10.00	13.33	16.00	20.00	26.67	33.33	40.00	50.00	66.67	80.00	100.00			7.8	4%	
8.67	10.83	14.44	17.33	21.67	28.89	36.11	43.33	54.17	72.22	86.67				7.825		
9.33	11.67	15.56	18.67	23.33	31.11	38.89	46.67	58.33	77.78	93.33				7.85		
10.00	12.50	16.67	20.00	25.00	33.33	41.67	50.00	62.50	83.33	100.00				7.875	5%	
10.67	13.33	17.78	21.33	26.67	35.56	44.44	53.33	66.67	88.89					7.9		
11.33	14.17	18.89	22.67	28.33	37.78	47.22	56.67	70.83	94.44					7.925		
12.00	15.00	20.00	24.00	30.00	40.00	50.00	60.00	75.00	100.00					7.95		
12.67	15.83	21.11	25.33	31.67	42.22	52.78	63.33	79.17						7.975		
13.33	16.67	22.22	26.67	33.33	44.44	55.56	66.67	83.33						8		
14.00	17.50	23.33	28.00	35.00	46.67	58.33	70.00	87.50						8.025		
14.67	18.33	24.44	29.33	36.67	48.89	61.11	73.33	91.67						8.05		
15.33	19.17	25.56	30.67	38.33	51.11	63.89	76.67	95.83						8.075		
16.00	20.00	26.67	32.00	40.00	53.33	66.67	80.00	100.00						8.1		
16.67	20.83	27.78	33.33	41.67	55.56	69.44	83.33							8.125		
17.33	21.67	28.89	34.67	43.33	57.78	72.22	86.67							8.15		
18.00	22.50	30.00	36.00	45.00	60.00	75.00	90.00							8.175		
18.67	23.33	31.11	37.33	46.67	62.22	77.78	93.33							8.2		
19.33	24.17	32.22	38.67	48.33	64.44	80.56	96.67							8.225		
20.00	25.00	33.33	40.00	50.00	66.67	83.33	100.00							8.25		
20.67	25.83	34.44	41.33	51.67	68.89	86.11								8.275		
21.33	26.67	35.56	42.67	53.33	71.11	88.89								8.3		
22.00	27.50	36.67	44.00	55.00	73.33	91.67								8.325		
22.67	28.33	37.78	45.33	56.67	75.56	94.44								8.35		
23.33	29.17	38.89	46.67	58.33	77.78	97.22								8.375		
24.00	30.00	40.00	48.00	60.00	80.00	100.00								8.4		
24.67	30.83	41.11	49.33	61.67	82.22									8.425		
25.33	31.67	42.22	50.67	63.33	84.44									8.45		
26.00	32.50	43.33	52.00	65.00	86.67									8.475		
26.67	33.33	44.44	53.33	66.67	88.89									8.5		
27.33	34.17	45.56	54.67	68.33	91.11									8.525		
28.00	35.00	46.67	56.00	70.00	93.33									8.55		
28.67	35.83	47.78	57.33	71.67	95.56									8.575		
29.33	36.67	48.89	58.67	73.33	97.78									8.6		
30.00	37.50	50.00	60.00	75.00	100.00									8.625		

pH 7.5 mV															Setpoint	Deadband
50%	40%	30%	25%	20%	15%	12%	10%	8%	6%	5%	4%	3%	2%			
30.67	38.33	51.11	61.33	76.67											8.65	
31.33	39.17	52.22	62.67	78.33											8.675	
32.00	40.00	53.33	64.00	80.00											8.7	
32.67	40.83	54.44	65.33	81.67											8.725	
33.33	41.67	55.56	66.67	83.33											8.75	
34.00	42.50	56.67	68.00	85.00											8.775	
34.67	43.33	57.78	69.33	86.67											8.8	
35.33	44.17	58.89	70.67	88.33											8.825	
36.00	45.00	60.00	72.00	90.00											8.85	
36.67	45.83	61.11	73.33	91.67											8.875	
37.33	46.67	62.22	74.67	93.33											8.9	
38.00	47.50	63.33	76.00	95.00											8.925	
38.67	48.33	64.44	77.33	96.67											8.95	
39.33	49.17	65.56	78.67	98.33											8.975	
40.00	50.00	66.67	80.00	100.00											9	
40.67	50.83	67.78	81.33												9.025	
41.33	51.67	68.89	82.67												9.05	
42.00	52.50	70.00	84.00												9.075	
42.67	53.33	71.11	85.33												9.1	
43.33	54.17	72.22	86.67												9.125	
44.00	55.00	73.33	88.00												9.15	
44.67	55.83	74.44	89.33												9.175	
45.33	56.67	75.56	90.67												9.2	
46.00	57.50	76.67	92.00												9.225	
46.67	58.33	77.78	93.33												9.25	
47.33	59.17	78.89	94.67												9.275	
48.00	60.00	80.00	96.00												9.3	
48.67	60.83	81.11	97.33												9.325	
49.33	61.67	82.22	98.67												9.35	
50.00	62.50	83.33	100.00												9.375	
50.67	63.33	84.44													9.4	
51.33	64.17	85.56													9.425	
52.00	65.00	86.67													9.45	
52.67	65.83	87.78													9.475	
53.33	66.67	88.89													9.5	
54.00	67.50	90.00													9.525	
54.67	68.33	91.11													9.55	
55.33	69.17	92.22													9.575	
56.00	70.00	93.33													9.6	
56.67	70.83	94.44													9.625	
57.33	71.67	95.56													9.65	
58.00	72.50	96.67													9.675	
58.67	73.33	97.78													9.7	
59.33	74.17	98.89													9.725	
60.00	75.00	100.00													9.75	

pH 7.5 mV															
50%	40%	30%	25%	20%	15%	12%	10%	8%	6%	5%	4%	3%	2%	Setpoint	Deadband
60.67	75.83													9.775	
61.33	76.67													9.8	
62.00	77.50													9.825	
62.67	78.33													9.85	
63.33	79.17													9.875	
64.00	80.00													9.9	
64.67	80.83													9.925	
65.33	81.67													9.95	
66.00	82.50													9.975	
66.67	83.33													10	
67.33	84.17													10.025	
68.00	85.00													10.05	
68.67	85.83													10.075	
69.33	86.67													10.1	
70.00	87.50													10.125	
70.67	88.33													10.15	
71.33	89.17													10.175	
72.00	90.00													10.2	
72.67	90.83													10.225	
73.33	91.67													10.25	
74.00	92.50													10.275	
74.67	93.33													10.3	
75.33	94.17													10.325	
76.00	95.00													10.35	
76.67	95.83													10.375	
77.33	96.67													10.4	
78.00	97.50													10.425	
78.67	98.33													10.45	
79.33	99.17													10.475	
80.00	100.00													10.5	
80.67														10.525	
81.33														10.55	
82.00														10.575	
82.67														10.6	
83.33														10.625	
84.00														10.65	
84.67														10.675	
85.33														10.7	
86.00														10.725	
86.67														10.75	
87.33														10.775	
88.00														10.8	
88.67														10.825	
89.33														10.85	
90.00														10.875	
90.67														10.9	
91.33														10.925	
92.00														10.95	
92.67														10.975	
93.33														11	
94.00														11.025	
94.67														11.05	
95.33														11.075	
96.00														11.1	
96.67														11.125	
97.33														11.15	
98.00														11.175	
98.67														11.2	
99.33														11.225	
100.00														11.25	