

# Diamond Power® Series II — Single Detection Circuit (SDC) Alarm Module

The Diamond Power® Series II – single detection circuit (SDC) alarm module from Babcock & Wilcox (B&W) represents the latest advancement in electronic level detection designed to meet increasing industry demand for a reliable, cost effective and versatile means of sensing water in high temperature and pressure applications.

The SDC alarm measures resistance, and reports the presence of either steam or water based on fluid conductivity.

The probe can be mounted directly to the pressure vessel by welding the probe connector in a tee or column. Its Swagelok® metal-to-metal seal provides a leak-proof installation.

The SDC alarm module is an effective electronic replacement for mechanical floats switches and can be conveniently located up to 65 ft (20 m) away from the probe with low conductivity water, and 500 ft (152 m) away with high conductivity water.

Three LED indicators provide visual verification, showing “WATER,” “STEAM” and “POWER/CLOCK.” The “POWER/CLOCK” LED flashes under normal conditions to show that power is present and the clock is properly functioning.

## Features

- Stand-alone plug-in module
- 120 or 240 VAC operations, 50/60 Hz
- Power/Clock fault monitor
- Local indication (up to 500 ft [152 m] away)
- Two “FORM-C” type relay contacts

## Benefits

- Relay can be set as “fail safe” in case of power failure
- Proven electronic sensor – no moving parts to fail
- Field configurable to handle service requirements
- Ideal replacement for float switches



## Applications

- Main steam header drain
- Hot and cold reheat drains
- Turbine extraction drain
- Turbine water induction prevention (TWIP)
- Main boiler high/low alarms and trips
- Hot well alarms
- Deaerator storage level alarms
- HP and LP feedwater heater – column level alarms and trips
- Generator coolant liquid level
- Blow-down flash tank alarm
- Turbine casing drains

(Continued on reverse side)

## Specifications

Supply Voltage	120VAC or 240VAC
Supply Frequency	50/60 Hz
Supply Current	1/2 amp @ 120VAC and 1/4 amp @ 240 VAC Relay Contact: 2 Form "C"
Contact Rating	5 Amp at 24VDC or 120VAC, 1/3 hp @ 120VAC
LED Indicators	Water, Steam, Power/Clock
Conductivity Capability	0.5 micro mho and up
Probe Output Voltage	± 5 VDC
Low Pressure Probe Rating	650 psi @ 500F (4.5 MPa @ 260C)
High Pressure Probe Rating	Above 650 psi (4.5 MPa)
Operating Ambient Temperature Electronics	32 to 140F (0 to 60C)
Weight	2.3 lb (1 kg)

## SDC Alarm Module System

Each single detection module system includes:

- Electronic module
- HP or LP probe
- Probe cover
- Three ft (1 m) of HT wire
- 20 in. (0.5 m) of braided conduit
- 1.5 in. (13 mm) probe connector welded in a 1.5 in. (13 mm) ANSI Class 3000# SW TEE, P/N DP-49-98-2205
- P11, P22, P91 tee materials and 1-probe water columns available upon request

### Babcock & Wilcox

20 South Van Buren Avenue  
Barberton, Ohio, U.S.A. 44203  
Phone: +1 330.753.4511

[www.babcock.com](http://www.babcock.com)     

The information contained herein is provided for general information purposes only and is not intended nor to be construed as a warranty, an offer, or any representation of contractual or other legal responsibility.

Diamond Power is a trademark of The Babcock & Wilcox Company.

Swagelok is a trademark of Swagelok Company.



ENERGY | ENVIRONMENTAL

Established in 1867, Babcock & Wilcox is a global leader in advanced energy and environmental technologies and services for the power, industrial and renewable markets, with operations, subsidiaries and joint ventures worldwide.

For more information or to contact us, visit our website at [www.babcock.com](http://www.babcock.com).