



ADCATTO



## BLOWDOWN CONTROLLER BCS220

## **DESCRIPTION**

The ADCATrol BCS220 is a blowdown controller specially designed for use with steam boilers. The device takes care of both TDS and intermittent blowdown controls.

TDS (Total Dissolved Solids) is controlled through measurement of the boiler water electrical conductivity and intermittent control is performed via a blowdown timer.

The device utilizes a clear multifunction LCD to display measured conductivity, temperature, operational alarm status and provide an intuitive user interface. The device is IP 66 rated NEMA 4X and can be panel, surface/wall and pipe mounted.



TDS and intermittent blowdown control in one single device.

Displays conductivity, resistivity, PPM and temperature units.

Programmable cell constant.

Versatile IP 66 NEMA 4X (144 x 144 mm) enclosure design.

Large informative 3,75" LCD backlit display.

Simple intuitive menu structure with soft tactile function buttons.

Software upgradable via SD card slot – Future proof.

Volt-free outputs with multiple alarm function options.

0(4) to 20 mA analog output for remote monitoring purposes with features including adjustable scaling, selectable on-error states and loop fault detection.

Digital input suitable for connection to the boiler stand-by/burner contact, to reduce energy waste.

**OPTIONS AND** 

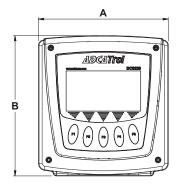
ACCESSORIES: Panel mounting kit.

Pipe mounting kit (50 to 100 mm pipe OD).

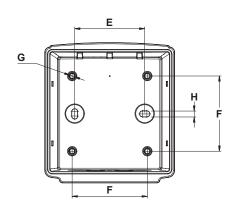
**AVAILABLE** 

MODELS: BCS220 – 90 to 265 V AC power supply.

BCS220-LV - 12 to 30 V DC power supply.







DIMENSIONS (mm)									
MODEL	Α	В	С	D	E	F	G	н	WEIGHT (kg)
BCS220 BCS220-LV	150	161	77	42	80	86	M4	6,8	0,8







## **TECHNICAL DATA**

GENERAL					
Supply voltage	90 to 265 V AC, 10 W max. (standard model) 12 to 30 V DC, 5 W max. (LV model)				
IP rating	IP 66 NEMA 4X				
Material	Housing in PC/ABS				
Ambient temperature	-20 to +55 °C				
Ambient humidity	5 to 95 %, non condensing				
Front panel	144 x 144 mm (cutout: 138 x 138 mm)				
Display	3,75" 240 x 128 dot LCD module *				
Language	English, Portuguese, French, Spanish and Italian				

<sup>\*</sup> Backlight can be set to flash to indicate the instruments alarm status.

INPUTS AND OUTPUTS					
Digital inputs 1 NO/NC contact input					
Relay outputs	2 NO volt free contacts 5A @ 30 V DC / 5A @ 250 V AC				
Analog output *	0(4) to 20 mA, 750 ohms max., fully isolated to 2 kV				
MicroSD card interface	SD, SDHC and SDXC-FAT32 cards supported				

<sup>\*</sup> Expandable across operating range. Includes loop fault detection.

CONDUCTIVITY, TDS AND RESISTIVITY					
Measuring ranges *	0 to 99,99 μS/cm up to 0 to 999,9 mS/cm (K= 0,01 to 10,0) 0 to 99,99 KΩ/cm up to 0 to 9,999 MΩ/cm (K= 0,01 to 1,0) 0 to 99,99 ppm up to 0 to 99,99 ppt				
Cell constant adjustment	Fully adjustable from 0,005 to 15				
Cell constant calibration	± 50% of nominal cell constant				
Range selection	Internal single or auto range				
Conductivity accuracy	± 0,5% of range				
Linearity	± 0,1% of range				
Repeatability	± 0,1% of range				
Operator adjustment (conductivity)	± 10 % slope (gain) adjustment for solution calibration				
Sensor input filter	Adjustable filter that averages the sensor inpu over a user selectable time (10 sec. to 5 min.)				
Cell constant calibration Range selection Conductivity accuracy Linearity Repeatability Operator adjustment (conductivity) Sensor input filter	Internal single or auto range  ± 0,5% of range  ± 0,1% of range  ± 0,1% of range  ± 10 % slope (gain) adjustment for solutio calibration  Adjustable filter that averages the sensor in				

<sup>\*</sup> See conductivity, TDS and resistivity range tables for further information.

TEMPERATURE COMPENSATION					
Range of temperature measurement	50 °C to 300 °C				
Temperature accuracy	± 0,5 °C				
Temperature sensor	Pt100 or Pt1000 RTD (2,3 or 4 wire)				
Temperature compensation type	Automatic or manual (- 0 to 9,99 %/°C)				
Temperature compensation base	Selectable at 20 °C or 25 °C				
Range of temperature compensation	-10 °C to +300°C				

DIRECTIVES					
Electromagnetic compatibility directive	2014/30/EU using EN 61326-1:2013				
Low voltage directive	2014/35/EU using EN 61010-1:2010				
RoHS directive	2011/65/EU using EN 50581:2012				

CONDUCTIVITY RANGE						
	Nominal cell constant					
Conductivity range	0,01	0,1	1	10		
0 to 9,999 μS/cm	•	•				
0 to 99,99 μS/cm	•	•	•			
0 to 999,9 μS/cm		•	•	•		
0 to 9999 μS/cm			•	•		
0 to 99,99 mS/cm *			•	•		
0 to 999,9 mS/cm *						

<sup>\*</sup> Maximum measurement range will be limited by the solution temperature. With the temperature compensation slope set to 2%/°C the range will derate linearly from full scale at 25°C to 50% of scale at 100°C.

TOTAL DISSOLVED SOLIDS RANGE						
	Nominal cell constant					
TDS range	0,010	0,1	1	10		
0 to 9,999 ppm	•	•				
0 to 99,99 ppm	•	•	•			
0 to 999,9 ppm		•	•	•		
0 to 9999 ppm			•	•		
0 to 99,99 ppt				•		

RESISTIVITY RANGE						
	Nominal cell constant					
Resistivity range	0,010	0,1	1	10		
0 to 99,99 kΩ-cm		•	•			
0 to 999,9 kΩ-cm	•	•				
0 to 9,999 MΩ-cm	•	•				
0 to 99,99 MΩ-cm ●						