

Active Digital Controller

VACUUM SYSTEMS PRODUCT DATA

The **BOC Edwards Active Digital Controller (ADC)** is a compact single gauge controller and display. It features a bright LED display and simple push-button controls. The ADC automatically recognizes compatible BOC Edwards gauges, loads the appropriate look-up table and displays the pressure in commonly used vacuum units.



The ADC is available in standard and enhanced versions. The standard controller displays the pressure measured by a single active gauge. The enhanced controller supports two similar gauges - it has two variable hysteresis set-points which are linked to 48V dc 1A changeover relays and two 0-10V dc analog outputs. To aid system integration, the enhanced controller is provided with an RS232 interface.

When combined with a suitable gauge, such as the BOC Edwards APGX-H Convection Pirani or Wide Range Gauge (WRG), the ADC represents a cost effective means of monitoring and controlling process vacuum in a broad range of applications.

Features and Benefits

- **Plug and go operation**
 - Simply plug in the mains supply, connect the gauge and ADC displays the measured pressure
- **Wide pressure range**
 - ADC supports BOC Edwards gauges with a total measuring range of 2000 to 1×10^{-9} mbar (1500 to 7.5×10^{-10} Torr)
 - ADC and BOC Edwards gauges address a broad spectrum of laboratory and industrial applications
- **High visibility display**
 - Bright LED display gives clear long distance readability
- **Choice of units**
 - ADC displays in mbar, Torr, Pascal or Volts
- **Compact instrument**
 - Small 1/8 DIN enclosure, may be panel or bench mounted
- **Very simple to use**
 - Push-button control makes operation highly intuitive

STANDARD VERSION



Front panel:

- ▼ Select displays units

ENHANCED VERSION



Front panel:

- ↵ Enter/Select button
 - Turn the selected gauge on or off
 - Edit the selected numerical item
 - Move to the next digit of a numerical value
- ▲ Scroll up button
 - Move to previous selection
 - Scroll selected numerical values up
- ▼ Scroll down button
 - Move to next selection
 - Scroll selected numerical values down

- G1 & 2 Indicates gauge displayed
- SP1 & 2 Indicates set-point trip
- Hi, Lo Indicates high and low set-point threshold for setting up
- CAL Indicates calibrate message sent to gauge (remote calibration supporting gauges only)

COMMON INTERFACES AND CONFIGURATION DETAILS

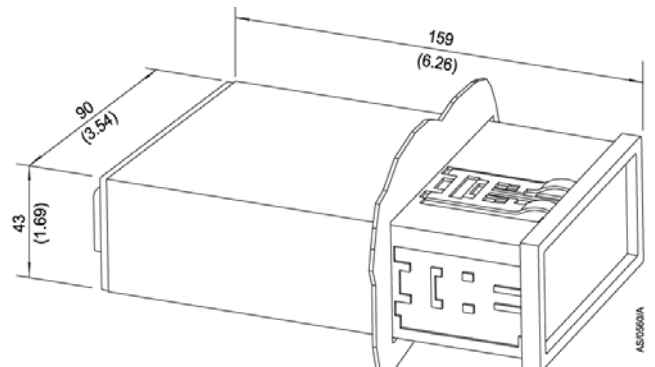
		Standard	Enhanced							
Active gauge compatibility	APG-L,APG-MP,APG-M,APGX-H,APGX-L,APGX-MP,APGX-M & WRG	✓	✓							
	AIM-S,AIM-X & ASG		✓							
Display	High brightness green LED display (0.47" high) Units - mbar/Torr/Pa/Volts	✓	✓							
Electrical supply	100 to 240V ac 47 to 63 Hz	✓	✓							
Serial interface	RS232 serial interface allows the ADC to be linked to a PC, PLC or OEM system controller		✓							
	RS232 Protocol - 9600 baud, 1 stop bit, 8 data bits, no parity		✓							
Logic Interface	May be used either to link to system relays, or a higher-level control system and includes:									
	<table border="0"> <tr> <td>Analog outputs</td> <td>One 0-10V dc output signal per gauge channel</td> <td></td> <td>✓</td> </tr> <tr> <td>Set-points</td> <td>One user programmable, variable hysteresis set point per gauge channel</td> <td></td> <td>✓</td> </tr> </table>	Analog outputs	One 0-10V dc output signal per gauge channel		✓	Set-points	One user programmable, variable hysteresis set point per gauge channel		✓	
Analog outputs	One 0-10V dc output signal per gauge channel		✓							
Set-points	One user programmable, variable hysteresis set point per gauge channel		✓							
	<table border="0"> <tr> <td>Control Relays</td> <td>One volt-free, single pole change-over relay per gauge channel, tied to the respective programmable set-point: 1A @ 48V dc 2A @ 24V dc</td> <td></td> <td>✓</td> </tr> </table>	Control Relays	One volt-free, single pole change-over relay per gauge channel, tied to the respective programmable set-point: 1A @ 48V dc 2A @ 24V dc		✓					
Control Relays	One volt-free, single pole change-over relay per gauge channel, tied to the respective programmable set-point: 1A @ 48V dc 2A @ 24V dc		✓							

DIMENSIONS, MOUNTING OPTIONS AND WEIGHT

Panel cut-out 92 ^{+0.8} x 45 ^{+0.6} mm (3.62" x 1.77") to DIN43700

Panel thickness 1.5mm (0.06") Min

Weight 0.33Kg



ENVIRONMENT AND STANDARDS COMPLIANCE

Operating and storage data

Operating temperature	+0 to +40°C
Storage temperature	-30 to +70°C
Max ambient operating humidity	90% RH non condensing at 40°C

Standards

Electrical safety	BS EN 61010-1 2001
Electrical noise immunity	BS EN 61326 (Industrial location, class B emissions)
Flame retardant case materials	UL94 V1
Enclosure rating	IP40

ORDERING INFORMATION

Controllers

ADC Standard	D395-90-000
ADC Enhanced	D395-91-000

Interface cables

2m RS232 interface cable	D397-00-834
--------------------------	-------------

Mains cables

2m UK plug	D400-13-025
2m USA plug	D400-13-120
2m Northern European plug	D400-13-120

Software upgrade

ADC software upgrade kit	D395-91-800
--------------------------	-------------

Example compatible gauges

APG-M-NW16 AI	D021-71-000
APGX-H-NW25 St St	D023-92-000
WRG-S-NW25	D147-01-000

Active gauge cables (include FCC68/RJ45 compatible connectors at both ends)

0.5m Active gauge cable	D400-01-005
1m Active gauge cable	D400-01-010
3m Active gauge cable	D400-01-030
5m Active gauge cable	D400-01-050
10m Active gauge cable	D400-01-100
15m Active gauge cable	D400-01-150
25m Active gauge cable	D400-01-250
50m Active gauge cable	D400-01-500
100m Active gauge cable	D400-01-999

GLOBAL CONTACTS

EUROPE

UK Crawley +(44) 1293 528844
 Belgium Brussels +(32) 2 363 0030
 France Paris +(33) 1 47 98 24 01
 Germany Munich +(49) 89 9919180
 Italy Milan +(39) 02 48 4471

ISRAEL

Qiryat-Gat +(972) 8 681 0633

INDIA

New Delhi +(91) 11 851 0065

USA

Wilmington, MA +(1) 978 658 5410
 Toll free (USA only) 1 800 848 9800
 Santa Clara, CA +(1) 408 496 1177
 Austin, TX +(1) 512 416 0102

CANADA

Misissauga +(1) 905 501 2558

BRAZIL

Sao Paulo +(55) 11 3952 5000

KOREA

Bundang +(82) 31 716 7070

JAPAN

Tokyo (Vacuum/Abatement) +(81) 3 5470 6530
 Tokyo (Gases/Chemical Mgt) +(81) 3 5470 6546
 Osaka +(81) 6 6384 7052
 Kyushu +(81) 96 292 4082
 Sendai +(81) 22 373 8525

ASIA PACIFIC

China Shanghai +(86) 21 5866 9618
 China Tianjin +(86) 22 2834 1981
 Taiwan R.O.C. Toufen Town +(886) 37 611 422
 Singapore +(65) 6546 8408

www.bocedwards.com
 info@bocedwards.com

BOC Edwards is a trading name
 used by affiliate companies of The BOC Group plc.
 The stripe symbol is a trademark of The BOC Group plc.
 © BOC Edwards 2004

Publication Number: D395-90-895