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PRODUCT DATA SHEET

ACTIVE DIGITAL CONTROLLER (ADC)

edwardsvacuum.com

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

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

When combined with suitable gauges such as the Edwards APG100 Pirani, AIM Inverted Magnetron 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 the ADC displays the measured pressure
- Wide pressure range
  - ADC supports Edwards gauges with a total measuring range of 2000 to 1 x 10^{-9} mbar (1500 to 7.5 x 10^{-10} Torr)
  - ADC and Edwards gauges address a broad spectrum of laboratory and industrial applications
- New multiple gauge ability
  - The new enhanced ADC MkII can now support two different gauges making it a more versatile instrument controller
- 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

Specifications

Standard version





Front panel:

▼ Select display units

MkII enhanced version





↵ 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

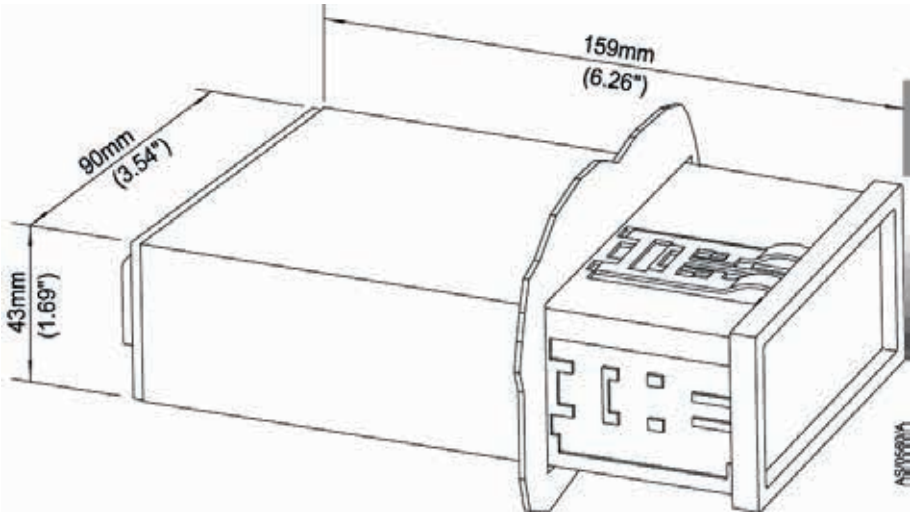
G1 & 2	Indicates gauge displayed
SP1 & 2	Indicates set-point trip
Hi, Lo	Indicates high and low set-point threshold for setting up
CAL	Indicates calibrate message sent to gauge (remote calibration supporting gauges only)

Common interfaces and configuration details

			Standard	Enhanced
Active gauge compatibility	APG100, APGX-H, WRG and the following legacy gauges - APG-L, APG-MP, APG-M, APGX-L, APGX-MP and APGX-M		✓	✓
	AIM-S, AIM-X and ASG			✓
Display	High brightness green LED display 12mm (0.47” high) Units - mbar/Torr/Pa/Volts		✓	✓
Electrical supply	100 to 240V a.c. 47 to 63Hz		✓	✓
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:			✓
	Analog outputs	One 0-10V d.c. output signal per gauge channel		✓
	Set-points	One user programmable, variable hysteresis set point per gauge channel		✓
	Control relays	Two volt-free, single pole change-over relays tied to the respective programmable set-points: 1A @ 48 V d.c. 2A @ 24 V d.c.		✓

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	1.5 mm (0.06”) min
Weight	0.33 kg



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

Product description	Order number
Controllers	
ADC standard	D39590000
ADC MkII Enhanced	D39591500
Certificated Controllers	
Controllers are supplied certificated traceable to national standards	
ADC standard, Certificated	D3959000C
ADC MkII Enhanced, Certificated	D3959150C
The above controllers are certificated on their own without gauges. Contact Edwards for controllers certificated with Active gauges as a set.	
Interface cables	
2m RS232 interface cable	D39700834
Mains cables	
2m UK plug	D40013025
2m USA plug	D40013120
2m Northern European plug	D40013030
Example compatible gauges	
APG100-XM-NW16	D02601000
APGX-H-NW25	D02392000
WRG-S-NW25	D14701000
Active gauge cables (include FCC68/RJ45 compatible connectors at both ends)	
0.5 Active gauge cable	D40001005
1m Active gauge cable	D40001010
3m Active gauge cable	D40001030
5m Active gauge cable	D40001050
10m Active gauge cable	D40001100
15m Active gauge cable	D40001150
25m Active gauge cable	D40001250
50m Active gauge cable	D40001500
100m Active gauge cable	D40001999

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