

Active thermocouple gauges

The Edwards Active Thermocouple (ATC-E) gauges mount directly on the thermocouple tube to form a compact, stand-alone vacuum transducer.

The ATC-E electronics module drives both medium and low pressure gauge tubes. These gauges offer a cost effective measuring solution for higher pressures.

Edwards Active Strain Gauges operate from standard 20 to 36 V dc power supplies with a 0 to 10 V dc signal output making them easy to interface with the users equipment. Alternatively they are directly compatible with Edwards Active Digital Controllers or TIC Instrument Controllers.



Features and benefits

- Drive electronics mount directly on the gauge tube
 - Simplifies system design
 - Saves valuable rack space
- Wide range, regulated, internal power supply
 - Runs from standard dc power supplies
 - +20 to +36 V
 - Tolerant to voltage fluctuations
- Standard analogue output 0 to +10 V dc and gauge identifier
 - Easy to interface with a computer or PLC
 - Fault output indication
- Adjustable set-point with vacuum status LED
 - Use for process control and interlocking
 - Includes a digital vacuum status signal
 - Set-point level ready visually
- Low output impedance and integral Faraday shield
 - Provides high level of noise immunity
 - Permits long cable runs (up to 100 metres)
- Choice of medium and low pressure gauge tubes
 - ATC-D covers from 50 to 5×10^{-2} Torr
 - ATC-M covers from 1 to 10^{-3} Torr

Technical data

ATC-E electronics module

Power supply	+13.5 to +36 V dc (max 1 volt ripple)
Power consumption	0.54 W max
Output signal	
Operating	2 to 10 V dc
Fault output	0 to 2 V dc, 10 to 13.5 V dc
Output impedance	0.1 Ω
Minimum load	10 k Ω

Tube type selection

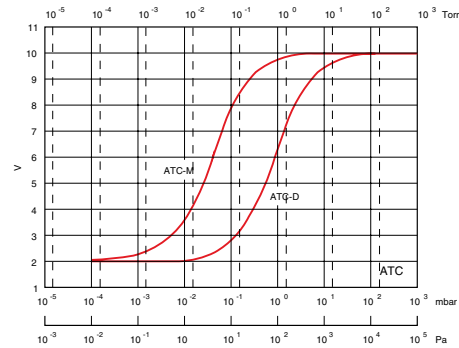
Adjustments	Adjust set point visually via potentiometer
Set point	Open collector transistor
Range of set point	2% to 85% full scale voltage
Fixed hysteresis	12% full scale voltage
Level setting	$\pm 2\%$ full scale voltage
Rating	40 V dc, 100 mA max
Temperature range	
Operating/storage	+5 to +60 / +0 to +70 °C
Weight	110 g
External interface connector	8 way FCC68/RJ45 socket
Standards	
Electronic design	EN61010-1
Electromagnetic compatibility	EN61326 (Class B Emissions)
Flame retardant casing	UL94

ATC-D, ATC-M gauge tubes

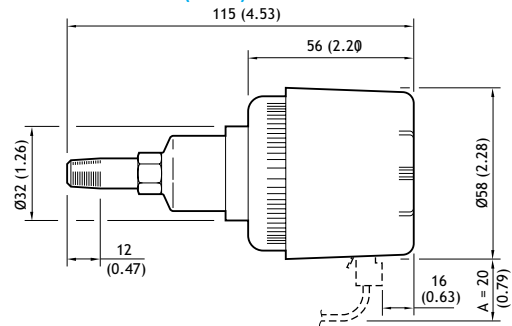
Pressure range	
ATC-D	65 to 6.5×10^{-2} mbar (50 to 5×10^{-2} Torr)
ATC-M	1.3 to 1.3×10^{-3} mbar (1 to 1×10^{-3} Torr)
Maximum overpressure	
ATC-D	10 bar absolute
ATC-M	3.4 bar absolute
Weight	55 g
Internal volume	
ATC-D/ATC-M	1 cm ³ /8 cm ³
Vacuum fitting	$\frac{1}{8}$ " NPT

Edwards offers a calibration service traceable to national standards for new or returned gauges and controllers. Please contact Edwards for details.

Output characteristics



Dimensions - mm (inch)



Ordering information

Product Description	Order No.
ATC-E Electronics module	D35108000
ATC-D $\frac{1}{8}$ " NPT gauge tube	D35512000
ATC-M $\frac{1}{8}$ " NPT gauge tube	D35513000
$\frac{1}{8}$ " NPT to NW16 adaptor	C10501072
Surge protector	D40006000
Cable assemblies (inc FCC68 compatible connectors at both ends)	
0.5 m	D40001005
1 m	D40001010
3 m	D40001030
5 m	D40001050
10 m	D40001100
15 m	D40001150
25 m	D40001250
50 m	D40001500
100 m	D40001999

Non standard lengths and screened cables available on request

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Publication Number: D35108895, Issue C
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