Electro/Pneumatic Converter

Models 8064A and 8064C

Typical applications

- Controls AMOT pneumatic temperature control valves (G valve)
- Converts a 4 to 20 mA input signal to a directly proportional 0.2 to 1 bar (3 to 15 psi) pneumatic output signal

8064A

Key benefits 8064A

- High vibration resistance - Lloyds Marine
- Suitable for longer pipe runs
- Fully adjustable for optimised system operation
- ATEX hazardous area certification

Key benefits - 8064C

- Accepts high supply pressure - avoids use of additional regulator
- Factory set for ease of installation
- Low cost alternative to 8064A
- ATEX hazardous area certification

8064C

www.amot.com

Overview - 8064A

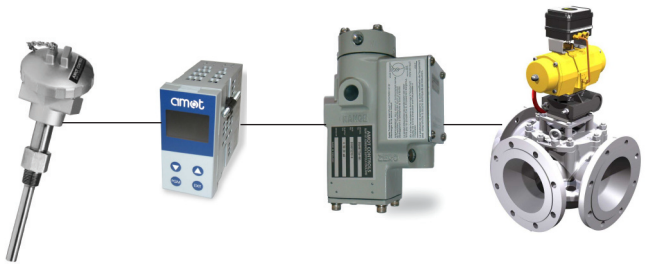
8064A

Using a clean, regulated air supply, model 8064A transducer provides a 3 - 15 psig pneumatic output which is proportional to a DC milliamp input. The mechanism is damped with a viscous silicone fluid, making it insensitive to shock and vibration.

Model 8064A may be specificed with output either direct or reverse acting, increasing or decreasing with an increasing input.

Application

Electro-pneumatic system



Temperature probe 8060 | Temperature controller 8071D | Electro-pneumatic converter 8064A | G valve

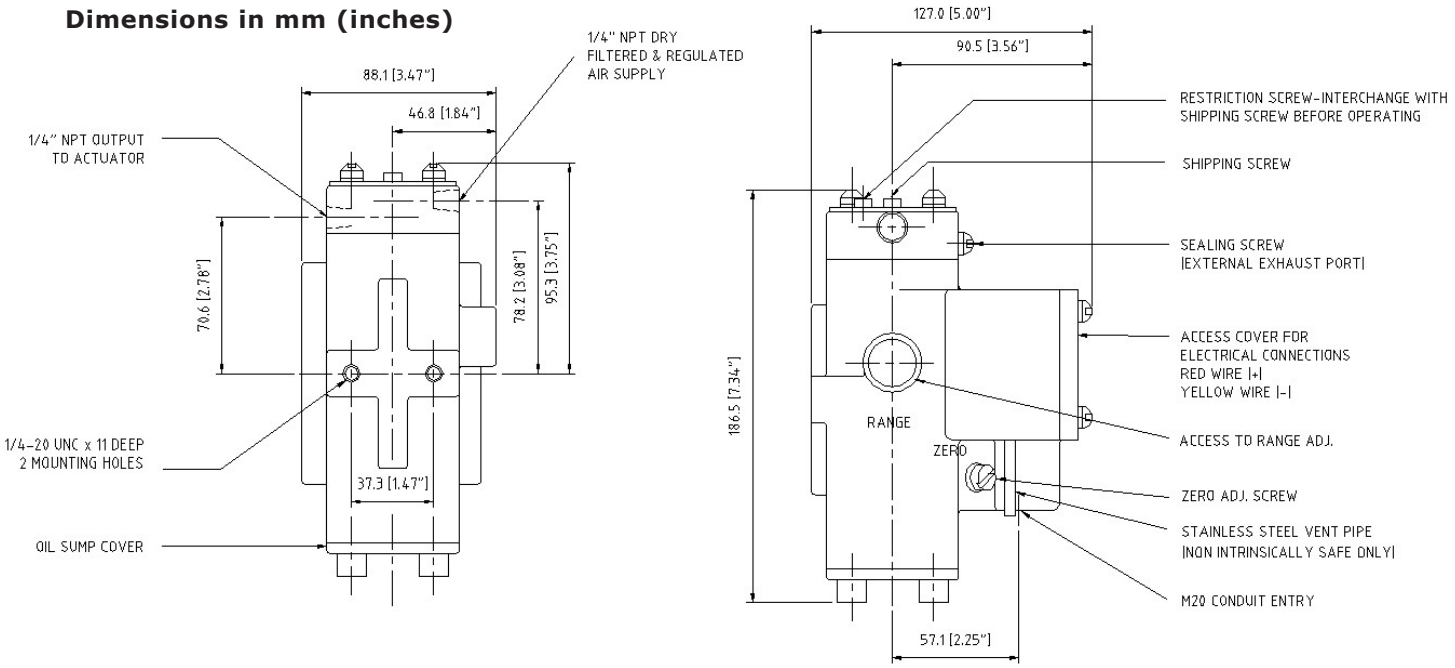
The electro-pneumatic valve system (see datasheet Datasheet_G_temperature_control_valve) combines both electric and pneumatic technology, consisting of a pneumatically actuated three-way control valve with an electro-pneumatic converter.

The probe sends a resistance signal to the electronic controller, which in turn sends a 4 to 20mA signal to the 8064A I/P converter that converts this to a pneumatic signal.

The electro-pneumatic system combines the features and functionality of the AMOT electronic control system with the fail-safe action benefits of a pneumatically actuated valve.

Dimensions - 8064A

Dimensions in mm (inches)



Specification - 8064A

Supply pressure	1.3 to 2.1 bar	**(**18 to 30 psi)
Input	4 to 20 mA	
Output	0.2 to 1 bar	(3 to 15 psi)
Zero offset adjustment	+40% to -20% of span	
Output capacity	0.16 SCFM	
Output volume	170 cc maximum recommended	
Response level	0.025% of span	
Calibration accuracy	0.25% of span	
Supply pressure effect	Less than 1% of span	
Ambient temperature limit	-40˚C to +80˚C	(-40˚F to +180˚F)
Coil resistance	185 Ohms	
Vibration	5 - 100 Hz 4g (Lloyds Register Type Approval System Test Specification Number 1 2002 - Vibration Test 2)	
Body material	Cast iron	
Top housing & terminal cover	Aluminium	
Paint finish	Epoxy powder	
Weight	4.5 kg	(10.5 lbs)
Mounting	Vertical only	
Hazardous area certification	ATEX EEx ia IIC T6	

Overview - 8064C

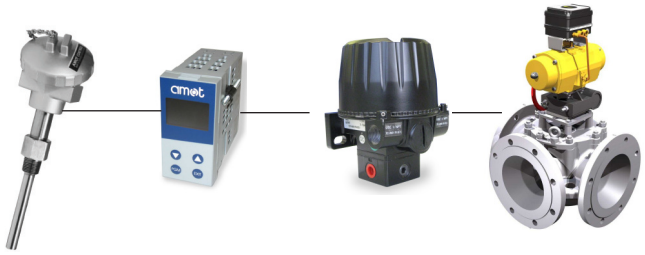
8064C

The 8064C Proportional I/P Converter uses advanced closed loop solid-state electronic control to achieve accurate, high resolution pressure control.

It is available in intrinsically safe and non-incendive type nL versions and its minimum vibration effect and IP66 weatherproof rating make it ideal for field application.

Application

Electro-pneumatic system



Temperature probe 8060	Temperature controller 8071D	Electro-pneumatic converter 8064C	G valve

The electro-pneumatic valve system (see Datasheet_G_temperature_control_valve) combines both electric and pneumatic technology, consisting of a pneumatically actuated three-way control valve with an electro-pneumatic converter.

The probe sends a resistance signal to the electronic controller, which in turn sends a 4 to 20mA signal to the 8064C I/P converter that converts this to a pneumatic signal.

The electro-pneumatic system combines the features and functionality of the AMOT electronic control system with the fail-safe action benefits of a pneumatically actuated valve.

Dimensions - 8064C

1 Inlet port

2 Outlet port

3 Conduit entry (1/2 NPT standard)

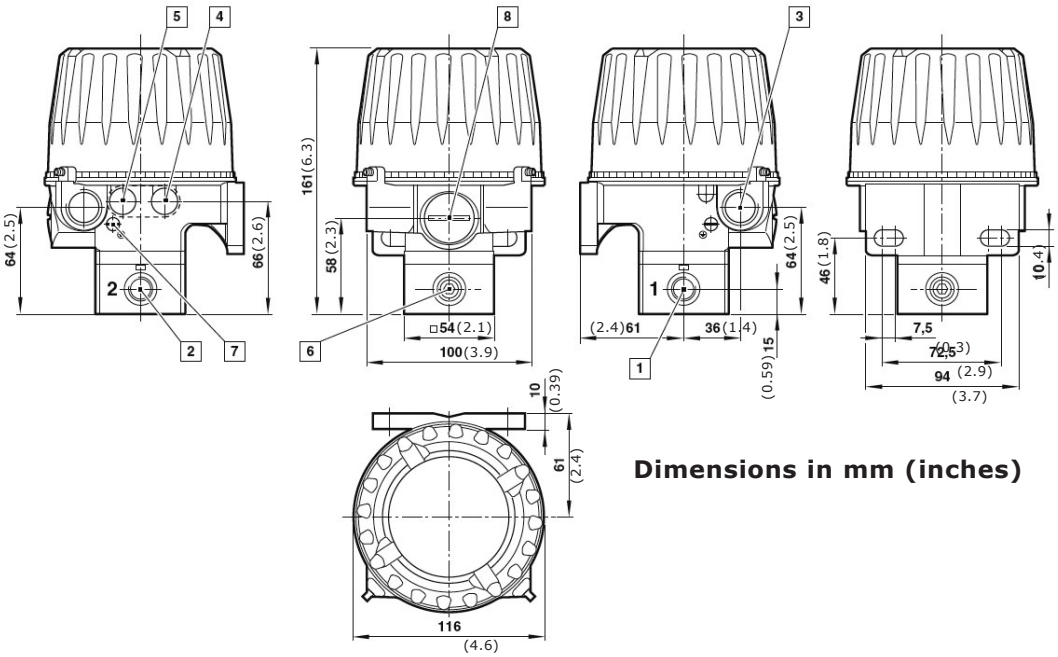
4 Enclosed bleed port

5 Exhaust port

6 1/4" Gauge port

7 External ground

8 Air filter



Dimensions in mm (inches)

Specification - 8064C

Pneumatic		
Supply pressure	1.2 to 10 bar	(18 to 150 psi)
Output	0.2 to 1 bar	(3 to 15 psi)
Supply sensitivity	Less than 0.1% span over full supply pressure range	
Flow	Max 300N l/min	(12 scfm)
Air consumption	<2.5N l/min at 50% signal	(0.025 cfm)
Temperature effect	Typically less than 0.035% of span/°C between -40°C to +85°C (-40°F to +185°F)	
Response time	1 sec (from 0 to 90% or 100 to 10% of output pressure into a 0.5 litre load)	
Degree of protection	IP66, NEMA 4X (when mounted upright)	
Linearity	<0.1% of span	
Hysteresis	<0.1% of span	
Physical		
Ambient temperature	-40°C to +85°C Contact us for use below +2°C (35°F)	(-40°F to +185°F)
Vibration immunity	Output pressure changes less than 3% for vibration amplitude 4mm 5 - 15 Hz, 2g 15 - 150 Hz	
Weight	2.07 kg	4.5 lb
Calibration	Independent control of 0% and 100% set points. Adjustable by potentiometers up to 20% of output range. Unit is factory calibrated to within 1% of span.	
Materials	Body	Aluminium and zinc diecasting
	Diaphragms	Nitrile
	Black epoxy powder coating standard	
Electromagnetic compatability	CE marked	Conforms to EC requirements EN 50081-2 (1994) and EN 50082-2 (1995)
Electrical		
Electrical input signal	4 - 20 mA (two wire)	
	Terminal voltage <6.5V @20mA	
Failure mode	Signal falls to below 15 mbar (0.2 psi) in <2 sec, when input signal fails	
Overload protection	100 mA max overload current	
Insulation resistance	>100 mΩ at 850V dc electrical terminals to case	
Tight shut off	Adjustable up to 4.5 mA to achieve tight shut off	
Input impedance	The impedance changes with applied current because its terminal voltage remains fairly constant, therefore:	
	4 mA = approx 1370Ω	
	12 mA = approx 470Ω	
	20 mA = approx 290Ω	
Connections	1/2” NPT or M 20; internal terminal block with capacity up to 2.5 mm² cable	

Specification - 8064C cont'd

Actuation	Port Size	Max Flow (N L/min)	Output Pressure	Port
	G1/4	300	0.2 - 1 bar	BSP
	G1/4	300	3 - 15 psi	BSP

Certification 8064C

Certification Agency	Explosion proof/ flame proof	Intrinsically safe	Type N/Non-incendive	Others
SIRA (CENELEC ATEX approved) CE Ex II	EEx d IIC T4 Ta=-20°C to +40°C EExd IIB+H_2 T5/T6 Ta=-20°C to +80°C (T5) Ta=-20°C to +65°C (T6) Umax=30V Sira 01ATEX1006 2G (T4/T5/T6)/2D (95°C)	EEx ia IIC T4 Ta=-40°C to +85°C Ui=30V, Ii=110mA Pi=0.84W Ci=6nF, Li=100µH Sira 01ATEX2007X 1G (T4)/1D (95°C)	EEx nL IIC T5 Ta=-40°C to +85°C Ii=24mA Ci=6nF Li=100µH Sira 01ATEX4008X 3G(T5)/3D (95°C)	
Factory Mutual FM Approved	Class I, Division 1, Group B, C, D; T6, Ta=75°C T5, Ta=85°C	Class I, II, III, Division 1, Group A, B, C, D, E, F, G; T4, Ta=85°C	Class I, Division 2, Group A, B, C, D; T6, Ta=75°C T5, Ta=85°C	**Dust Ingress Protection:** Class II, III, Division 1, Group E, F, G; T6, Ta=75°C T5, Ta=85°C **Suitable for:** Class II, III, Division 2, Group F, G; T6, Ta=75°C T5, Ta=85°C
CSA	Class I, Group B, C, D; Class II, Group E, F, G; Class III; Ex d IIC;T4 Ex d IIB+H_2; T5/T6	Class I, Group A, B, C, D Class II, Group E, F, G Class III EX ia IIC; T4	Class I, Division 2, Group A, B, C, D; Ex nL IIC; T5 Class II, Division 2 Group E, F, G; Class III	

How to order

Use the table below to select the unique specification of your 8064A converter:

Example code	8064A	7716	-AA	Code Description
Model & revision level				Model & revision level
	8064A			Converter
Type				Type
		7716		Direct acting - output increases as input increases
Customer special options				Customer special options
			-AA	Standard product
			-**	Customer special code assigned

The 8064C is supplied as a standard unit. You will need to state the code below when ordering.
Code: **8064C00-AA**

Example code	8064C00	-AA	Code Description
Model & revision level			Model & revision level
	8064C00		Converter
Customer special options			Customer special options
		-AA	Standard product
		-**	Customer special code assigned

Europe, Middle East and Africa

AMOT
Western Way
Bury St Edmunds
Suffolk, IP33 3SZ
England

Tel +44 (0) 1284 762222
Fax +44 (0) 1284 760256
Email info@amot.com

AMOT Controls GmbH
Rondenbarg 25
22525 Hamburg
Germany

Tel +49 (0) 40 8537 1298
Fax +49 (0) 40 8537 1331
Email germany@amot.com

AMOT Russia
#34 Shabolovka Street
Building 2
Moscow 115419
Russia

Tel +7 495 617 12 93
Fax +7 495 913 97 65
Email russia@amot.com

Asia and Australasia

AMOT Shanghai
Rm A8-671 Jiahua Business Center
808 Hongqiao Road
Shanghai 200030
China

Tel +86 (0) 21 6447 9708
Fax +86 (0) 21 6447 9718
Email shanghai@amot.com

AMOT Singapore
10 Eunos Road 8 #12-06
Singapore Post Centre
Singapore 408600

Tel +65 6408 6265
Fax +65 6293 3307
Email singapore@amot.com

Americas

AMOT USA
8824 Fallbrook Dr
Houston, TX 77064
USA

Tel +1 (281) 940 1800
Fax +1 (713) 559 9419
Email general: sales@amotusa.com
orders: orders@amotusa.com
customer service: cs@amotusa.com