



ENGINEERED FOR LIFE

Conoflow

## Conoflow® Series GT\_8 Series I/P Electropneumatic Transducer

Conoflow's GT\_8 series I/P Electropneumatic Transducers convert a milliamp electrical input signal to a proportional pneumatic output signal.

The GT\_8 series transducer is available with current inputs of 4-20 or 10-50 mA DC. Electrical connections are made through a 1/2" conduit connection and a terminal strip on the circuit board.

These units are available with output signals of 3-15, 3-27, or 6-30 PSIG (21-103, 21-186, or 41-207 kPa), are available in low volume or relay equipped configurations.

This product is available in an integral FM Approved explosion proof housing.

Typical applications for these units include valve actuators and control room applications.



*Standard GT\_8  
with Booster Relay*



*Explosion Proof GT\_8  
with Booster Relay*

### Principles of Operation

An increase in coil signal current drives the coil downward, out of a magnet assembly, pushing a balance beam toward a pilot nozzle. This action reduces the flow through the pilot nozzle, increasing the backpressure.

For low volume models (GT18, GT38, or GT58), this is the controlled output pressure.

For booster relay equipped models (GT28, GT48 or GT68), this pressure above the diaphragm assembly drives a diaphragm assembly downward, opening the relay nozzle and increasing the output pressure. The output pressure will continue to increase until it is equal to the pilot nozzle backpressure on top of the diaphragm, and the forces are balanced.

A decrease in the input signal allows the coil to move into the magnet assembly, which moves the beam away from the pilot nozzle. This allows the flow through the nozzle to increase, which reduces the pressure above the diaphragm assembly.

Since the output pressure is greater than the pilot nozzle pressure, the diaphragm will move upward, allowing the relay valve to close and the exhaust flow path to open. Air will flow from the output side of the transducer and flow through the relief port in the diaphragm assembly, venting to atmosphere through exhaust holes in the diaphragm spacer. This relieving / exhausting action reduces the output pressure of the transducer until equilibrium is established.

In the reverse acting mode, an increase in the input signal permits the coil to move toward the magnet instead of being driven away from it since the direction of the current through the coil is reversed. An increasing electrical signal caused a proportionally decreasing output signal.

Calibration of outlet pressure to the input signal is accomplished through an external zero adjustment, and a span potentiometer on the circuit board.

# GT\_8 Series Transducer

## Dimensional Views

	GT18 (3)	GT28	GT38 (3)	GT48	GT58 (3)	GT68
Input Range	4 - 20 mA DC, 10 - 50 mA DC					
Nominal Input Impedance	145 ohms 60 ohms					
Output Signal	3 - 15 PSI (21 - 103 kPa)		3 - 27 PSI (21 - 186 kPa)		6 - 30 PSI (41 - 207 kPa)	
Required Regulated Air Supply Pressure	25 PSI (172 kPa)		35 PSI (241 kPa)			
Air Consumption	0.2 SCFM (0.006 m <sup>3</sup> /min)					
Air Delivery Rate (Max.)	0.17 SCFM (0.005 m <sup>3</sup> /min)	5 SCFM (0.142 m <sup>3</sup> /min)	0.17 SCFM (0.004 m <sup>3</sup> /min)	5 SCFM (0.142 m <sup>3</sup> /min)	0.17 SCFM (0.005 m <sup>3</sup> /min)	5 SCFM (0.142 m <sup>3</sup> /min)
Exhaust Rate (Max.)	0.17 SCFM (0.005 m <sup>3</sup> /min)	1.7 SCFM (0.05 m <sup>3</sup> /min)	0.20 SCFM (0.006 m <sup>3</sup> /min)	2.3 SCFM (0.065 m <sup>3</sup> /min)	0.20 SCFM (0.006 m <sup>3</sup> /min)	2.3 SCFM (0.065 m <sup>3</sup> /min)
Linearity	±1.5% of Span					
Temperature Effect (3)	0.2% FS/10 °F for a 30 °F (17 °C) Change in 15 minutes					
Ambient Temperature Range	0° to +150°F (-18° to +66°C)					
Approximate Shipping Weight	Approximately 7 lbs. (0.8 kg) for standard units with relay Approximately 13 lbs. (5.9 Kg) for explosion proof unit with relay					

- Notes:
1. An ITT Conoflow Model FR95 Airpak®, Filter-Regulator or equal is recommended.
  2. Minimum piping requirements are 3/8" tubing or 1/4" pipe.
  3. Models without output booster relay (GT18, GT38, and GT58) have a Temperature Effect of 0.1% FS/10 °F

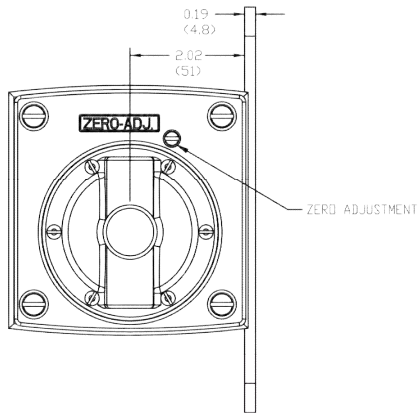
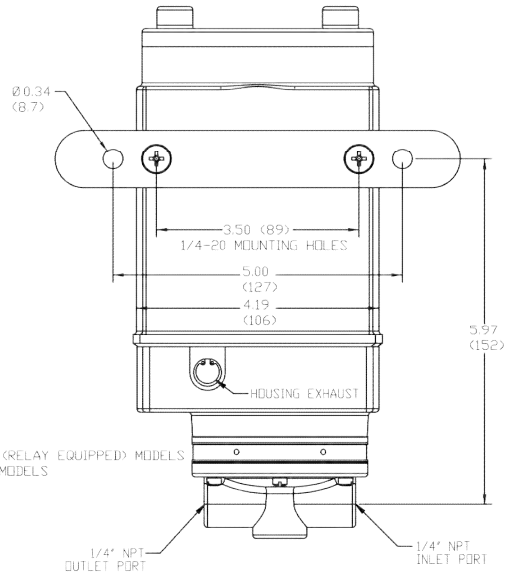
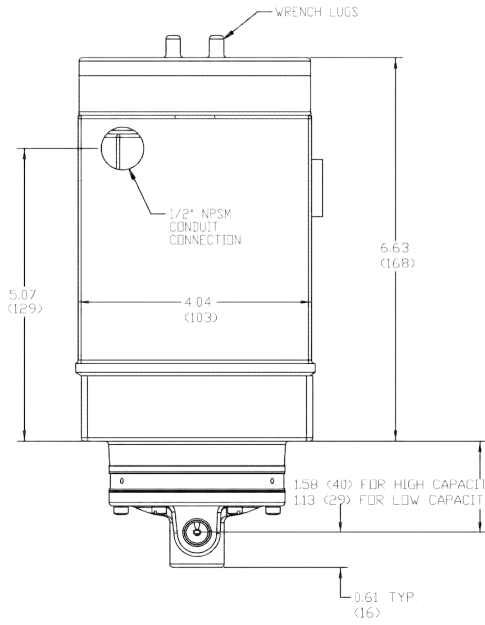
## Product Configuration Coding

Control Engineering Data is intended to provide a single source from which one can determine, in detail, the full scope of the product line. Operating principles are found in the instruction manual. Control Engineering Data also provides a means of communicating, by way of a code number, which is fully descriptive of the product selection.

**NOTE:** Catalog numbers as received must contain eight (8) characters.

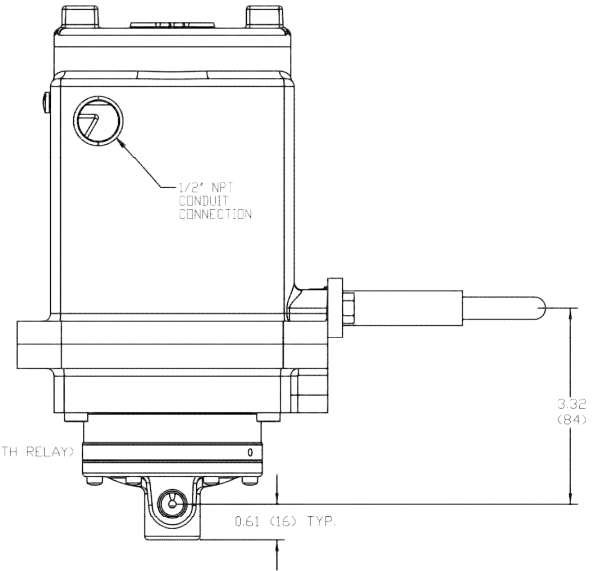
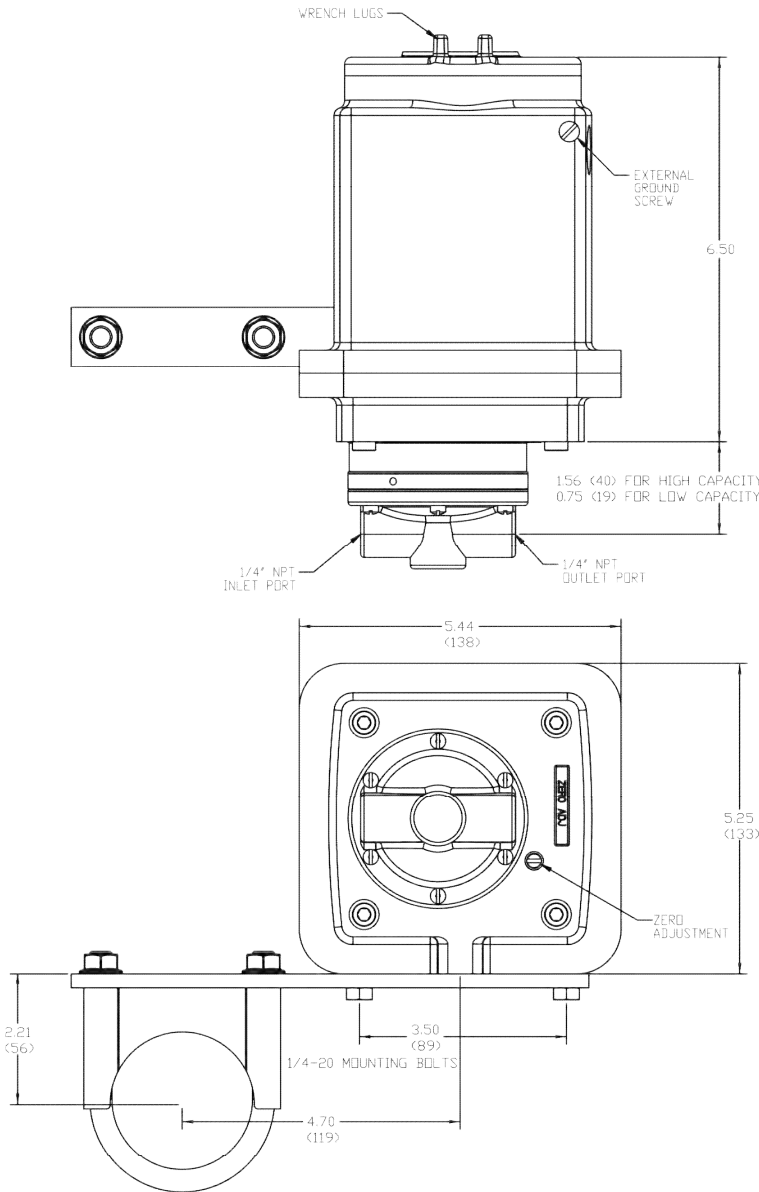
1-4 Models	GT18 = 3-15 PSI (21-103 kPa) Output, Low Volume GT28 = 3-15 PSI (21-103 kPa) Output, High Volume GT38 = 3-27 PSI (21-186 kPa) Output, Low Volume GT48 = 3-27 PSI (21-186 kPa) Output, High Volume GT58 = 6-30 PSI (41-207 kPa) Output, Low Volume GT68 = 6-30 PSI (41-207 kPa) Output, High Volume <i>Note: High Volume models include integral booster relay.</i>
5 Electrical Input	E = 4-20 mA DC milliamp Input F = 10-50 mA DC milliamp Input
6 Accessories	A = FR95XSKEK1C with 0-30 psi Gauge (For GT18 or GT28 models) B = FR95XSKEK1F with 0-60 psi Gauge (For GT38, GT48, GT58 or GT68 models) D = No Filter-Regulator Included <i>Note: Optional filter regulator and pressure gauge is shipped loose.</i>
7 Housing Options	F = Factory Mutual Approved – Explosion Proof X = Standard - Unless Option Code is Specified
8 Mounting Options	A = 2" U-Clamp for Pipe Mounting X = Standard - Unless Option Code is Specified

# GT28ED - Standard Options



STANDARD MODEL SHOWN, WITH STANDARD BRACKET  
 DIMENSIONS IN INCHES  
 (XX) DIMENSIONS IN MILLIMETER

# GT28EDFA - Non-Standard Options



EXPLOSION PROOF MODEL WITH OPTIONAL PIPE MOUNT SHOWN

DIMENSIONS IN INCHES.  
(XX) DIMENSIONS IN MILLIMETER



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