

# I/P Transducer - IEEE Qualified



GT25 \* 1826 3-15 PSI (21-103 kPa) OUTPUT  
GT45 \* 1826 3-27 PSI (21-186 kPa) OUTPUT  
GT65 \* 1826 6-30 PSI (41-207 kPa) OUTPUT

## CONFIGURATION OPTIONS

\* CA= 4-20 mA DC Input, with GFH25XT1767F  
IEEE Qualified Filter Regulator

DA= 10-50 mA DC Input, with GFH25XT1767F  
IEEE Qualified Filter Regulator

CD= 4-20 mA DC Input, without GFH25XT1767F  
IEEE Qualified Filter Regulator

DD= 10-50 mA DC Input, without GFH25XT1767F  
IEEE Qualified Filter Regulator

ITTT Conoflow's Models GT25/45/65 \* 1826 series transducers have been qualified in accordance with the requirements of IEEE 323-1974 and the recommended practices of IEEE 344-1975. The Environmental Qualification program included thermal aging, radiation aging, wear aging, seismic qualification and steam line break / loss of coolant accident testing.

This transducer operates on a 4-20 or a 10-50 mA DC input signal, providing a proportional output of 3-15, 3-27 or 6-30 psig (21-103, 21-186 or 41-207 kPa). This product can be ordered with or without the matching IEEE Qualified Airpak filter regulator. This Airpak filter regulator has also been qualified to the requirements and recommended practices of IEEE 323-1974 and IEEE 344-1975.

Performance of these transducers is assured by ITTT's high standards of manufacturing and stringent Quality Program.



GFH25XT1767F Matching  
Airpak Filter Regulator

# Principle of Operation

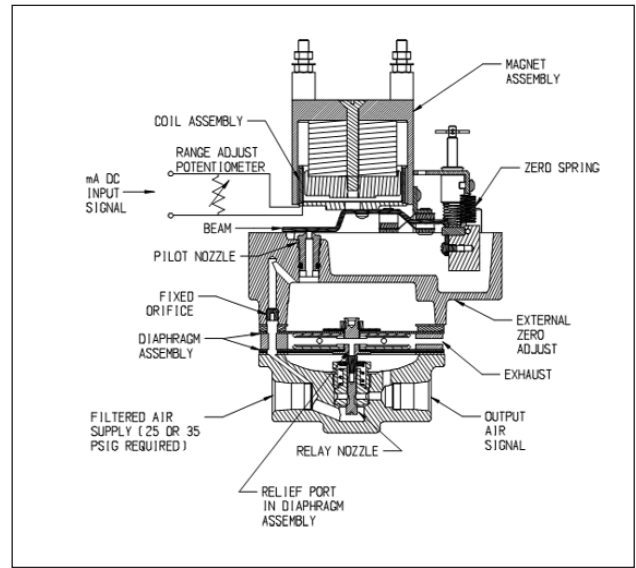
The ITT Conoflow IEEE Transducer is a force-balance unit which accepts a DC milliamp input signal and converts it to a proportional air pressure output.

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

The increased pressure above the diaphragm assembly drives the diaphragm 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 back pressure above the diaphragm assembly. Since the output pressure is greater than the pilot nozzle backpressure, the diaphragm will move upward allowing the relay valve to close and the exhaust valve 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.

Calibration and adjustment is easily accomplished by a zero adjust screw conveniently located on the bottom of the rugged housing, and by a span (range) adjustment potentiometer, conveniently located on the printed circuit board beneath a large threaded cap on top of the unit.



## Specifications

### Input Range:

4-20 or 10-50 mA DC

### Output Signal:

3-15, 3-27 or 6-30 PSIG  
(21-103, 21-186 or 41-207 kPa)

### Required Filtered Air:

GT25: 25 PSIG (172 kPa)  
GT45/65: 35 PSIG (241 kPa)  
(GFH25XT1767F Airpak Filter Regulator)

### Air Consumption:

GT25: 0.20 scfm (5.7 slpm) max  
GT45/65: 0.30 scfm (8.5 slpm) max

### Air Delivery Rate:

5 SCFM (142 slpm) max

### Exhaust Rate:

3 SCFM (85 slpm) max

### Linearity:

+/- 1.50% of output span

### Temperature Effect:

0.25% of output span / ° F

### Temperature Range:

0 °F to 150 °F (-18 °C to 66 °C)

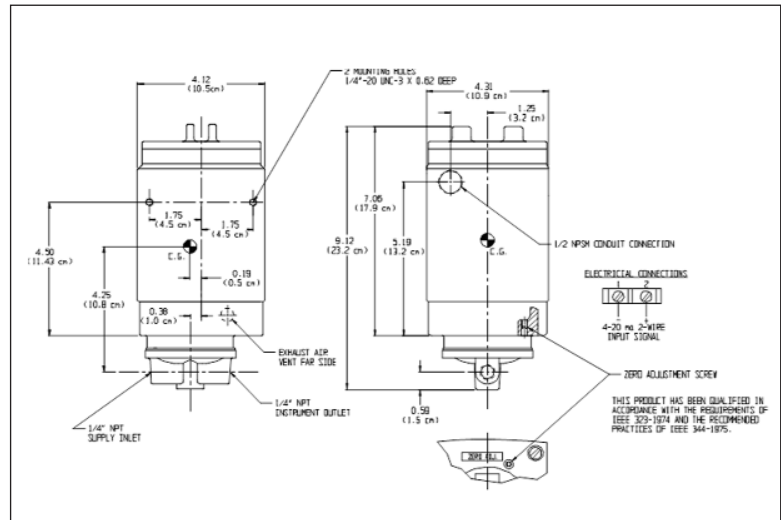
### Approximate Weight:

12 1/2 lb (5.7 kg)

### Piping Requirements:

3/8" Tubing or 1/4" Pipe (minimum)

Note: IEEE Qualification validates ability to operate at higher temperatures. Temperature Range is for conformance to published performance specifications.



Drawing A28-15 GT25 \* 1826 Dimensions.

(See drawing A17-135 for GFH25XT1767 IEEE Qualified Airpak Filter Regulator dimensions)