



Extremely fast (2.5ms) and very accurate (+/-0.1%), TR proportional electro pneumatic pressure regulators convert a voltage or current input into a precise proportional pressure output. Direct-acting voice-coil technology inside these valves removes minimum pressure requirements and delivers smooth, accurate air pressure control down to 0 psig and below.

## Features

- Externely Fast
- Very Accurate
- No Minimum Pressure Required
- Direct-Acting
- Stepless Transitioning
- High Bandwidth
- Single Regulator Handles Both Vacuum and Positive Pressure

## Applications

- Pressure Regulation
- Tensioning/Force Control
- Backpressure
- Weld Clamping
- Blow Molding
- Glass Formation
- Painting
- Plastic Injection
- Liquid Dispensing
- Pilot Valve Operation
- Burst/Leak Testing
- Pump/Booster Control

## Industries

- Industrial Automation
- Semiconductor
- Metrology
- Test & Measurement
- Medical
- Scientific Research
- Petro-chemical
- Food & Beverage

## Mechanical Specifications

### Pressure:

See page 2

### Ports:

¼" NPTF

### Mounting:

2 x M5 (10-32) Thru Holes

### Operating Temperature:

0° - 40°C (32° - 104°F)

### Media:

ISO 8573 Class 2.3.2

### Filtration Components (Typical):

5 µm Particulate, 0.3 µm Coalescing and Drier

### Height x Width x Length:

126 x 64 x 68 mm (5.00 x 2.50 x 2.75 in)

### Weight:

0.91 kg (2.00 lbs)

## Electrical Specifications

### Power Requirement:

12 ± 2 VDC  
24 ± 4 VDC @ 20W

### Command Input Impedance:

0...10VDC: 100kΩ  
4...20mA: 210Ω

### Command Input:

Configurable 0...10 VDC; 4...20mA

### Monitor Output:

0...10 VDC

### Electronic Adjustments:

USB-Connectable User Interface

## Material Specifications

### Body:

Aluminum 6061

### Caps:

PA66 30% Glass Filled Nylon

### Other:

Nitrile, 440C SS, Nickel Plated Steel

## Performance Specifications

Percentages based off full scale pressure sensor output found on page 2.

### Minimum Volume:

100mL (6.1 in<sup>3</sup>) preferred

### Flow:

TR-010 Versions 535 SLPM 5.5 → 0 bar  
(19 SCFM 80 → 0 psi)  
TR-025 Versions 1300 SLPM 5.5 → 0 bar  
(46 SCFM 80 → 0 psi)

### Leak Rate:

5.7 SLPM 10 → 0 bar  
(12 SCFH 150 → 0 psi)

The TR Electronic Pressure Regulator is an E/P & I/P that converts a voltage or current input into a precise, proportional pressure output. Available in two models, one with embedded sensor and one compatible with a range of external sensors, the TR series of electro pneumatic regulators deliver superior pressure control across a range of application.



Order Code	TR-0##-v-ex	TR-0##-g10-s
Description	Electronic Pressure Regulator with External Sensor Input	Electronic Pressure Regulator with Internal Pressure Sensor
Electrical Connection	4-Pin M8 x 1 (Male) 3-Pin M8 x 1 (Male)	4-Pin M8 x 1 (Male)
Resolution	± 0.1% Full Scale	± 0.1% Full Scale
Linearity	± 0.1% Full Scale	± 0.1% Full Scale
Hysteresis	± 0.1% Full Scale	± 0.1% Full Scale
Pressure Range	External pressure sensor within vac...10bar (vac...145psi) Scalable to any subrange	Internal pressure sensor 0...10 bar (0...145psi) Scalable to any subrange
Sensor Accuracy	Based on selected sensor	± 1.5% Full Scale
Controller Accuracy	± 0.1% Full Scale	± 0.1% Full Scale

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