

# ICM380 Optional Pressure Transducer



*The ICM380 pressure transducer provides proven performance at a competitive price.*

## Features

- Ceramic capacitive sensor
- Durable, compact design
- Accurate performance over wide temperatures
- Overvoltage and short circuit protected
- Brass connector
- Sealed gauge (neoprene seal)

## Applications

- Discharge and suction pressure monitoring
- Subcooling and superheat calculations
- Compressor oil pressure monitoring
- Condenser fan control
- Compressor staging and unloading
- Electronic expansion valve control
- Remote systems diagnostics and trending

## Specifications

### Pressure Ranges

- 0-500 psi

### Performance

Accuracy: +/- 1.2% span

(linearity, hysteresis, repeatability, calibration)

Temperature error: +/- 0.013% °C

Operating Temperature: -40°C to +135°C

### Electrical

- Supply Voltage ( $V_{in}$ ): 4.5 to 5.5 Vdc
- Output Voltage ( $V_{out}$ ): 0.5 to 4.5 Vdc typical
- Supply Current: 8 mA (maximum @ 5.5 Vdc with no load)
- Output Current: 2.5 mA (maximum sink or source)
- Output Load: 10K ohms typical Output
- Output Response Time: 10 mS
- Overvoltage Protection: 16 Vdc
- Reverse Voltage: 14 Vdc
- Short Circuit Protected: Yes
- EMC (512 MHz-1 GHz): 25 V/m
- EMC (10 MHz-512MHz): 50 V/m
- ESD (CDF-AEC-Q100-002): 15k V

### Physical

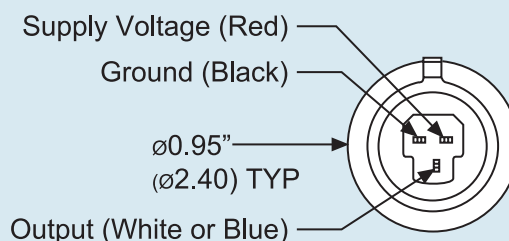
- Proof Pressure: 5X 15- 75psi  
3X 100-300psi  
2X 500psi
- Burst Pressure: 2CP5 1500psi/2500 psi minimum  
2CP50 2500 psi minimum
- Cycle Life: 10M F.S. cycles
- Random Vibration (50-2000 Hz): 11g
- Drop (any axis): 1.5 m
- Electrical Connection: Nema 4X, IP65



## Mode of Operation

The standard design is ideal for demanding HVAC and refrigeration applications where long-term reliability is a must. The transducer is designed to operate with a 5Vdc supply, and to provide a robust 0 to 5Vdc output. The output is ratiometric to supply voltage, allowing the user to maintain accuracy with variation in the supply voltage. The electrical interface is a rugged industry accepted connector. The brass pressure connection has multiple threads. This device maintains accuracy through a wide temperature range.

## Wiring Diagram



## Dimension Diagram

