



BAPI Cable and Lead Wire Options

Etched Teflon, Plenum-Rated and FEP-Jacketed Overview

Application Note

Cable_and_Lead_Wire_Options.pdf

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Depending on the product and application, BAPI sensors are available with Etched Teflon, Plenum-Rated, or FEP-Jacketed lead wires. Each wire type is safe for use in plenum space.

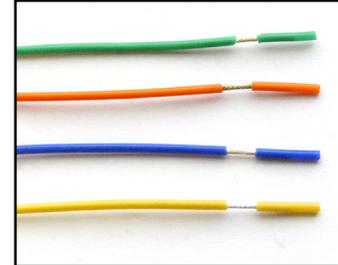
Wire and Cable Material Comparison

ETCHED TEFLON (TFE)

Teflon is used around the globe as a coating material for a number of reasons, all which come together to make it a robust and dependable material. As an insulator, it is valued for the strength of its carbon-fluorine bonds that are extremely flexible and non-reactive. Teflon also ensures that water and substances with water in them will not react with the wire it is insulating. Teflon is an incredible material for insulating wires and allows the wire to stay reliable for numerous years. The standard lead wire for BAPI duct and immersion style temperature sensors is 6" (15cm) of etched Teflon. This wire is used for its wide temperature range and resistance to damage, moisture, oil and certain chemicals. The etching process of Teflon wire allows BAPI's epoxy to bond and seal around the wire during the encapsulation process.

Operating Temperature Range: -67 to 221°F (-55 to 105°C)

Size: 22 AWG, Stranded



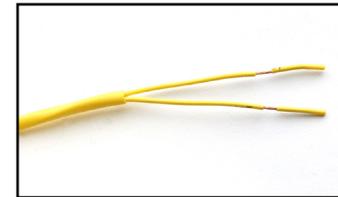
Etched Teflon (TFE) Lead Wires

PLENUM RATED (PL)

BAPI's plenum-rated wire includes a flame-retardant PVC insulation and jacket so that in the event of a fire, it will not release toxic fumes and smoke as it burns. In some areas of the world, plenum-rated wire is required by law. This wire is used for products that require longer wire runs from the sensor in a mid-range operating temperature.

Operating Temperature Range: -4 to 167°F (-20 to 75°C)

Size: 22 AWG, Stranded



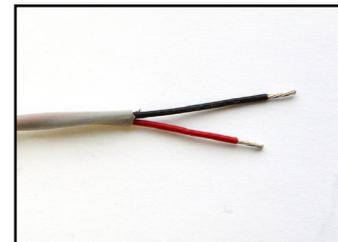
Plenum-Rated (PL) Cable

FEP-JACKETED (FEP)

Normally referred to as FEP, Fluorinated Ethylene Propylene is a type of fluoropolymer commonly extruded as both an insulation and jacket material for wire and cable. FEP exhibits outstanding resistance to chemicals and has a wide operating temperature range. Due to these physical characteristics, FEP-jacketed cable is a popular choice for use in numerous industries, including aerospace, medical, lighting and electronic applications. FEP-jacketed cable is commonly used for products that require longer wire runs from the sensor across a wide range of operating temperatures.

Operating Temperature Range: -112 to 392°F (-80 to 200°C)

Size: 22 AWG, Stranded



FEP-Jacketed (FEP) Cable