

# Molded Thermocouple with a Small Diameter and a Fluororesin Coating

**Okazaki's technical capability, which has realized  $\phi 0.06$  mm (the narrowest diameter class in the world), further expands the possibilities of temperature measurement.**

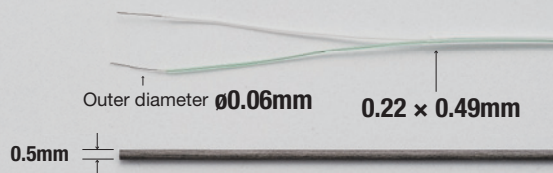
**Characteristics**

Okazaki's fluororesin-coated, small-diameter thermocouples not only insulate their small-diameter thermocouple wires with fluororesin but also enclose these wires in a sheath. Multiple types are available: a type in which the measuring junction is exposed and types that are insulated with fluororesin or silicone rubber. After coating with fluororesin, the  $\phi 0.06$  mm elements have an outer diameter of approximately  $0.22 \times 0.49$  mm, which places these products in the class of the most narrow products in the world (according to Okazaki's research). These products are optimal for measuring temperatures in extremely narrow spaces.  $\phi 0.1$  mm and  $\phi 0.32$  mm products are also available. Products with fluororesin-coated measuring junctions are airtight and have excellent corrosion resistance. The models with exposed measuring junctions are optimal for measuring the temperatures of gases and solid surfaces. The insulated types are optimal for measurements in water and in locations where electrical insulation is necessary. We can manufacture the Ultra-Fine Type as small as  $\phi 0.06$  mm.

Technology for welding the elements of the smallest type ( $\phi 0.06$  mm; Ultra-Fine Type).

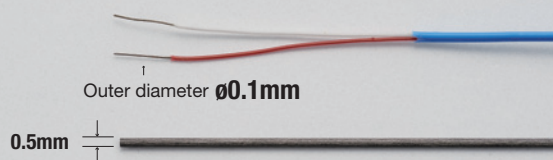
These products are molded using Teflon as the raw material, which makes it possible to perform measurements in water and in locations where electrical insulation is necessary.

## Ultra-fine coating thermocouple



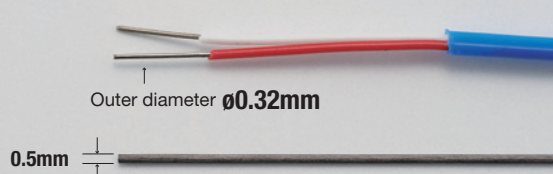
**EXS Ultra-Fine Type**

## Super-fine coating thermocouple



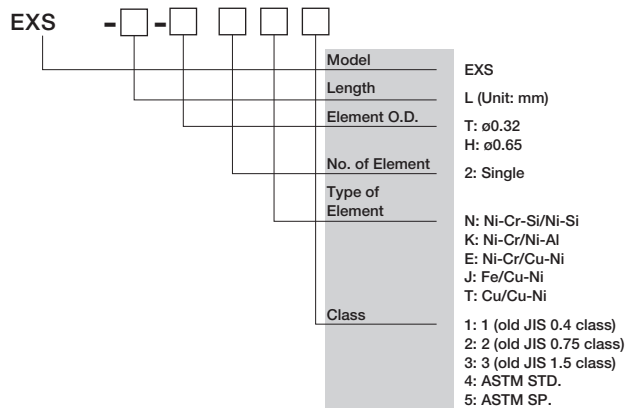
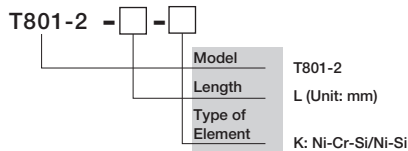
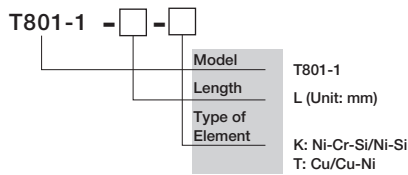
**EXS Super-Fine Type**

## Narrow-diameter coating thermocouple



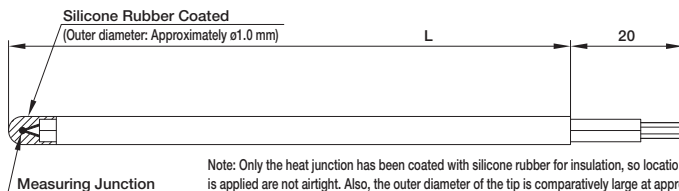
**EXS**

## Model No.



## Specifications

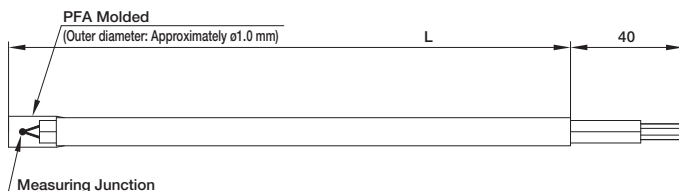
### ■ T801-1 Ultra-Fine PFA-Coated Thermocouple EXS Ultra-Fine Type



Element : K & T class 2  
 Element outer diameter :  $\phi 0.06$  mm  
 Insulation coating : PFA resin  
 Coating outer diameter : Approximately  $0.22 \times 0.49$  mm  
 Measuring junction : Silicone rubber coated  
 Maximum usage temperature :  $180^{\circ}\text{C}$

Note: The color of the insulation coating complies with JIS C 1610:2012. The other outer coating is transparent.

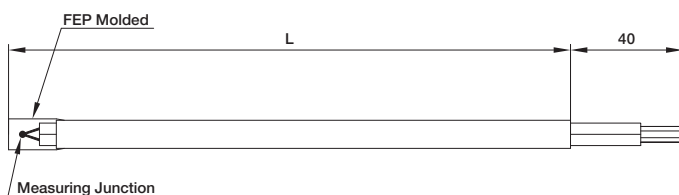
### ■ T801-2 Super-Fine PFA-Coated Thermocouple EXS Super-Fine Type



Element : K class 2  
 Element outer diameter :  $\phi 0.1$  mm  
 Insulation coating : PFA resin  
 Coating outer diameter : Approximately  $0.42 \times 0.68$  mm  
 Measuring junction : PFA molded  
 Maximum usage temperature :  $180^{\circ}\text{C}$

Note: The color of the insulation coating complies with section 2 of JIS C 1610:1995.

### ■ EXS Narrow-Diameter FEP-Coated Thermocouple



Element : K, E, and J & T class 2  
 Element outer diameter :  $\phi 0.32/\phi 0.65$  mm  
 Insulation coating : FEP resin  
 Coating outer diameter : Approximately  $1.0 \times 1.7/1.7 \times 2.8$  mm  
 Measuring junction : FEP molded  
 Maximum usage temperature :  $150^{\circ}\text{C}$

Note: The color of the insulation coating complies with section 2 of JIS C 1610:1995.

Note: All the models listed above can be manufactured with the measuring junction exposed.



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