PRESS-FIT 3 MM CAVITY TEMPERATURE SENSOR

TS-PF03-K

The press-fit 3 mm cavity temperature TS-PF03-K analyzes temperature variation inside the mold cavity. The TS-PF03-K is designed for use with RJG, Inc.'s Lynx Quad Temperature Module LS-QTTB-K—which receives input from up to four thermocouples—and the e*DART*®.

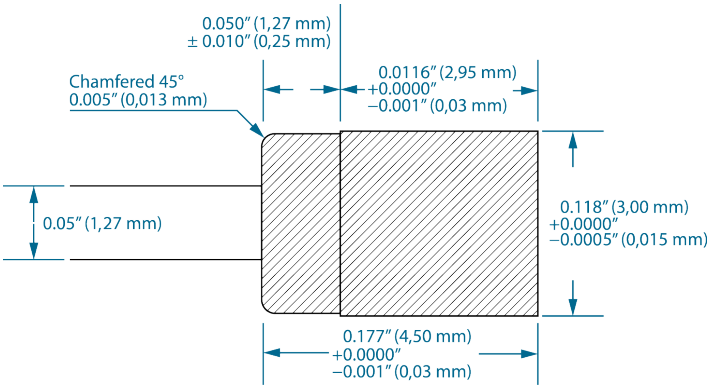
TECHNICAL SPECIFICATIONS

The TS-PF03-K sensor head is made of hardened steel, and can be contoured, angled, and/or textured to match the cavity, The sensor's Teflon™-coated wire allows the sensor to work in mold temperatures of up to 824 °F (450 °C).

Sensing Element	Type K Thermocouple	
Force Range	30,000 psi	2,068 bar
Sensor Temp	0–527 °F	0–275 °C
Accuracy		±1.1C
Sensor Temp	527–842 °F	275–450 °C
Accuracy	0.4 % of reading	
Sensor Max Temp	842 °F	450 °C
Cable Max Temp	400 °F	204 °C

PRODUCT DIMENSIONS

SENSOR HEAD



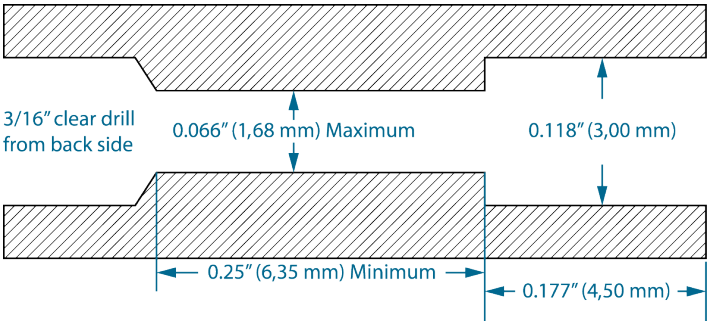
CABLE LENGTH

The TS-PF03-K sensor wire is 6 ft (1,83 m) in length, and can be shortened or lengthened appropriately for each application. Length must be longer than needed to assure proper installation without tension on the lead wire.

Gage	30
Length	6 ft (1,83 m)

SENSOR POCKET

The wire channel maximum diameter of 0.066" (1,68 mm) is specified to ensure sensor body support under pressure. The channel does not need to be enlarged as shown.



SENSOR INSTALLATION

Feed the sensor cable wire into the sensor cavity. Press the sensor into place with a larger diameter pin to avoid cracking the mold; trim excess wire.

> **NOTE** *Once installed, a sensor CANNOT be removed. Attempts to remove sensor will result in destruction of sensor.*

2. Sensor Pocket
3. Cable Pocket[1]
4. Cable Clips[2]
5. Wire Channel Cover Plate
6. RJG, Inc. Lynx Quad Temperature Module[3]

1 Cable pocket corner is rounded to prevent cutting wire. Minimum wire bend radius is ~0.125" (3,175 mm)

2 Plastic cable clips hold the wire 0.25" X 0.25" (6,35 mm X 6,35 mm) deep in channel to prevent pinching.

3 Model # LS-QTTB-K, Type K Thermocouple

> **NOTE** *DO NOT pull on sensor cable with greater than 6 lbs of force. DO NOT lay sensor cable in hot runner power channels. Failure to comply will result in damage to equipment.*

TESTING

Test the sensor cable wire resistance with an ohmmeter during installation to confirm the proper resistance.

Negative (-)	Red	~1.8 Ω/ft
Positive (+)	Yellow	~4.6 Ω/ft

Connect a millivoltmeter to the sensor cable wires. Heat the face of the sensor slightly with a torch; the voltage reading should increase by 0.016 mV/°F (0.03 mV/°C). The sensor temperature can be raised to 64 °F (18 °C) to cause a +1 mV change.

MACHINING

If the cavity must be surfaced or contoured, use the following specifications to machine the sensor head. Failure to comply will result in damage to the thermocouple junction.

MAX. MATERIAL REMOVAL

0,127 mm	0.005"

A maximum angle of 5° is acceptable if one side is left at full height.