

B Type

- Adjustable spring load probe is available to ensure constant consistent force
- The Stopper is available to fix on any place of your applications
- Various Connection Jigs and caps for the twists and locks of mold applications
- Bayonet Lock Cap to allow quick installation and secured attachment

The HAWK **B model** temperature sensor is with the bayonet connection design which provides a reliable reading, low cost, quick installation and secure contact to virtually any application requiring constant temperature monitoring and checking. It can provide mechanical protection in harsh environment. This compact and durable device is ideal for confined and high-vibration environments such as plastic molding, metal processing, and die casting industries.

Specifications

Sensing Element:

K(Ni-Cr, Ni-Al)...0/+1200°C,
E(Ni-Cr, Ni-Cu)...-200/+900°C,
J(Fe, Ni-Cr)...-50/750°C,
T(Cr, Ni-Cr)...-200/+350°C,
N(Ni-Cr-Si, Ni-Si)...0/1200°C,
Platinum 100Ω/500Ω/1000Ω,
Nickel 120Ω, Copper 10Ω,
Single, Double or Tripple Resistance,
Element.

Tolerance (°C)-PT100:

JIS/DIN

ClassA	ClassB
$\pm(0.15+0.002 t)$	$\pm(0.3+0.005 t)$

ASTM

ClassA	ClassB
$\pm(0.13+0.0017 t)$	$\pm(0.25+0.0042 t)$

Probe Size:

1/4" diameter-Standard, 3/8", 3.2mm,
6mm, 8mm, 10mm, 12mm, others dia
available.

Probe Length:

10mm, 20mm, 1/2", 1", 1 1/2"
standard lengths, others available.

Jig Connection Size:

Thread.....3/8", 1/4", 1/8" NPT
standard, JIS, DIN , M10*1.0,
M14*1.0 and M16*1.5 available.

Probe Material:

SS304, SS316, SS316L.

Transition Style:

Standard, Spring or Armor.

Insulation/Conductor:

Fiberglass, PVC or PTFE.

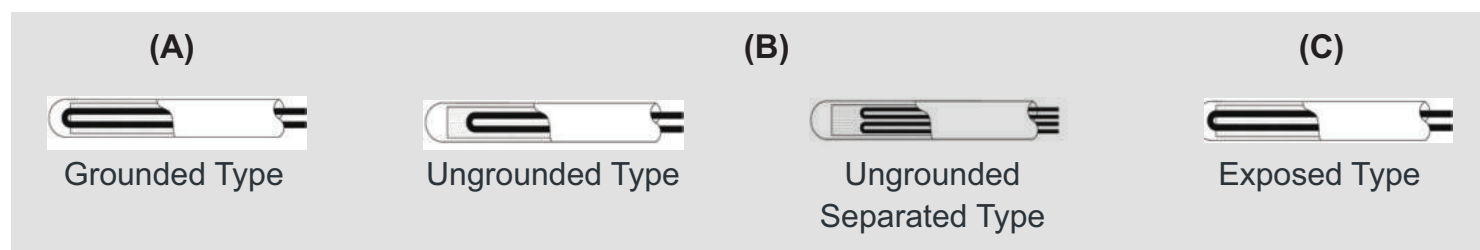
Wire Termination:

Plain Leads-not stripped, Stripped.
Lead 3mm, Spade lug,
Standard Male Plug, Mini Male Plug,
Standard Female Socket,
Mini Female Socket,
Terminal Pin or others.

Tolerance Thermocouple

	JIS C1605/DIN(IEC 584-2)			ASTM E230
Code	Class 1	Class 2	Class 3	STD / SP
K-TYPE	-40°C~375°C ±1.5°C	-40°C~333°C ±2.5°C	-167°C~40°C ±2.5°C	STD...±0.75% or ±2.2°C(4°F)
	375°C~1000°C ±0.004 · t	333°C~1200°C ±0.0075 · t	-200°C~-167°C ±0.0015 · t	SP...±0.4% or ±1.1°C(2°F)
N-TYPE	-40°C~375°C ±1.5°C	-40°C~333°C ±2.5°C	-167°C~40°C ±2.5°C	STD...±0.75% or ±2.2°C(4°F)
	375°C~1000°C ±0.004 · t	333°C~1200°C ±0.0075 · t	-200°C~-167°C ±0.0015 · t	SP...±0.4% or ±1.1°C(2°F)
E-TYPE	-40°C~375°C ±1.5°C	-40°C~333°C ±2.5°C	-167°C~40°C ±2.5°C	STD...±0.5% or ±1.7°C(3.1°F)
	375°C~800°C ±0.004 · t	333°C~900°C ±0.0075 · t	-200°C~-167°C ±0.0015 · t	SP...±0.4% or ±1°C(1.8°F)
J-TYPE	-40°C~375°C ±1.5°C	-40°C~333°C ±2.5°C	-	STD...±0.75% or ±2.2°C(4°F)
	375°C~750°C ±0.004 · t	333°C~750°C ±0.0075 · t	-	SP...±0.4% or ±1.1°C(2°F)
T-TYPE	-40°C~125°C ±0.5°C	-40°C~133°C ±1°C	-67°C~40°C ±1°C	STD...±0.75% or ±1°C(1.8°F)
	125°C~350°C ±0.004 · t	133°C~350°C ±0.0075 · t	-200°C~-67°C ±0.0015 · t	SP...±0.4% or ±0.5°C(0.9°F)

Measuring Junction Type



(A) The thermocouple is grounded to the protective tube. It is with fair response than unground type. It is not suitable for the noisy and dangerous location such as electromagnetic induction interfered by radio frequency.

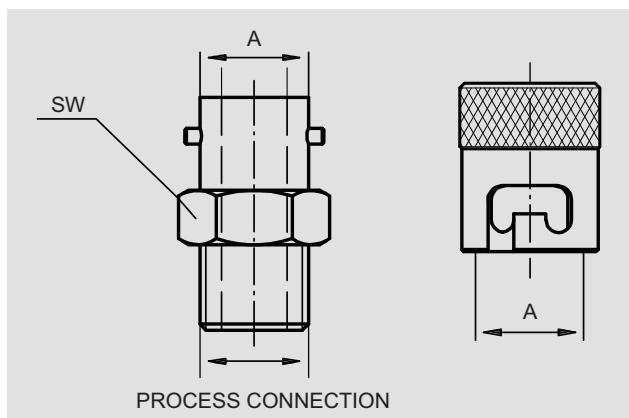
(B) The thermocouple is covered with insulator. It responds slower than grounded type. For most applications, it can ensure a long-life. It is available in two control loop separately.

(C) The thermocouple is exposed. It is with rapid response, but not good in airtightness, insulation and mechanical strength.

Typical Applications

- ▶ Injection molding machinery
- ▶ Vehicle brake system
- ▶ Plastic processing equipment
- ▶ Power generating stations
- ▶ Cylinder and sump
- ▶ Industrial engines
- ▶ Pipelines and vessels
- ▶ Bearing processing

Jig Connection



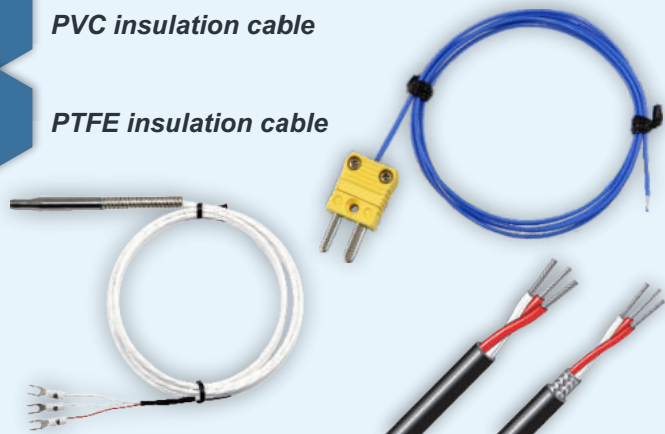
Insulation/Conductor

C

PVC insulation cable

F

PTFE insulation cable



P

Fiberglass insulation cable



G

Glass coating shield SUS cover insulation cable

Transition Type

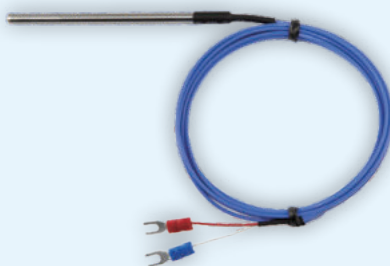
A

SS Armor Transition



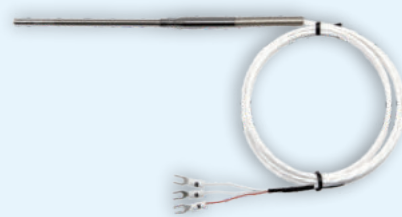
P

Standard Transition



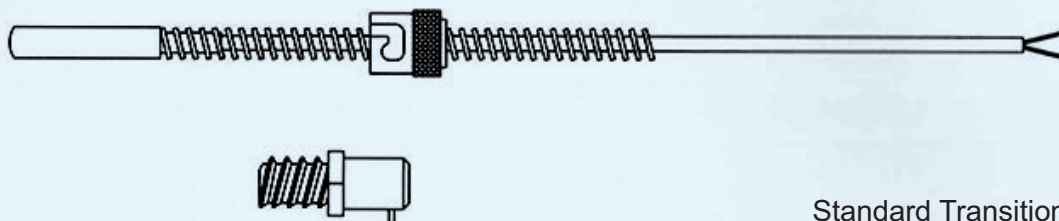
S

Spring Transition

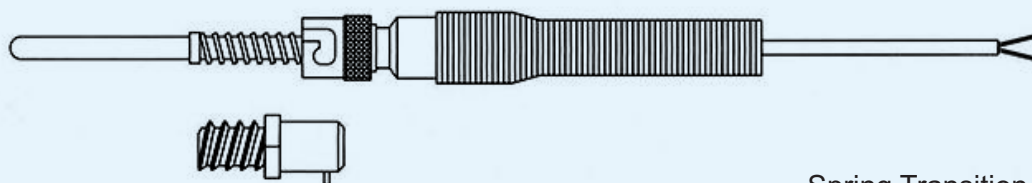


Drawings

BAYONET CAP WITH LOAD SPRING PROBE

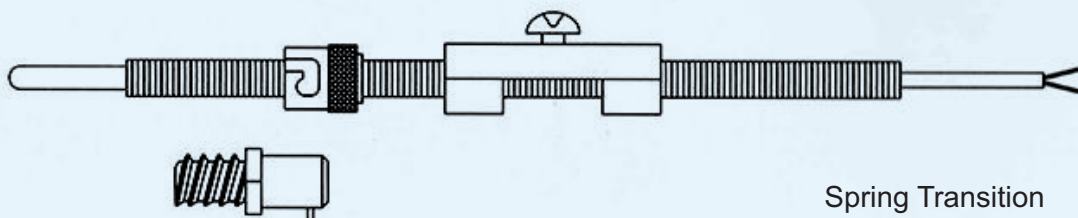


Standard Transition



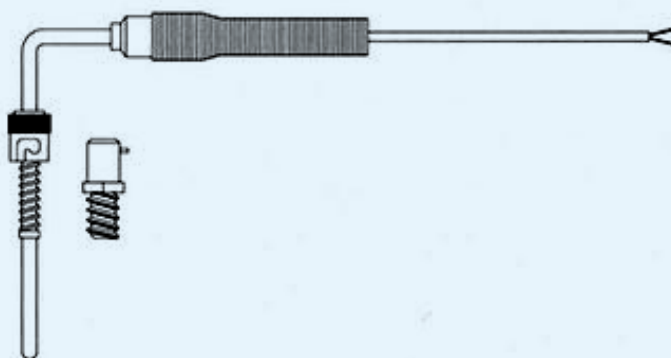
Spring Transition

BAYONET CAP PROBE



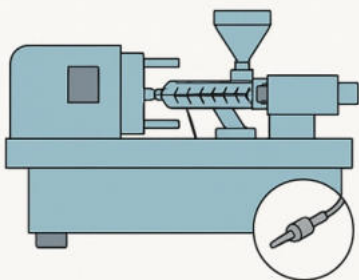
Spring Transition
with Stopper

L TYPE BAYONET CAP WITH SPRING PROBE

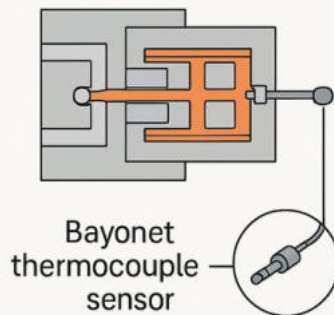


Applications

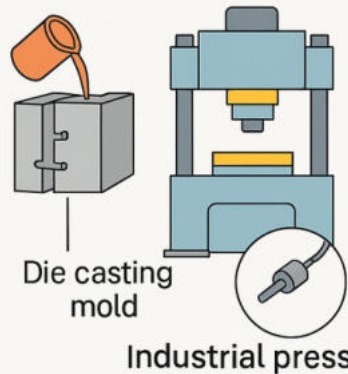
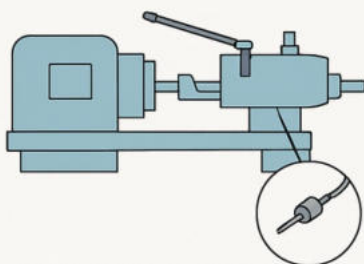
Plastic injection molding machine



Hot runner system



Extrusion machine

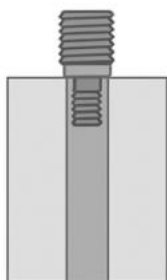


Extrusion machine

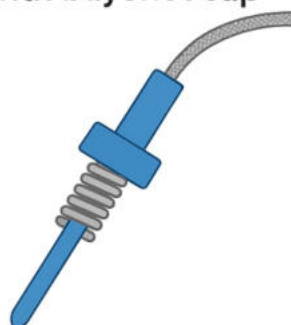
Industrial press

Installation

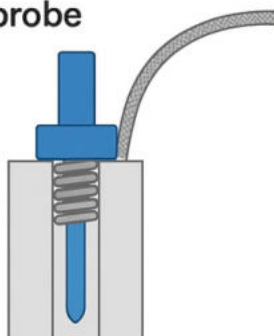
1. Confirm installation hole size



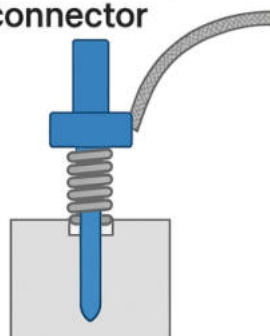
2. Prepare the sensor with bayonet cap



3. Insert the sensor probe



4. Lock the bayonet connector



Accessories/Options



ZC Certificate of Accuracy (Factory)

ZE Certificate of Accuracy (TAF)

ZI Certificate of Accuracy (NIST)



ZN NACE-MR0175 Heat Treatment



ZX Oxygen Cleaning

Titanium Coating Stem

TE



TC

PFA Lining Stem



TC

PTFE Coating Stem



Load Spring

KS



KN

Pipe Nipple Extension



KU

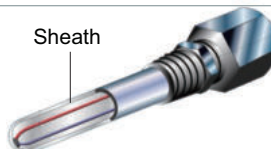
Nipple Union Nipple Extension



KH

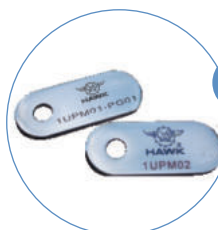
Sheath Type

Sheath



ZY

Stainless Steel Tag Plate



Order Information

P-4D-B2 CC K J2 A 006 075 S 000 G S 2 P 000 C P H-XX

Option
ZC-Certificate of Accuracy (Factory)
ZE-Certificate of Accuracy (TAF)
ZI-Certificate of Accuracy (NIST)
ZN-NACE-MR0175-2002 Heat Treatment
ZX-Oxygen Cleaning
KA-SS Armor Cable
TC-PFA Lining Stem
KS-Load Spring
ZY-Stainless Steel Tag Plate
 Please refer to the options and write down the code which you need.

Wire Termination

P-Plain Leads-not stripped
S-Stripped Lead 3mm
L-Spade lug **T**-Terminal Pin
M-Standard Male Plug
A-Mini Male Plug
F-Standard Female Socket
C-Mini Female Socket

Insulation / Conductor **C**-PVC **F**-PTFE **P**-Fiberglass
N-Nickel **G**-Glass Coating Shield SUS Cover

Lead/Armor Length	000-Non 2C5-2 1/2" 04C-4"	06C-6" 09C-9" 12C-12"	15C-16" 18C-18" 24C-24"	050-50mm 100-100mm 900-900mm	1M1-1.1m 1M5-1.5m 10M-10m and so on...
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Transition Type **P**-Standard Transition **S**-Spring Transition
A-Armor Transition

Wires 2-2 wires 3-3 wires 4-4 wires 6-6 wires 8-8 wires 0-non

Number of elements **S**-Single Element **D**-Double Elements **T**-Tripple Elements

Type of Junction **G**-Grounded **U**-Ungrounded **L**-Others **E**-Explosed **N**-None

Lagging Extension	000-Non 2C5-2 1/2" 04C-4"	06C-6" 09C-9" 12C-12"	15C-16" 18C-18" 24C-24"	050-50mm 100-100mm 900-900mm	1M1-1.1m 1M5-1.5m 10M-10m and so on...
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Shank Design **S**-Straight **R**-Stepped **T**-Tapered

Stem Length	2C5-2 1/2" 075-75mm	04C-4" 100-100mm	06C-6" 150-150mm	09C-9" 200-200mm	12C-12" 250-250mm	16C-16" 24C-24" and so on...
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Stem Diameter	C25-1/4"	C32-5/16"	C38-3/8"	006-6mm	008-8mm	010-10mm	012-12mm and so on...
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Stem Material **A**-SS304 **S**-SS316 **W**-SS316L

Class	J1-JIS/DIN Class 1 J2-JIS/DIN Class 2 J3-JIS/DIN Class 3 AT-ASTM Standard AP-ASTM Special	EA-JIS/DIN Class A-200/+100°C EB-JIS/DIN Class B-200/+100°C AA-ASTM Class A-200/+100°C AB-ASTM Class B-200/+100°C	LA-JIS/DIN Class A-30/+250°C LB-JIS/DIN Class B-30/+250°C BA-ASTM Class A-30/+250°C BB-ASTM Class B-30/+250°C	MA-JIS/DIN Class A-50/+450°C MB-JIS/DIN Class B-50/+450°C CA-ASTM Class A-50/+450°C CB-ASTM Class B-50/+450°C	HA-JIS/DIN Class A 0/+650°C HB-JIS/DIN Class B 0/+650°C DA-ASTM Class A 0/+650°C DB-ASTM Class B 0/+650°C
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Sensor Type	K-K-Type E-E-Type	J-J-Type T-T-Type	N-N-Type C-C-Type	D-D-Type	P-Platinum 100Ω A-Platinum 500Ω	D-Platinum 1000Ω I-Nickel 120Ω	C-Copper 10Ω
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Process Connection	Style C-Bayonet Cap Jig Male	Size 3-3/8"NPT 4-1/4"NPT	8-1/8"NPT G-3/8"PT(R)	B-1/4"PT(R) C-1/8"PT(R)	C-3/4"PT(R) H-3/8"PF(G)	E-1/4"PF(G) F-1/8"PF(G)	S-M16*1.5 K-M14*1.0 and so on...	M-M10*1.0 and so on...
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Limited Warranty and Liability

HAWK GAUGE CO.,LTD warrants all its mechanical instruments to be free from defects in materials and workmanship. HAWK agrees to repair or replace any thermometers if returned to our factory, transportation charges prepaid, and after which examination reveals is to be defective due to faculty workmanship or material. This warrant should not apply to subject to the following terms and conditions:

- A. The product has not been subjected to misuse, neglect, abuse , accident, incorrect mounting, improper use or misapplication such as negligence, accident, vandalism, shock or vibration.
- B. The performance of any system of which HAWK's products are a component part.
- C. The product has not been exposed to any other service, range or environment of greater severity than that for which the products were designed.
- D. The product has not been altered or repaired by anyone except HAWK GAUGE or its authorized service agencies.
- E. The serial number or date code has not been removed, defaced or changed.
- F. The actual pressure&temperature occurring exceed the values specified for HAWK Thermometer.

Unless otherwise specified in a manual or warranty card, or agree to in a writing signed by HAWK GAUGE office, HAWK Process gauge products shall be warranted for one years from the date of sale.

This warranty is in lieu of all other warranties expressed or implied, and of all obligations or liabilities on its part for damages including but not limited to consequential damages, following the use of misuse of instruments sold by it. No agent is authorized to assume for it any liability except as set forth above.

Note

HAWK GAUGE CO.,LTD reserves the right to make product improvements and change its specifications at any time stated throughout this brochure without notification. Please contact the factory on all critical dimensions and specifications for verification.

HAWK GAUGE is not expert in the customer's technical field and therefore doesn't warrant suitability of it's product for the application selected by customer.



1971 – 2025

Data Sheet No: MKDP4DBA2-E