



INSTRUMENTS, INC.

468 Liberty Drive
Wittenberg, WI 54499
USA

TEL 715- 253-2801

FAX 715- 253-2811

www.imcinstruments.com

Ver. 12-01-2014



TEMPERATURE MEASURING PRODUCTS

PROBE SPECIFICATIONS

PROBE STEM: 1/4" or 3/16" Stainless Steel with
K type thermocouple sensor

Measuring Temperature range -200F to +400F

HANDLE: High Temperature plastic 350F max

CABLES: Food safe silicone plastic/rubber 350F max

Measuring accuracy ** +/- 0.3F

** Permanently connected Probe 0F to 300F

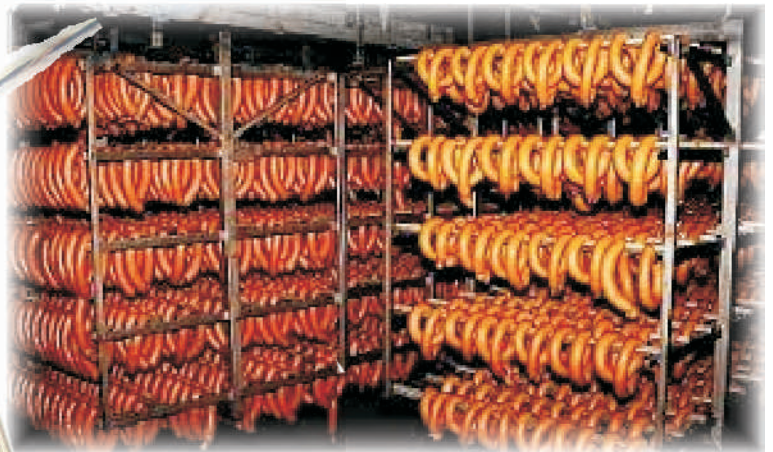
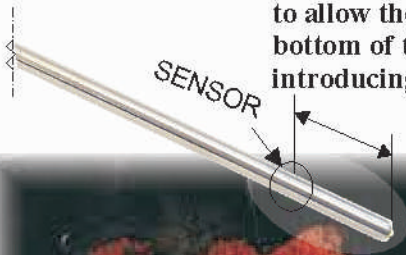


MEAT PRECESSING PROBES

1/4" DIA HARD STAINLESS STEM
FOR PENETRATION OR
IMMERSION PROBES 12 TO
48 INCH LONG

5/32 OR 3/18" DIA HARD
STAINLESS FOR LONGER
PENETRATION OR
IMMERSION PROBES

PROBE TIP DETAIL
Sensor located away from tip end
to allow the probe to rest on the
bottom of the kettle with out
introducing measuring error



**PENETRATION TIP TAPERS
DOWN TO .125" FOR FAST
RESPONSE**



INSTRUMENTATION WITH QUALITY ENGINEERING



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TEMPERATURE MEASURING PRODUCTS

**HIGH VOLUME PIZZA MAKING
TEMPERATURE MONITORING SYSTEM**

OVEN[1]



OVEN[2]



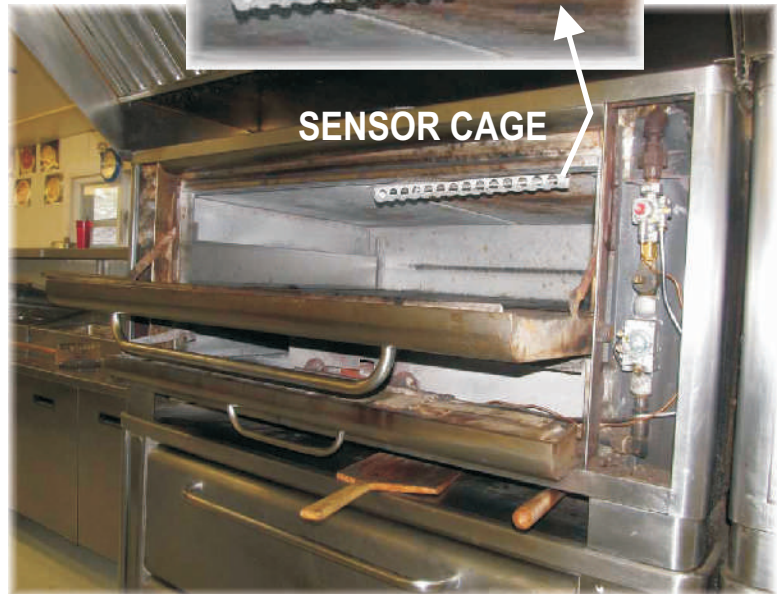
OVEN[3]



OVEN[4]



PRECISION TEMPERATURE SENSOR IN CAGE



SENSOR CAGE



**MONITOR OVEN TEMPERATURE TO INSURE QUALITY
AND CONSISTENCY THRU HIGH VOLUME LOADS**



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TEMPERATURE MEASURING PRODUCTS

BREAD PROOFING AND BAKING PROBE

PROBE SPECIFICATIONS

PROBE STEM: 1/4" or 3/16" Stainless Steel with
K type thermocouple sensor

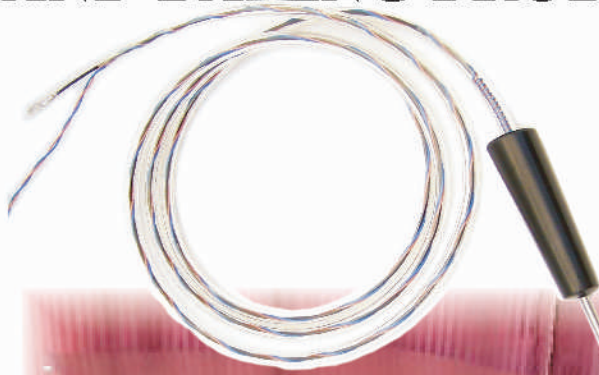
Measuring Temperature range -200F to +400F

HANDLE: High Temperature plastic 350F max

CABLES: Food safe silicone plastic/rubber 350F max

Measuring accuracy ** +/- 0.3F

** Permanently connected Probe 0F to 300F



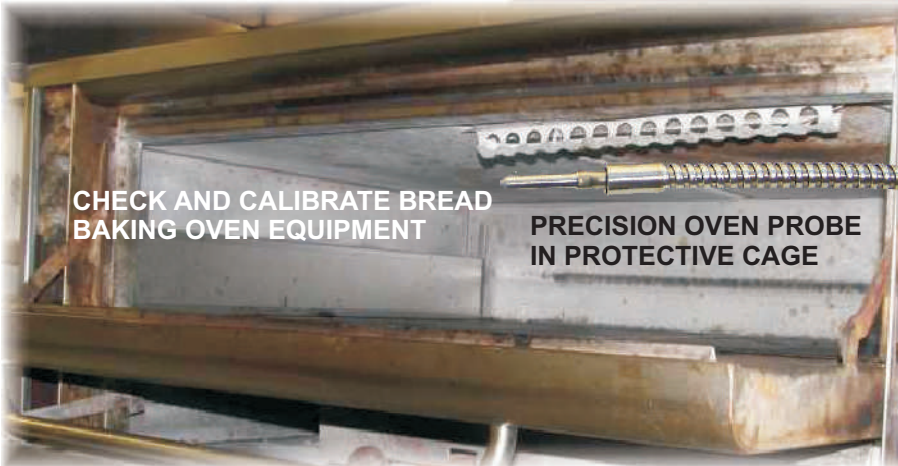
CHECK AND CALIBRATE DOUGH PROOFING EQUIPMENT



CHECK AND CALIBRATE DOUGH
PROOFING EQUIPMENT



CHECK DOUGH
TEMPERATURES



CHECK AND CALIBRATE BREAD
BAKING OVEN EQUIPMENT

PRECISION OVEN PROBE
IN PROTECTIVE CAGE



INSTRUMENTATION WITH QUALITY ENGINEERING



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TEMPERATURE MEASURING PRODUCTS

PROBE SPECIFICATIONS

PROBE STEM: 1/4" or 3/16" Stainless Steel with
K type thermocouple sensor

Measuring Temperature range -200F to +400F

HANDLE: High Temperature plastic 350F max

CABLES: Food safe silicone plastic/rubber 350F max

Measuring accuracy ** +/- 0.3F

** Permanently connected Probe 0F to 300F

**CANDY MAKING
CONFECTIONARY PROBE**

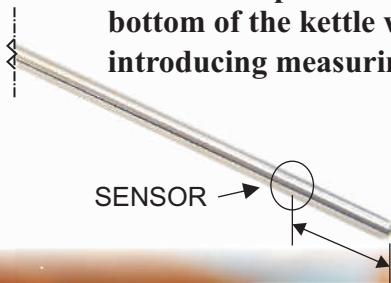


Eliminate the use of **GLASS
THERMOMETERS** and all the
costly hazards it introduces.



PROBE TIP DETAIL

Sensor located away from tip end
to allow the probe to rest on the
bottom of the kettle with out
introducing measuring error



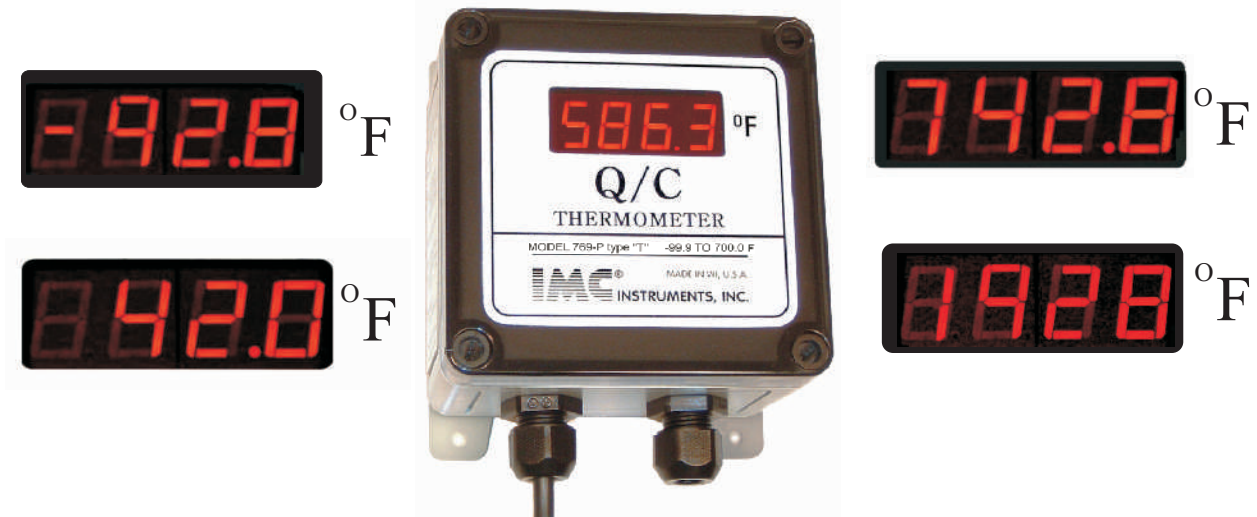
INSTRUMENTATION WITH QUALITY ENGINEERING



INSTRUMENTS, INC.

INTRODUCING A NEW LINE OF:

PRECISION DIGITAL THERMOMETERS
WITH J, K and T CALIBRATIONS



GENERAL SPECIFICATIONS

Measuring Range:

T type -392F to +752F (-200C to +400C)

K type -302F to +2498F (-150C to +1370C)

J type -212F to +2192F (-100C to +1200C)

Max ANSI error for all above calibrations +/- 0.2F (0.1C)

Max resolution (0.1) display values -99.9 deg to 999.9deg

Min resolution (1.0) display values -400deg to 2999deg

Environmental Operation:

Max Environmental operation -40F (-4C) to 140F(+60C)

Temperature offset error 25C(77F) reference 0.015deg/deg ----

Temperature span error 25C(77F) reference 0.03%/deg

Ideal as a secondary STANDARD

Special Environmental CALIBRATION available for WIDE ambient operation from -20C(-4F) to +50C(122F) :

Maximum combined SPAN and OFFSET error: +/- 0.25F(0.14C)

Calibrations available in deg F or C and T or K or J thermocouples

REVISED 12-01-2014

INSTRUMENTATION WITH QUALITY ENGINEERING



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Wittenberg, WI 54499
U.S.A.

TEL: 715-253-2801
715-445-4946
FAX: 715-253-2811

PRECISION DIGITAL THERMOMETERS FOR "QUALITY CONTROL" USE

WITH J, K and T CALIBRATIONS

These precision microprocessor thermometers have unparalleled accuracy and long term stability. with 1/10th or whole degree resolution. They are housed in sealed enclosures suitable for continuous use in high humidity or wash-down areas. Meters come complete with permanently attached probes calibrated to provide matched accuracy. These probes are constructed of tough, long-life materials, and can be custom optimized to meet specific customer requirements. Typical monitoring applications include batch cooking of fudge, hard and soft candies and any product where the processing temperature is critical. Built-in quality gives these instruments an excellent combination of accuracy and durability.

FEATURES:

Thermocouple type K wire is used because of its superior mechanical strength and corrosion resistance over a temperature range from **-40F to 2300F** .

Thermocouple type T wire is used because of its superior overall accuracy **+/- 0.3F** including probe error over a temperature range from **-40F to 500F**

Precision cold junction tracks ambient temperature changes and compensates accurately and without lag.

Large bright red LED display is about 1/2" high for excellent readability. Individual digits are mounted in sockets for simple replacement.

Washable enclosure is made of heavy wall molded plastic with convenient external mounting feet and gasket sealed front cover.

SPECIFICATIONS

Measuring Range:

T type is -99.0 F to 500.0 F (-72.0 C to 260.0 C).

K type is -99.0 F to 999.9 F in tenths or 2300 F whole degrees (-72 C to 1260 C)

Measuring Accuracy:

T type is 0.3F from -99.0 F to 500.0 F(-72.0 C to 260.0C) including probe error

K type is 0.5F from -99.0 F to 2300 F (-72 C to 1260 C)

Probe error is probe dependant

Our test facilities include NBS traceable references for all certified probes and meters.

Instrument Environmental Range

-10° to 120F° (-23° to 49° C).

Models SM4K-0769 "Q/C"

1/10 or whole degree resolution



ENGINEERED AND MANUFACTURED IN WI, U.S.A

Heavy-duty probes are designed for use in batch production applications. **Long flex-life cables** are steel reinforced and are jacketed for either cold or hot environments. See next page for details.

Cold Junction Offset:

For an ambient range of 0F to 120 F it is +/- 1.5 F . Special low error of +/- 0.3F compensation is available up on request.

Construction:

Polycarbonate molded 4.3 sq x 2.7" Nema 4-X enclosure with polymer cover fasteners.

Power Requirement:

Supplied with a 5ft power cord for 120VAC 50/60HZ

Weight:

Appx.1.2 lbs (0.54 kg) without probe.

"INSTRUMENTATION WITH QUALITY ENGINEERING "



DESCRIPTION:

Meter with 5 ft power cord for line voltage operation

SCALE:

Fahrenheit
Celsius

OPTION -MODEL

9 4 5 0 - 0 7 9 - N

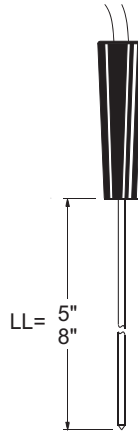
6
8

IMCs Cable-Probes are manufactured for applications in the food, beverage, and chemical industries. Probe construction includes a 7x7 stranded steel core for strength, a phenolic handle for temperature resistance and a choice of cables for most requirements.

Type 4 cable construction is rated for -30 to 200 oF in applications that require abrasion and cut-through resistance. This cable is jacketed with 5/16" dia. polyurethane. **Type 5** cable construction is rated for -100 to 500 oF with long flex-life materials. This cable has Teflon insulated conductors that are protected by a 5/16" dia. silicone jacket. **Type 6** 3/8" Poly with 5/32" SST Armor. Optional 1/4" dia. stainless steel armored cables are also available but not recommended for food contact applications. Handles are 3.25" long x .94" tapered with either side or back cable exit.

For use to sample semi-solids such as meat, ice cream, vegetables, or pre-drilled hard-frozen foodstuff. The stem is .125 dia. fully tempered HD stainless steel #304. The probe and polyurethane cable are fully immersable.

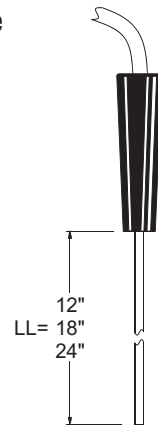
PROBE #	CABLE
PKP4-06P4-05	6 ft
PKP4-06P4-08	6 ft
PKP4-12P4-05	12 ft
PKP4-12P4-08	12 ft



99% Response time in oil = 12 secs.

Fast responding immersion probe for use with beverages or other low viscosity mixes. Stem is made of .19 dia bendable stainless steel #304. Tip design allows resting onto container bottom without distorting readings. The silicone cable is heat resistant and washable.

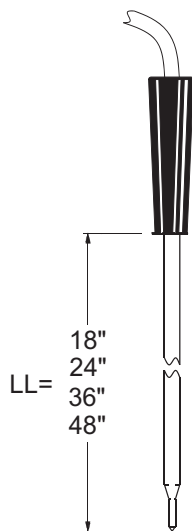
PROBE #	CABLE
PKP5-06Z6-12	6 ft
PKP5-06Z6-18	6 ft
PKP5-06Z6-24	6 ft
PKP5-12Z6-LL	12 ft



99% Response time in oil = 18 secs.

For use to probe liquids or semisolids with long reach. Stem is made from .25 dia. bendable stainless steel #304 and steps down to .125 dia. rigid tip for easy penetration and fast response. Probe and polyurethane cable are fully immersable.

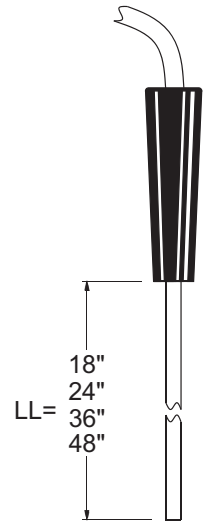
PROBE #	CABLE
PKP4-06T8-18	6 ft
PKP4-06T8-24	6 ft
PKP4-06T8-36	6 ft
PKP4-06T8-48	6 ft
PKP4-12T8-LL	12 ft



99% Response time in oil = 16 secs.

Heavy-duty immersion probe for use in semi-liquid mixes such as, fudge, chocolate, soups, etc. Stem is made of .25 dia. bendable grade stainless steel #304. Tip design allows resting onto kettle wall without distorting readings. The silicone cable is heat resistant and washable.

PROBE #	CABLE
PKP5-06Z8-18	6 ft
PKP5-06Z8-24	6 ft
PKP5-06Z8-36	6 ft
PKP5-06Z8-48	6 ft
PKP5-12Z8-LL	12 ft



99% Response time in oil = 24 secs.

IMC INSTRUMENTS, INC.

PRECISION PORTABLE THERMOMETERS

Models 2300 and 2400

After many years of field use, these digital thermometers earned the reputation of maintaining accuracy while under rigorous use. The rugged construction features a high impact ABS plastic case, heavy-duty coiled cord, long-life sealed switches and moisture protected circuits for use in high humidity environments. A calibration feature is also included which permits field calibration of the instrument and provides assurance of factory accuracy each time.

The *nickel RTD precision sensor* is repeatable to ± 0.1 degree over the entire measuring range.

Impact resistant case with an edge viewable display and *snap-on neck strap* allows user to take readings and have one hand free.

Bright red LED display is .42" (11 mm) high for excellent readability in shaded sunlight or in a darkroom.

Rechargeable NICAD battery pack is built-in and provides at least two years of minimum cost power. A single 8 hr. charge will operate the instrument at least 10 hrs.

Built in calibration reference. Simply actuate the switch to display the calibration number and turn the adjustor to match the factory accuracy.

Wide variety of probes and cables are available for this meter. These probes and cables are built for long life in very demanding applications.

SPECIFICATIONS:

Measuring Range:

Usable range is -50.0 to 250.0 °F (-50 to 121 °C).

Probe limit is -75 to 275 °F.

Measuring Accuracy:

Temp °F:	<u>-50</u>	<u>70</u>	<u>250</u>
2300-PN	± 0.3	± 0.1	± 0.3
2300-DN	± 0.8	± 0.2	± 0.8

Temp °C:	<u>-45</u>	<u>20</u>	<u>120</u>
2400-PN	± 0.2	± 0.1	± 0.2
2400-DN	± 0.4	± 0.1	± 0.4

Washable external storage well # ACCN-0105



MODEL 2300-PN00 with FOOD-USE probe TPC1-N105



MODEL 2300-PNC1 with HVAC probe for gas/liquid

Charger and neck strap are included with each instrument.

Instrument Environmental Range:

-20° to 140° F (-30° to 60° C) and 90% RH max.

Ambient Temperature Effects:

0.15% of reading while meter is at 0° or 120° F and adjusted to agree with factory calibration.

Display Indication:

Updated 3 times per second on LED digits 0.42" (11mm) high.

Construction:

Unit measures 6.5" L x 3.5" W x 1.5" H and weighs 1 lb. without probe.

ORDERING INFORMATION

SCALE: _____

Fahrenheit reading
Celsius reading

PERMANENTLY ATTACHED PROBE:

HVAC probe with 3 ft. reach coiled cable (see detail)
Same as above with 5 ft reach
See "PERMANENT PROBES" sheet to select probe
specify separate probe number with this option

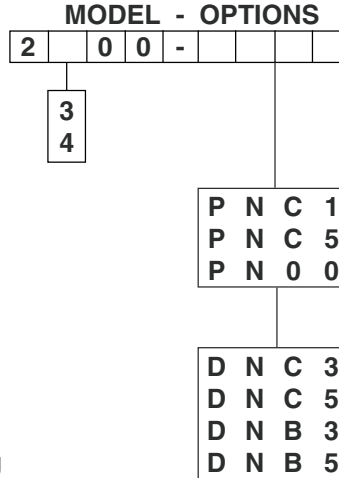
CABLE WITH CONNECTOR: _____

Coiled cable with 3 ft. reach (see detail)
Same as above with 5 ft reach
Heavy-duty 3 ft straight cable (see detail)
Same as above 5 ft long

See "DETACHABLE PROBES" sheet to select probe

INSTALLED ACCESSORY: _____

Washable external storage well for food-use probes
1/8" dia. 5" lg. such as TPC1-N105



A C C N - 0 1 0 5

* Prices and specifications are subject to change without notice

-PNC1 & -PNC5 Permanently attached coiled cable and probe.

This fast responding probe is ideal for gases, liquids and soft solids.
Construction: Stainless steel #304, 4.5" lg. x 0.11" dia. immersible.
Response time: 8 seconds in water, 50 seconds in air.



-DNC3 & -DNC5 Cables for use with detachable RTD-NI probes.

1/4" dia. polyurethanes cable, coiled for maximum flexibility, with DIN precision connectors.



-DNB3 & -DNB5 Heavy-duty cables for use with detachable RTD-NI probes.

1/4" dia. straight polyurethane cable, reinforced with a flexible steel core for maximum strength.



* Specifications are subject to change without notice

DS-2300 v07-07

IMC[®] INSTRUMENTS, INC.
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Website: www.imcinstruments.com

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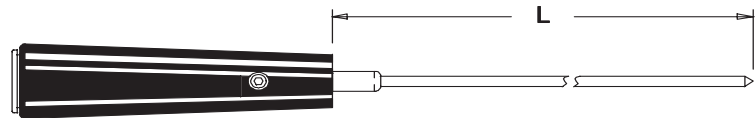
DETACHABLE RTD-NI PROBES FOR MODELS 2300-DN & 2400-DN

IMC'S PRECISION RTD PROBES for models 2300 through 2401, are made with our highly stable Nickel sensors and calibrated using NIST traceable references. All probes are quality constructed using heat resistant handles, microphone-type connectors and stainless steel stems. Select from standard designs shown below or contact the factory for custom requirements.

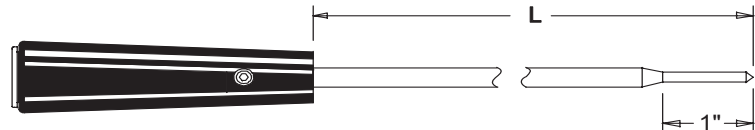
Note: The maximum allowable tip temperature on any of these probes is 275 °F.

DESCRIPTION	Max. Tip °F (°C)	99%Resp. Water	Time (sec) Air	L (in.)	Probe Number
General purpose for use in gases, liquids and semi-solids. Stem is 0.11" dia. and full temper stainless steel #304. Strength and design make this probe ideal for sampling foodstuff.	300(150)	10	70	4.5	8011-2005
				8.5	8011-2009

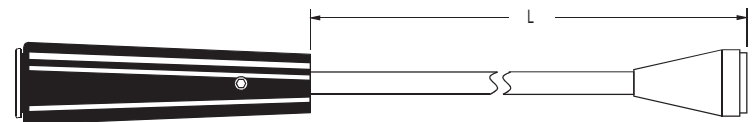
HANDLE IS 3.25" LG X .94" DIA



For use in liquids and semi-solid materials with long reach. Stem steps down from 0.25" dia. to .125" dia. and is made of #304 stainless steel. Typical uses are in the beverage and food processing industries.	300(150)	12	90	18	8011-2018
				36	8011-2036



For use on windows, heater fins, smooth pipes, etc. The probe has a surface conforming sensing disc for fast response on most materials. Stem is of 0.25" dia. aluminum and has a .75" dia. head. Can be used on pipes down to 2" dia. Accuracy: ±0.5°F at 32.0°F and ±1.5°F at 190.0°F	300(150)	Surfaces		3.5	8011-2304
		Metal	Plastic	11.5	8011-2312
		20	50	17.5	8011-2318



CONTACT FACTORY FOR AVAILABILITY

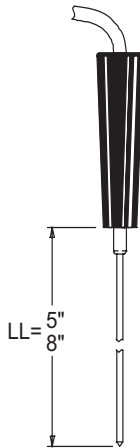
* Customer specified bend along any bendable probe stem is extra.

PERMANENT RTD-NI PROBES FOR MODELS 2300-PN & 2400-PN

IMCs Cable-Probes are manufactured for applications in the food, beverage, and chemical industries. Probe construction includes a polyurethane cable, a phenolic handle for temperature resistance and a choice of stems to suit almost any application. The cable construction is rated for -30 to 200° F and has good abrasion and cut-through resistance. Optional 1/4" dia. stainless steel armored cables are also available but not recommended for food contact applications. Handles are 3.25" long x .94" tapered with either side or back cable exit. The probe and cable are fully immersible.

Note: The maximum allowable tip temperature on any of these probes is 275° F.

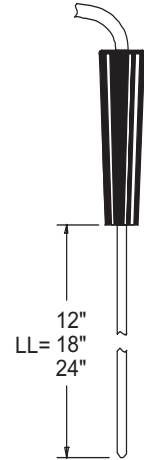
For use to sample semi-solids such as meat, ice cream, vegetables, or pre-drilled hard-frozen foodstuff. The stem is .125 dia. fully tempered stainless steel #304.



PROBE #	CABLE LEN.
TPC1-N10L	3 ft
TPC2-N10L	5 ft

99% Response time in oil = 12 secs.

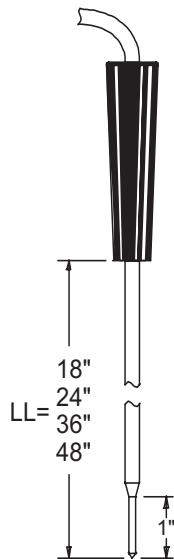
Fast responding immersion probe for use with beverages or other low viscosity mixes. Stem is made of .19 dia bendable stainless steel #304.



PROBE #	CABLE LEN.
TPD1-N2LL	3 ft
TPD2-N2LL	5 ft

99% Response time in oil = 18 secs.

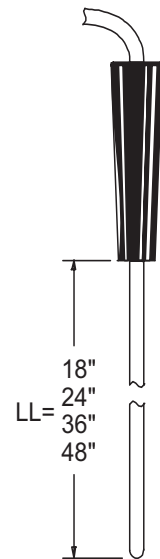
For use to probe liquids or semi-solids with long reach. Stem is made from .25 dia. bendable stainless steel #304 and steps down to .125 dia. rigid tip for easy penetration and fast response.



PROBE #	CABLE LEN.
TPC1-N3LL	3 ft
TPC2-N3LL	5 ft

99% Response time in oil = 16 secs.

Heavy-duty immersion probe for use in semi-liquid mixes such as, fudge, chocolate, soups, etc. Stem is made of .25 dia. bendable grade stainless steel #304.



PROBE #	CABLE LEN.
TPD1-N3LL	3 ft
TPD2-N3LL	5 ft

99% Response time in oil = 24 secs.

ORDERING INFORMATION: See Portable Accessories page for items such as carrying case, wet bulb kit, etc. All prices listed above are F.O.B. factory or distributor warehouse. Contact distributor if listed below for assistance. Products are warranted against material or workmanship defects for a full year from date of shipment.

Specifications are subject to change without notice.

DS-2300 v07-07

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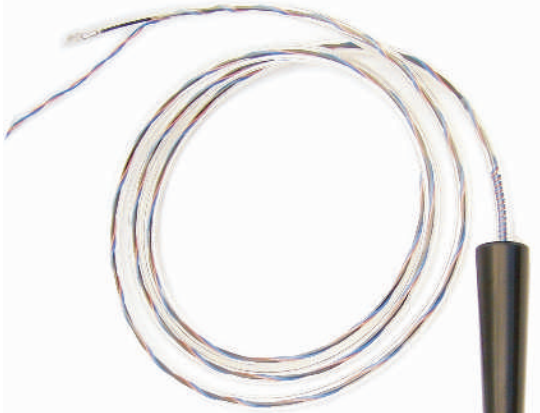
DISTRIBUTED BY:

IMC'S "HAND-HELD" TEMPERATURE PROBES

TEFLON INSULATED WIRES
WITH REINFORCING CORE

CABLES CONNECTING PROBE TO
METER IN LENGTHS OF 3 TO 24FT

WATERPROOF PHENOLIC HANDLES RATED TO 300°F



CABLES SLEEVED
WITH POLYURETHANE
FOR TOUGHNESS OR
SILICONE FOR HIGH
TEMPERATURES

1/8" DIA HARD STAINLESS
STEM FOR PROBES 6 TO
8 INCH LONG

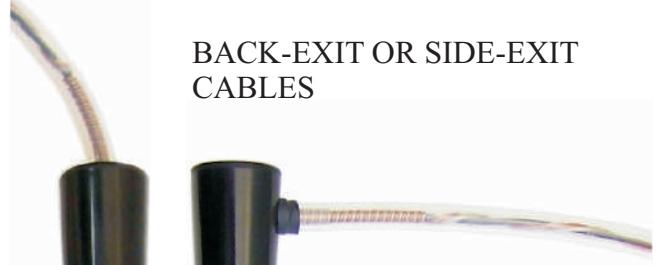
5/32 OR 3/18" DIA HARD
STAINLESS FOR LONGER
PENETRATION OR
IMMERSION PROBES

1/4" DIA HARD STAINLESS STEM
FOR PENETRATION OR
IMMERSION PROBES 12 TO
48 INCH LONG

PENETRATION TIP TAPERS
DOWN TO .125" FOR FAST
RESPONSE



DETACHABLE
"TC" PROBES



BACK-EXIT OR SIDE-EXIT
CABLES



STAINLESS
ARMORED
CABLES

HANDLES
WITH PUSH
SHOULDER



POINTED
TIP FOR
INSERTION
EASE

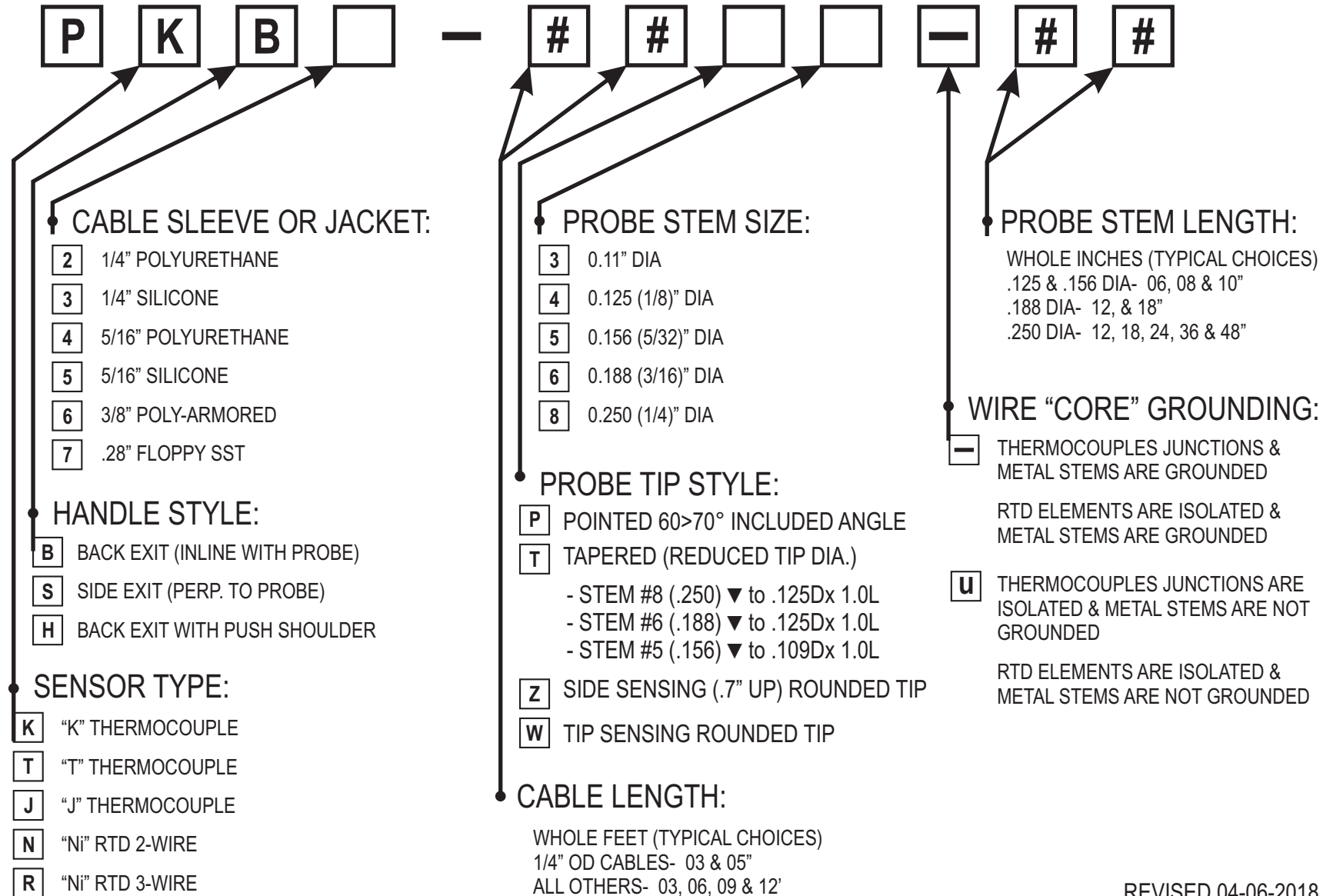
IMMERSION TIP IS ROUNDED
WITH SENSING LOCATION
AT THE TIP OR UP THE STEM

FOR ORDERING INFORMATION SEE NEXT PAGE

REVISED 12-01-2014

BUILD YOUR OWN PROBE TO MEET YOUR NEEDS

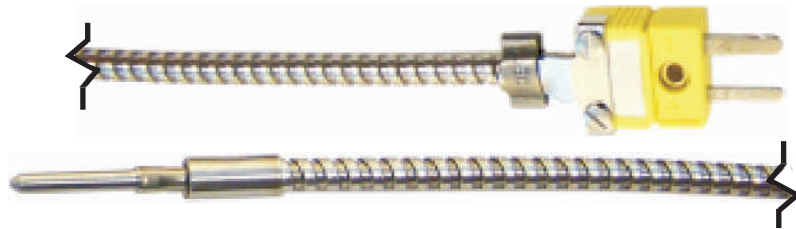
IMC'S HAND-USE PROBE NUMBERS FOR WALL-MOUNT METERS



REVISED 04-06-2018

PERMANENT MOUNTED PROBES

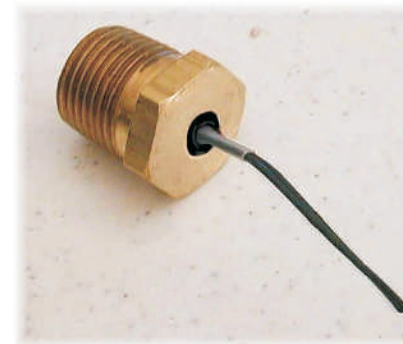
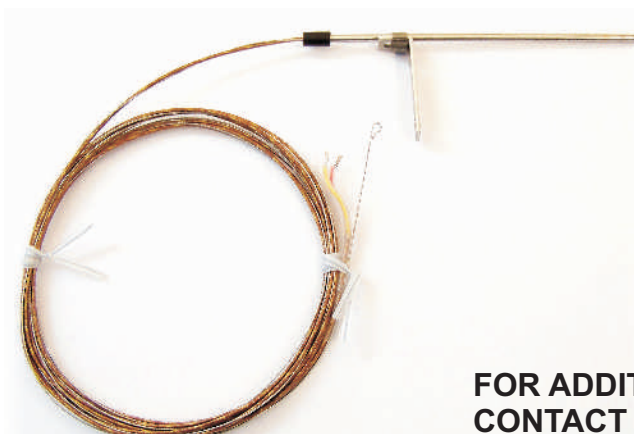
**OVEN MOUNTED PROBES
(ie. BREAD AND PIZZA)**



IMMERSION PROBES



WIRE PROBES



**FOR ADDITIONAL PERMANENT MOUNTED PROBES PLEASE
CONTACT THE FACTORY AT:**

**IMC INSTRUMENTS
WITTENBERG , WI
715 253 2801 OR
715 445 4946**

REVISED 12-01-2014

ENCLOSURES



NEMA 4X



NEMA 1



THIN WALL MOUNT ENCLOSURES



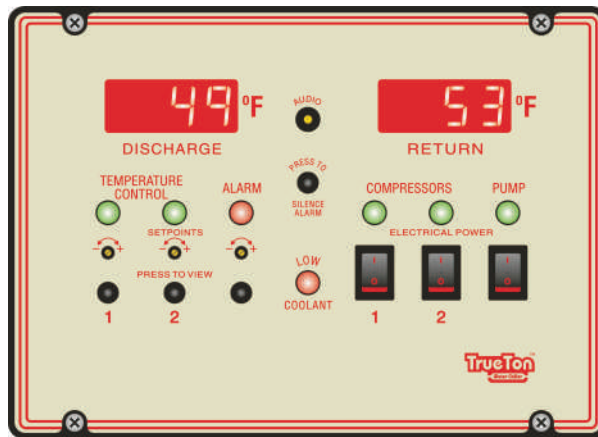
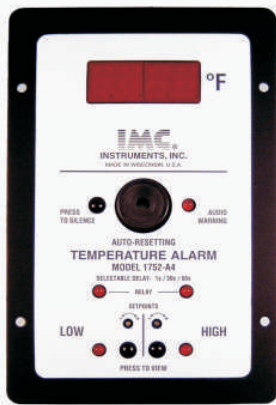
PORTABLES



BENCH METERS

PANEL OR CABINET MOUNT ENCLOSURES

STANDARD OR CUSTOM MONITORS & CONTROLS



PANEL LAYOUT PR# SCHR-0022



REVISED 12-01-2014