



**INSTRUMENTS, INC.**

468 Liberty Drive  
Wittenberg, WI 54499  
USA

TEL 715- 253-2801 Rel. 07-06-2019  
FAX 715- 253-2811  
www.imcinstruments.com



## TEMPERATURE MEASURING PRODUCTS

### WOOD FIRED OVEN THERMOMETERS

**THERMOMETER W/ANUNCIATOR  
SINGLE SENSOR**



**INDOOR-OUTDOOR LED  
SINGLE SENSOR**



**INDOOR-OUTDOOR BATTERY POWERED  
WITH SIX TEMPERATURE SENSORS**



**INDOOR SLIM ENCLOSURE  
WITH SIX TEMPERATURE SENSORS**



**INDOOR WOOD BURNING OVEN WITH  
SINGLE TEMPERATURE SENSORS**



**OUTDOOR WOOD BURNING OVEN  
WITH ENERGY STORAGE AND  
SIX TEMPERATURE SENSORS**



**OUTDOOR WOOD BURNING OVEN  
WITH ENERGY STORAGE AND  
SIX TEMPERATURE SENSORS**

**INSTRUMENTATION WITH QUALITY ENGINEERING**



**INSTRUMENTS, INC.**

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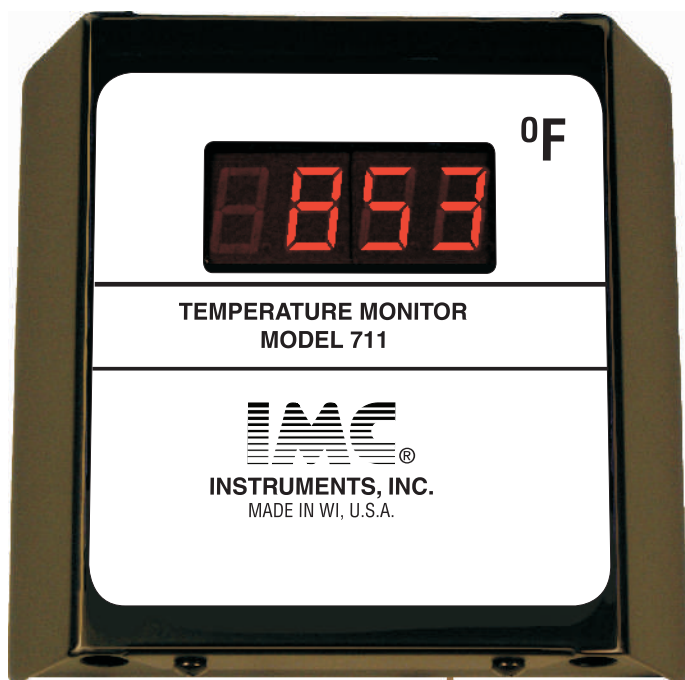
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Rel. 3-20-2015



**TEMPERATURE MEASURING PRODUCTS**

## MODEL 711 WOOD FIRED OVEN THERMOMETERS



9VAC ADAPTER

### MODEL 711 WITH 3 SENSOR AVERAGING MODULE



INTEGRAL 3 SENSOR  
AVERAGING MODULE



K THERMOCOUPLE  
24 GA (5) FOOT  
900F insulation with  
CERAMIC BEAD termination



K THERMOCOUPLE  
24 GA (5) FOOT  
900F insulation with  
CERAMIC BEAD termination



K THERMOCOUPLE  
24 GA (5) FOOT  
900F insulation with  
CERAMIC BEAD termination

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Ver. 4-8-2015



**TEMPERATURE MEASURING PRODUCTS**

## MODEL 7XX THERMOMETERS FOR WOOD FIRED OVENS w/ENERGY STORAGE



INDOOR/OUTDOOR  
MODEL 776X BATTERY  
POWERED SIX CHANNEL



MODEL 716 SIX CHANNEL  
FOR INDOOR USE  
9AC POWERED



9VAC ADAPTER

**INSTRUMENTATION WITH QUALITY ENGINEERING**



**INSTRUMENTS, INC.**

468 Liberty Drive  
Wittenberg, WI 54499  
U.S.A.

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

## PRECISION DIGITAL TEMPERATURE MONITORS IN NEMA-4X ENCLOSURES FOR "QUALITY CONTROL"

These precision microprocessor thermometers have unparalleled accuracy and long term stability with 1/10th or whole degree resolution. They are housed in polycarbonate NEMA-4X enclosures suitable for continuous use in high humidity or wash-down areas. Features provided on the enclosure are for permanent installation using conventional electrical accessories. These monitors are typically used in the chemical and food processing industries. Built-in quality gives these instruments an excellent combination of accuracy and durability.

### FEATURES:

**TC calibrations** available are **T**, **K**, or **J** linearized over their entire published ANSI temperatures range to the nearest 1/10 F for exceptional accuracy.

**RTD cold junction** compensates accurately for ambient temperature changes as fast as 2° per minute.

**High impedance circuit** allows use of probes with up to 1000 ft. of 24 ga. wire. With isolation transformer, several monitors can connect to the same probe.

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

**Long-life rotary selector** for displaying up to 6 thermocouple inputs. Polymer selector shaft is bushing sealed.

**NEMA 4X enclosure** protects the circuits against moisture and corrosion.

**Large selection of probes** from hypodermic needle to 1/4" dia. x 6 ft. long probes with or without handles. See probe selection in pages that follow

### 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). May be located in shaded outdoors.

### **Models SM4K-0776 1/10 or whole degree resolution**



**ENGINEERED AND MANUFACTURED IN WI, U.S.A.**

#### **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

#### **Display Indication:**

Updated three times per second on LED digits 0.56" (14mm) high.

#### **Construction:**

Molded polycarbonate 4.8"sq x 2.3"dp box with a NEMA-4X rating and external feet for wall mounting. External fasteners are 1/4-turn stainless steel.

#### **Power Requirement:**

Standard model requires 120 VAC @ 50/60HZ.  
Optional voltages are 24 and 2300 VAC.

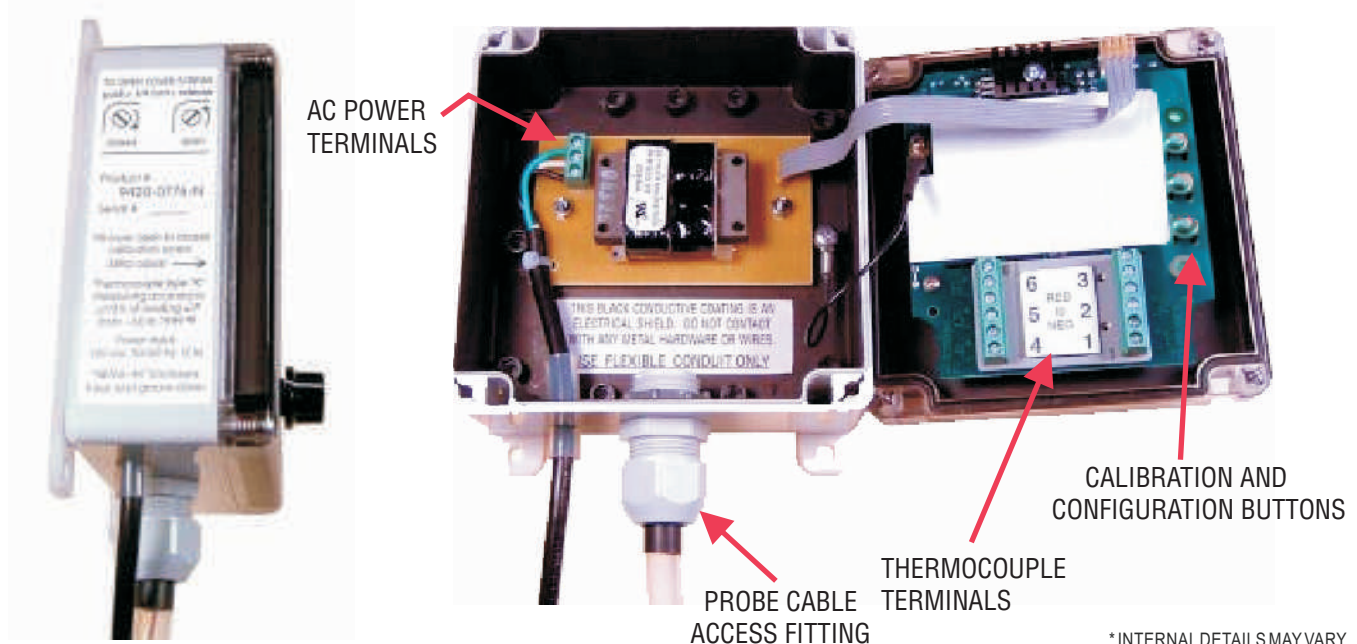
#### **Weight:**

Appx. 1.6 pounds (0.7 Kg.) without accessories.

**"INSTRUMENTATION WITH QUALITY ENGINEERING"**

**INTERNAL DETAIL:** Model 9420-0776-N shown.

**INTERIOR DETAIL:** Model 9420-0776-N \*



\* INTERNAL DETAILS MAY VARY.

#### ORDERING INFORMATION:

Refer to sheet titled "PERMANENT INSTALLATION TC PROBES" for the selection of wire and probes to complete any measuring system. All prices listed below are F.O.B. factory or distributor warehouse. Contact distributor listed below for assistance. Products are warranted against material or workmanship defects for a full year from date of shipment.

#### NUMBER OF THERMOCOUPLE INPUTS:

3 Probe Input (3 pos. selector)  
6 Probe Input (6 pos. selector)

#### POWER INPUT:

(without cord plug) 24 VAC 50/60 HZ  
120 VAC 50/60 HZ  
(without cord plug) 230 VAC 50/60 HZ

#### SCALE:

Fahrenheit reading  
Celsius reading

#### THERMOCOUPLE CALIBRATION:

K type 1/2% range is -60 to 2000 °F (-50 to 1100°C)  
T type 1/2% range is -60 to 400 °F (-50 to 205°C)  
J type 1/2% range is -60 to 1400 °F (-50 to 750°C)  
E type 1/2% range is -60 to 1650 °F (-50 to 900°C)  
K type +/-1°F range is -60 to 600 °F (-50 to 315°C)

#### INSTALLED OPTIONS:

7/8" Plain Hole for conduit fitting  
Smaller Fitting for 1/8 -5/16" Dia. cable  
Power Cord 9' with 120vac plug

OPTION - MODEL												
9			0	-	0	7	N		-			
3 4 5											3 6	
2 3 4 5 Q											7 8	
0	0	0	0	-	0	8	7	5				
7	2	2	5	-	3	2	2	8				
7	0	8	5	-	5	1	0	3				

\* specifications are subject to change without notice

**IMC INSTRUMENTS, INC.**  
468 Liberty Drive, Wittenberg, WI 54499  
Tel: (715) 253-2801 Fax: (715) 253-2811  
Website: [www.imcinstruments.com](http://www.imcinstruments.com)



## TEMPERATURE MONITORS IN NEMA-4X ENCLOSURES

Models 773-X9 & 776-X9 ( F ) or 783-X9 & 786-X9 ( C )

These battery powered meters are designed for long-term monitoring of single or multiple thermocouples. Their high performance circuits are protected by a gasket-sealed NEMA-4X enclosure for use in high humidity or wash-down areas. These meters are an ideal upgrade for mechanical "dial" type gages where better readability or accuracy is required. Features provided on the enclosure are for permanent installation.

### FEATURES:

**Thermocouple type K, T, J or E**, linearized in four sections for good accuracy. See ordering section.

**RTD cold junction** compensates accurately for ambient temperature changes as fast as 2 per minute.

**High impedance** circuit allows use of probes with up to 1000 ft. of 24 ga. wire. Several monitors can connect to the same probe.

**Long-life touch pad** for turning display ON/OFF.

**Displayed indication** "LO BAT" for low battery and a plain "1" for open thermocouple.

**Long-life rotary selector** for displaying up to 6 thermocouple inputs. Polymer selector shaft is bushing sealed.

**NEMA 4X enclosure** protects the circuits against moisture and corrosion.

**Large selection of probes** from hypodermic needle to 1/4" dia. x 6 ft. long probes for permanent installation or hand-held use.



ENGINEERED AND MANUFACTURED IN WI, U.S.A.

### SPECIFICATIONS:

#### Display Range:

-199 to 1999 F or C. Usable range varies with TC type & probe construction (see ordering section).

#### Measuring Accuracy:

± 1/2% of reading ± 1 degree using ANSI millivolt temperature standards.

#### Instrument Environmental Range

-5 to 120 F (-21 to 49 C). May be located in shaded outdoors.

#### Cold Junction Offset

One degree max. for an ambient range of 32 to

#### Display Indication:

Updated twice per second on 0.5" (13mm) high

#### Construction:

Molded polycarbonate 4.8"sq x 2.3"dp box with a NEMA-4X rating and external feet for wall mounting. External fasteners are 1/4-turn stainless steel.

#### Power Requirement:

One or two "9V" alkaline batteries for 2000 hours (with two) or 250 days when operated 8 hrs/day

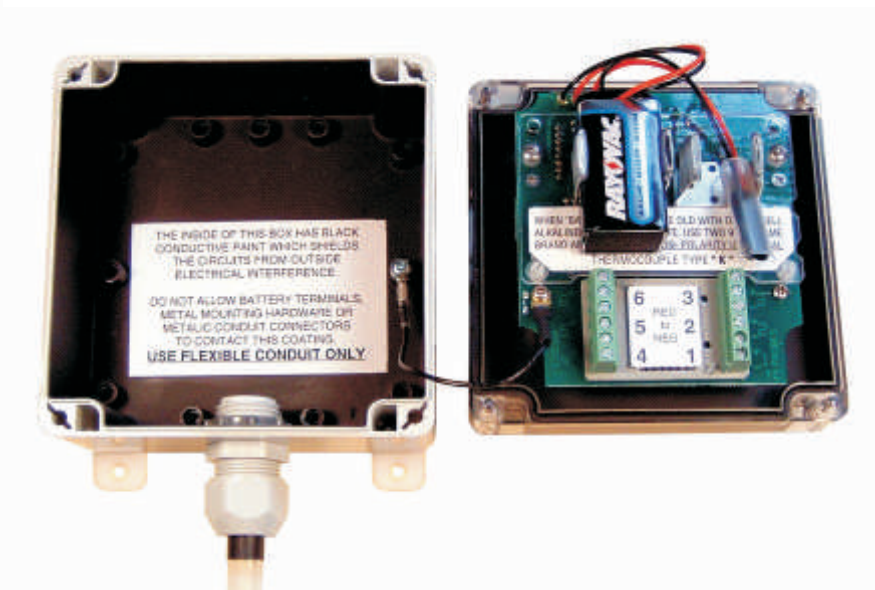
#### Power Requirement:

Appx. 1.0 lb (0.45 kg.) without probes

# **SIDE DETAIL: Model 9120-0776-X9 \***



# **INTERIOR DETAIL: Model 9120-0776-X9 \***



## **ORDERING INFORMATION:**

Refer to sheet titled "PERMANENT INSTALLATION TC PROBES" for the selection of wire and probes to complete any measuring system. All prices listed below are FOB, factory or distributor warehouse. Contact distributor listed below for assistance. Products are warranted against material or workmanship defects for a full year from date of shipment.

		OPTION - MODEL									
		9	1		0	-	0	7			-X9
<b>NUMBER OF THERMOCOUPLE INPUTS:</b>	_____										
	3 Probe Input (3 pos. selector)										
	6 Probe Input (6 pos. selector)										
<b>SCALE:</b>	_____										
	Fahrenheit reading										
	Celsius reading										
<b>THERMOCOUPLE CALIBRATION:</b>	_____										
Ktype	1/2% range is -60 to 2000°F (-50 to 1100°C)										
Ttype	1/2% range is -60 to 400°F (-50 to 205°C)										
Jtype	1/2% range is -60 to 1400°F (-50 to 750°C)										
Etype	1/2% range is -60 to 1650°F (-50 to 900°C)										
Ktype	+/-1°F range is -60 to 600 °F (-50 to 315°C)										
<b>INSTALLED OPTIONS:</b>	_____										
	7/8" Plain hole instead of Bushing	0	0	0	1	-	0	8	7	5	
	Smaller Fitting for cable 1/8 -5/16" Dia.	7	2	2	5	-	3	2	2	8	
	Second 9V Alkaline Battery	7	0	4	2	-	1	6	0	4	

Specifications are subject to change without notice

DS-0776-X9 v07-09

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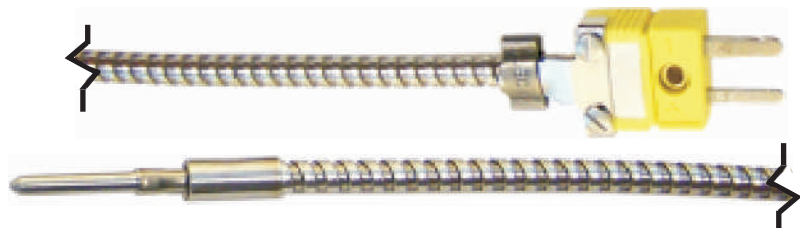
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## **PERMANENT MOUNTED PROBES**

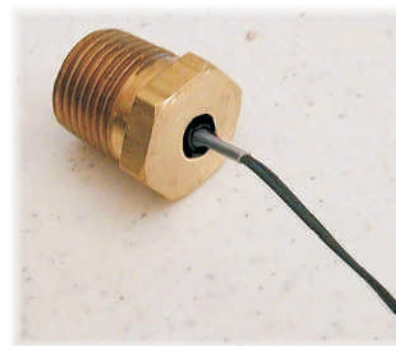
### **OVEN MOUNTED PROBES (ie. BREAD AND PIZZA)**



### **WOOD FIRED OVEN WIRE PROBES**



### **IMMERSION PROBES**



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

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

Rel. 12-01-2014





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USA

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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 BREAD BAKING OVEN EQUIPMENT

#### PRECISION OVEN PROBE IN PROTECTIVE CAGE



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**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 32F ( 0C) 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**

**INSTRUMENTATION WITH QUALITY ENGINEERING**



INSTRUMENTS, INC.

# 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

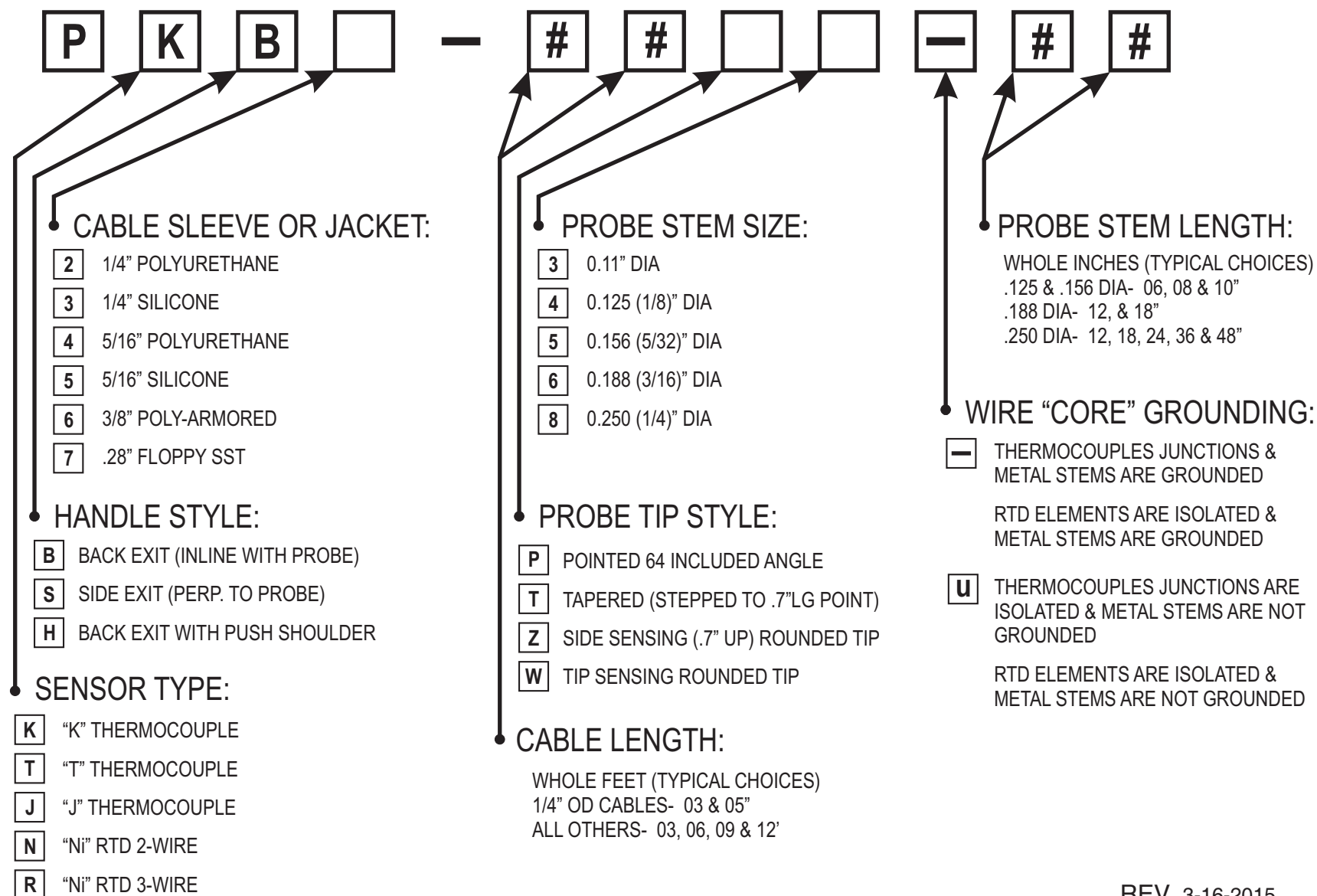
FOR ORDERING INFORMATION SEE NEXT PAGE

REVISED 12-01-2014



# BUILD YOUR OWN PROBE TO MEET YOUR NEEDS

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



REV. 3-16-2015



INSTRUMENTS, INC.

## ENCLOSURES



NEMA 4X



NEMA 1



THIN WALL MOUNT  
ENCLOSURES



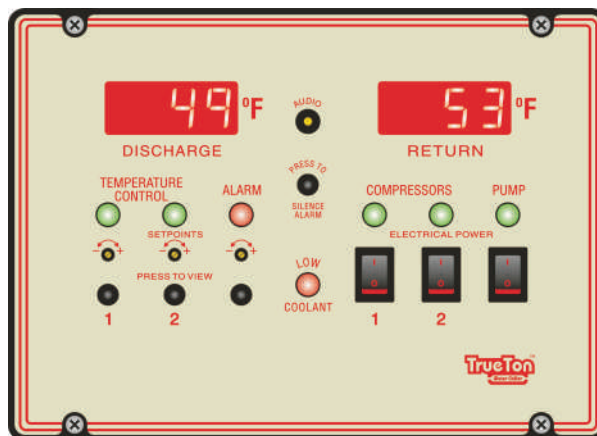
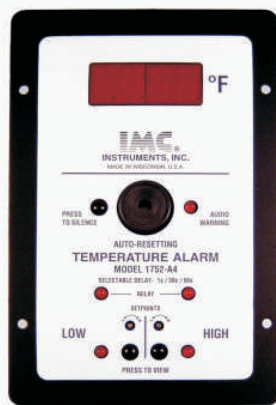
PORTABLES



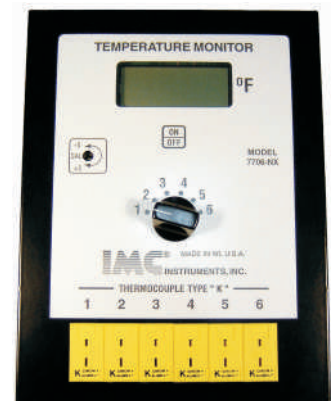
BENCH METERS

## PANEL OR CABINET MOUNT ENCLOSURES

STANDARD OR CUSTOM MONITORS & CONTROLS



PANEL LAYOUT PR# SCHR-0022



REVISED 12-01-2014

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