

# W. H. Cooke Times

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HANOVER, PA

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MICRONICS AMERICA



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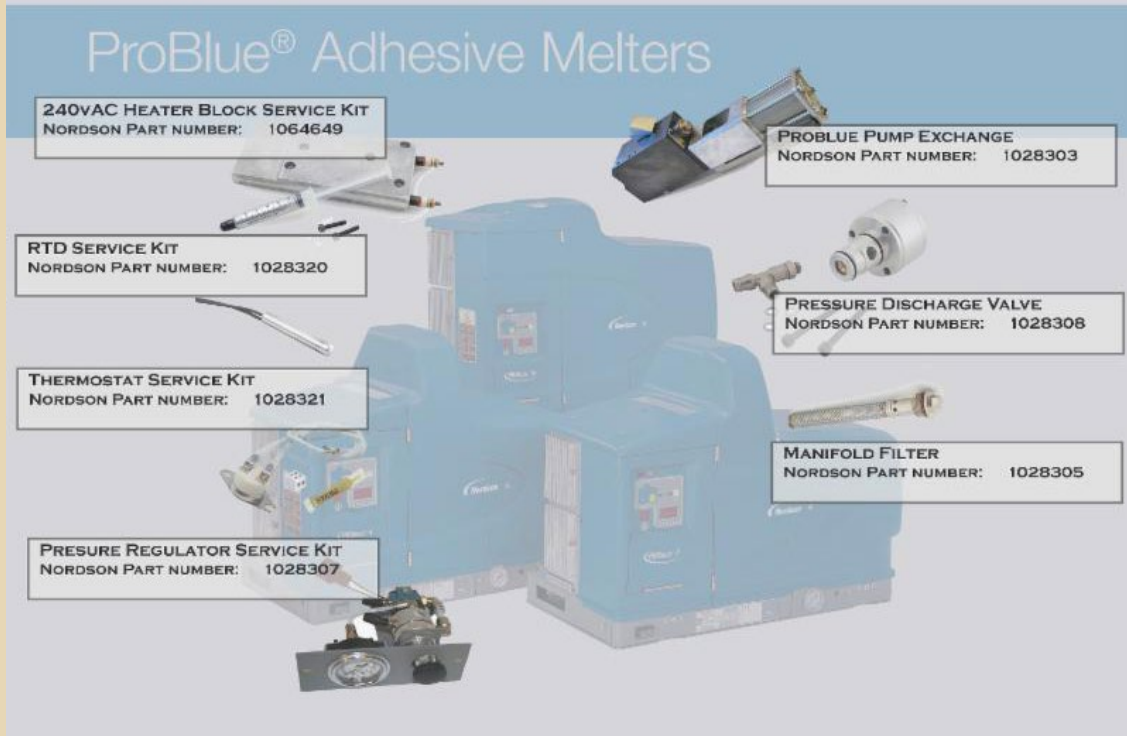
## Quarter in Review

The 1st quarter of 2018 was a good start to the year for us. Manufacturing is up and the phones are still ringing here so we can't complain. Just a reminder that the products that we manufacture are temperature sensors: thermocouples, RTD's and thermistors. We can cross your existing sensors or help spec in a new build. Please keep us in mind for your temperature sensing needs.

The other part of the business here at W. H. Cooke & Co. is distribution and we sell instrumentation for temperature, level, flow, pressure, pH, RH, flame & gas detection, and industrial heaters of almost any type you can imagine. We also sell insulation, wet bulb socks, and other items that you might not normally think of us for. If you have something that needs to be quoted and you are not sure if we handle it, please send your requests our way and if we don't have access to your part, we will refer you to someone who does. We don't do safety clothing/gloves or cleaning supplies (unless you count our degreasers and food grade lubricants) but we do handle many industrial parts, laboratory solutions,

# Nordson

W. H. Cooke & Co. offers Nordson parts from the factory as well as aftermarket options for customers that would like to save some extra money. Please call 717-630-2222 or email your parts number requests to [sales@whcooke.com](mailto:sales@whcooke.com)





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## Tech Tips

How to check to see if a thermocouple is functional and if it is grounded or ungrounded

Part 1 of a 2 part series with Wayne Cooke Sr.

**A.** Check for continuity by using a multimeter set up to measure ohms. Connect the multimeter test leads to the 2 thermocouple leads (polarity doesn't matter for this test) and if the meter reads 0 or open circuit, then at least one of the thermocouple leads are broken. Could be at the tip and not visible to you or could be somewhere along the lead wire portion of the assembly.

If you do get a reading it should be several ohms (for a short assembly) to 20, 30, 50 ohms or more depending on the lead length. Ex: a 4 ft. length of 20 gauge type J (iron-constantan) lead wire = 1.396 ohms (.349 / ohm per combined ft. x 4)



For a quote on any Fluke products please give us a call or email [sales@whcooke.com](mailto:sales@whcooke.com)

**Note:** When checking an “ungrounded” thermocouple, it is possible to have some leakage to ground in a mineral insulated thermocouple. It is difficult to keep the magnesium oxide insulation in a mineral insulated thermocouples (MgOs) completely dry. Most of the time this is not a problem when it’s connected to an instrument or PLC input module, even though you might see some resistance to ground in the megaohm or even kilohm range. When the thermocouple is heated in the process, it tends to drive the moisture out of the tube and create better isolation.

Stay tuned for part 2: Polarity checks

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## Sensor of the Quarter

For customers that need an RTD with an inline transmitter, the below sensor is just the ticket. It is great for applications where there isn’t room for a head. For more information call 717-630-2222 or email [sales@whcooke.com](mailto:sales@whcooke.com)

### **MODEL W22 RTD WITH BUILT-IN TEMPERATURE TRANSMITTER 4-20mA OUTPUT**

#### Features

- 4-20 mA Transmitter Integrated Into Temperature Sensor
- Hermetically Sealed Electronics
- Easily Re-programmable Via PC or Factory Calibrated
- Low Cost and Easy Installation
- Highly Stable and Accurate Microprocessor Based Design



The W22 series integrated temperature transmitter is one of the most advanced designs in the market today. The transmitter section is integrated and hermetically sealed into the head of the sensor. For this reason, the W22 does not require a separate transmitter housing. The micro-miniature transmitter fits into a potting adaptor which is only 2.5 inches long! The W22 comes factory calibrated to a customer specified temperature range. The unique feature of the hermetically sealed transmitter is that it is able to be



- range
- Operating temperature range of -50 to 200 °C ( -58 to 392 °F)
  - Order MIST PKIT programming kit to re-program and re-calibrate in-house
  - 1/4" probe diameter, stainless steel 316
  - Adjustable compression fitting not included, order separately
  - Cable supplied is a Teflon jacketed or Teflon armored 22AWG stranded 4-conductor, copper silver plated, 6ft long
  - Probe lengths available are 4", 6", 9" and 12"

To order a W22 with 9" probe and 4-20mA output calibrated to -25 to 125 OC, specify the inventory number and temperature range, ex.: W22L-N-TF090 ( -25/125 OC) on your order. To calibrate the W22 in house, order the PKIT which includes the module and software.

Ordering Information (Order using W.H. Cooke inventory number)

Catalog Number	Inventory Number	Probe Length "L"	Extension Cable
W22-L-LP-250-S-040-N10-N-TF-072	W22L-N-TF040	4.0"	Teflon
W22-L-LP-250-S-060-N10-N-TF-072	W22L-N-TF060	6.0"	Teflon
W22-L-LP-250-S-090-N10-N-TF-072	W22L-N-TF090	9.0"	Teflon
W22-L-LP-250-S-120-N10-N-TF-072	W22L-N-TF120	12.0"	Teflon
W22-L-LP-250-S-040-N10-N-TA-072	W22L-N-TA040	4.0"	Teflon with SS armor
W22-L-LP-250-S-060-N10-N-TA-072	W22L-N-TA060	6.0"	Teflon with SS armor
W22-L-LP-250-S-090-N10-N-TA-072	W22L-N-TA090	9.0"	Teflon with SS armor
W22-L-LP-250-S-120-N10-N-TA-072	W22L-N-TA120	12.0"	Teflon with SS armor

\* No stop collar option; "C" = N00

Stop collar recommended for temperature above 100°C

## Custom Builder

MODEL	1	2	3	4	5	6	7	8	9	10
W22	-	---	-	---	-	---	-	---	-	---

BOX1 CODE	Calibrated Temperature Range
05	0°C to 50°C (32 / 122°F)
10	0°C to 100°C (32 / 212°F)
15	0°C to 150°C (32 / 302°F)
20	0°C to 200°C (32 / 392°F)
55	-50°C to 50°C (-58 / 122°F)
51	-50°C to 150°C (-58 / 302°F)
52	-50°C to 200°C (-58 / 392°F)
L*	-50°C to 200°C (-58 / 392°F)
H*	-200°C to 600°C (-328 / 1112°F)

\* Code **L** & **H** are not factory calibrated. Requires  
customer calibration using the **PKIT**.

### Notes:

1. W22 Temperature Sensors are factory calibrated at one point to an accuracy of  $\pm 0.12^\circ$  @ 0°C or better. See MIST specs.
2. For non-standard temperature ranges, indicate desired value in °C or °F in Box1 or see web site [www.whcooke.com](http://www.whcooke.com).
3. Order **PKIT** for sensor customization.

BOX2 CODE	Output
LP	4-20mA loop, upscale burnout (std.)
LD	4-20mA loop, downscale burnout
VA	0-5 Vdc, 3-wire
VB	1-5 Vdc, 3-wire
VD	0-10 Vdc, 3-wire

Other outputs available. Consult factory.

BOX3 CODE	Probe Diameter "D"
125	1/8"
188	3/16"
250	1/4"
375	3/8"
500	1/2"

Other diameters available. Consult factory.

BOX4 CODE	Probe Material
S	Stainless steel 316/316L

Other materials available. Consult factory.

BOX5 CODE	Probe Length "L"
---	In 0.1" increments Ex.: 065 = 6.5" long

BOX6 CODE	Extension Cold Leg Length "C"
N---	In 0.1" increments (1.0" Std.) Ex.: N10 = 1.0" long

BOX7 CODE	Instrument Connection
N	None, smooth shank
SR	Strain Relief
EN	1/2" NPT male
EE	1/2" NPS male

Other connections available. Consult factory.

BOX8 CODE	Fitting Type
0	None
A**S	Adjustable fitting*
<b>Ferrule material :</b> <b>A</b> = Stainless steel* <b>B</b> = Brass* <b>T</b> = Teflon* * Not readjustable with metal ferrule <b>Fitting material :</b> <b>S</b> = Stainless steel <b>B</b> = Brass Ex.: <b>T14B</b> = Teflon* ferrule, 1/4" NPT, Brass fitting	
<b>Process NPT size :</b> <b>** 18</b> = 1/8" NPT <b>14</b> = 1/4" NPT <b>38</b> = 3/8" NPT <b>12</b> = 1/2" NPT <b>34</b> = 3/4" NPT <b>44</b> = 1" NPT	

BOX9 CODE	Extension Cable Type
PV	PVC insulation, 90°C (195°F) max.
TF	Teflon® insulation, 200°C (392°F) max.
TA	Teflon® with SS armor, 200°C (392°F) max.
TB	Teflon® with SS overbraid, 200°C (392°F) max.

BOX10 CODE	Extension Cable Length "F"
---	In inches Ex.: 060 = 60" long
<b>Note :</b> Leads "F" length 12" and less are single conductor Teflon® insulation, 22 AWG	

**More styles of RTD's with the inline transmitter**



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## New from Precision Digital

Precision Digital has just come out with a large 1.8" LED digital display that can be seen from 100 feet away. It is a great option for use with scales or any application where visibility from a distance is a plus. For more information on Precision Digital Products please see here

[https://www.whcooke.com/manufacturer\\_stage.php?compid=predig](https://www.whcooke.com/manufacturer_stage.php?compid=predig)





The only large display meter with a dual-line display  
so bright it can be read in direct sunlight.

[www.predig.com](http://www.predig.com)

PRECISION DIGITAL

For the rest of this brochure, see here

[https://www.whcooke.com/files/predig\\_helios\\_brochure.pdf](https://www.whcooke.com/files/predig_helios_brochure.pdf)

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## New Low Cost Clamp on Flow Option

U1000 Inexpensive Clamp on Water  
Meter

\$1,040.00 – \$1,253.00

The new alternative to cutting pipes  
and mechanical meters from  
Micronics, for simple, low cost flow  
measurement from outside the pipe!

The U1000 is an ultrasonic  
permanent/fixed clamp on flow  
metering solution for measuring flow  
rate – with a volume pulse output and  
optional 4-20mA flow rate signal,  
which can be used as a stand alone

meter or as an integral part of an a M&T or BEM's system. Simple to install – clamp on to the pipe, connect power and enter the pipe diameter, no specialist skills or tools required! A inexpensive alternative to traditional in-line meter installation, plus dry servicing, provide minimum downtime and maximum availability! Compact, rugged and reliable, the U1000 has been designed to provide sustained performance in industrial environments.



Click on picture to view full brochure:

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#### RECOMMENDED FOR:

- Pipes 3/4" -4"
- Steel, copper, and PVC
- Hot Water <185°F
- Chilled Water
- Potable Water
- Demineralized Water

#### APPLICATION/USE:

- Hot water metering and flow measurement
- Flow measurement for heat metering Chilled water metering and flow measurement
- Flow measurement for chilled water energy metering
- Potable water metering and flow measurement
- Process water metering and flow measurement
- Ultrapure water measurement

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View video here:

## Funny Signs

Here is some verbiage seen on some signs around our great country. Enjoy!



- Practice safe eating. Always use condiments
- I just did a week's worth of cardio after walking into a spider web
- Abstinence is a good thing if practiced in moderation
- Does seven days without meat make one week?
- I want to grow my own food but I can't find bacon seeds
- The past, present, & future walk into a bar. It was tense
- A clear conscience is the sign of a fuzzy memory
- Ban pre-shredded cheese. Make America grate again
- If attacked by a mob of clowns, go for the juggler
- The first 5 days after the weekend are the hardest
- I child proofed my house but the kids still get in somehow
- I'm still hot. It just comes in flashes now
- Between two evils I always pick the one I've never tried
- Cure for an obsession: Get another one
- If pride comes before a fall, humility should come by winter
- All those who believe in psychokinesis raise my hand
- Hold the door open for a clown. It's a nice jester
- The second mouse gets the cheese
- I was addicted to the hokey pokey but I turned myself around
- Went to the air & space museum but there was nothing
- What happens if you get scared half to death twice?

times nature can be just as beautiful as it can be brutal. These Eagles and Eaglets are real celebrities around these parts and can never get away from the eyes of the paparazzi (Hanover Eagle Cam)

If you would like to see what drama unfolds in real time, please visit <https://www.friendsofcodorus.org/> and scroll down to the Eagle Camera. There is also an Infrared camera view for those who want to see what wild excitement happens after dark. If you just can't get enough Eagle action in your life, you can join in the discussion at <https://www.facebook.com/groups/515858675222793/>

Update: As of 9:30 a.m. 4/13/18 Apparently some of the viewers are having trouble telling the Eagles known as Lucy and Liberty apart and some are even questioning if a newcomer has come to the nest and this is neither of the aforementioned Eagles. Is it Lucy? Is it Liberty? Is it an imposter? Tune in to find out!



Lucy



Mysterious Visitor



Liberty and Freedom

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