



Product: [1012A](#)

Type KX Thermocouple, 4 Pr #20+22 Sol, PVC Ins Yel, Red, IS/OS, Yellow PVC Jkt, 300V PLTC ITC CMG

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Product Description

Type KX Thermocouple, 4 Pair 20+22AWG (Solid) Chromel+Alumel, PVC Insulation Yel, Red Color Code, Individual & Overall Beldfoil® Shield, Yellow PVC Outer Jacket, PLTC ITC CMG AWM 2464 SUN RES

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | Industrial Control, Raceways Cable trays and ducts, Digital Control, Instruments (4-20ma, 0-10v, ...), low voltage digital control (24v, ...), Thermocouple, distributed control system (DCS), programmable logic controller (PLC) |
|------------------------|--|

Construction Details

Conductor

| Element | No. of Elements | Size | Stranding | Material |
|---------|-----------------|--------|-----------|------------------|
| Pair(s) | 4 | 20 AWG | Solid | Chromel & Alumel |
| Comm | 1 | 22 AWG | 7x30 | BC - Bare Copper |

Insulation

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code |
|---------|--------------------------|--------------------|--------------------------|--|
| Pair(s) | PVC - Polyvinyl Chloride | 0.021 in (0.53 mm) | 0.074 in (1.9 mm) | Yellow and Red Numbered 1, Yellow and Red Numbered 2, Yellow and Red Numbered 3, Yellow and Red Numbered 4 |
| Comm | PVC - Polyvinyl Chloride | 0.019 in (0.48 mm) | 0.066 in (1.7 mm) | Orange |

Inner Shield

| Shield Type | Material | Coverage | Drainwire Type | Notes |
|-------------|-------------------------|----------|------------------|---------------|
| Tape | Bi-Laminate (Alum+Poly) | 100% | 22 AWG (7x30) TC | Polyster Film |

Outer Shield

| Shield Type | Material | Coverage | Drainwire Type |
|-------------|-------------------------|----------|------------------|
| Tape | Bi-Laminate (Alum+Poly) | 100% | 20 AWG (7x28) TC |

Outer Jacket

| Separator | Material | Nom. Thickness | Nom. Diameter | Ripcord |
|----------------|--------------------------|-------------------|---------------|---------|
| Polyester Tape | PVC - Polyvinyl Chloride | 0.053 in (1.3 mm) | 0.447 in | Yes |

| | |
|-----------------------------------|----------|
| Overall Cable Diameter (Nominal): | 0.447 in |
|-----------------------------------|----------|

Electrical Characteristics

Electricals

| Element | Nom. Conductor DCR | Nom. Inner Shield DCR | Max. Current |
|---------|-------------------------------|-------------------------------|--------------------------------|
| Chromel | 420 Ohm/1000ft | 12.3 Ohm/1000ft (40.4 Ohm/km) | 2.8 Amps per Conductor at 30°C |
| Alumel | 161 Ohm/1000ft (528 Ohm/km) | | 2.8 Amps per Conductor at 30°C |
| Comm | 18.5 Ohm/1000ft (60.7 Ohm/km) | | 4.8 Amps per Conductor at 30°C |

Voltage

| |
|--------------------------|
| UL Voltage Rating |
| 300 V |

Mechanical Characteristics

Temperature

| UL Temperature | Operating |
|---------------------------|-----------------|
| UL: 105°C, AWM 2464: 80°C | -20°C To +105°C |

Bend Radius

| Stationary Min. | Installation Min. |
|------------------|-------------------|
| 4.47 in (114 mm) | 4.47 in |

| | |
|--------------------|------------------|
| Max. Pull Tension: | 635 lbs (288 kg) |
| Bulk Cable Weight: | 83 lbs/1000ft |

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor, Outdoor, Sunlight Resistance, UV Resistance, Burial |
| Flammability / Reaction to Fire: | UL1685 FT4 Loading, FT4, IEEE 1202 FT4 |
| NEC / UL Compliance: | Article 725, Article 727, Article 800 |
| AWM Compliance: | AWM 2464 |
| CEC / C(UL) Compliance: | CMG |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |

Product Notes

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|--------|---|
| Notes: | Chromel & Alumel = ""Chromel and Alumel are Hoskins Manufacturing Company trademarks."" |
|--------|---|

History

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|----------------------|--|
| Update and Revision: | Revision Number: 0.436 Revision Date: 02-03-2025 |
|----------------------|--|

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC | Footnote |
|---------------|--------|------------|----------|--------------|----------|
| 1012A 0045000 | Yellow | Reel | 5,000 ft | 612825102687 | C Z |

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