Jenny Durski

From: Paul Cero
Sent: Thursday, May 15, 2008 1:20 PM
To: Jenny Durski
Subject: RE: THC2002KK-GG

Just the spec section from PMC.

Paul Cero
Buyer
Industrial Electric Wire & Cable Inc.
Phone: 262-957-1286
Fax: 262-957-1786
E-mail: pcero@iewc.com

From: Jenny Durski
Sent: Thursday, May 15, 2008 11:15 AM
To: Paul Cero
Subject: RE: THC2002KK-GG

You mean from what's below? Is that the physical property section below?

Jenny L. Durski
Purchasing Asst/Expediter
Industrial Electric Wire & Cable
PH: 262-957-1138
FAX: 262-957-1638

From: Paul Cero
Sent: Thursday, May 15, 2008 9:58 AM
To: Jenny Durski
Subject: THC2002KK-GG

JD:

Download the spec only.

Paul Cero
Buyer
Industrial Electric Wire & Cable Inc.
Phone: 262-957-1286
Fax: 262-957-1786
E-mail: pcero@iewc.com

From: Julie Galloway
Sent: Thursday, May 15, 2008 7:59 AM
To: Paul Cero
Subject: FW: Emailing: cat_FB-FB

For Jessie Quote.

From: Kit OBrien [mailto:kobrien@pmcwire.com]

Sent: Thursday, May 15, 2008 7:29 AM
To: Julie Galloway
Subject: Emailing: cat_FB-FB

Hi Julie,

Attached is the spec sheet for the p/n KK-FB/FB-20

This is a Type K special limits Fiberglass insulation/Fiberglass jacket - 20 awg solid. Color is Brown jacket w yellow tracer. conductors are

+ - yellow
- - red

See special limits for initial calibration tolerances.

Let me know if you have any questions.

thanks,

Kit O'Brien
Inside Sales
kobrien@pmcwire.com
603-518-1723

FIBERGLASS Braided Thermocouple and Extention

PRODUCT CODE: FB/FB

Our customers have grown to expect only the highest quality products from PMC A Division of R-SCC.

This construction is one of the earliest insulations used and is perhaps still most widely used. It consists of single conductors insulated with a fiberglass braid then impregnated with a special binder to improve moisture and abrasion resistance. The singles are then laid parallel and a braided jacket of the same material is applied and impregnated.

While wire gauge size, calibration and atmosphere will affect maximum useful temperature in applications, this insulation is designated to withstand a maximum continuous use at 900°F (482°C) and a single exposure use at 1000°F (537°C). (Note: Impregnations retained to 400°F (204°C).

Calibrated conductors for high system accuracy.

900°F (482°C) Braided fiberglass insulation for abrasion resistance at high temperature.

900°F (482°C) Braided fiberglass jacket for additional flexibility and abrasion resistance at high temperatures.

Wire Grade	Gauge Size	Wire Type	Part Numbers					
			Type J	Type K	Type T	Type E	Type N	Type R/S

THERMOCOUPLE	16	Solid	J-FB/FB-16	K-SF/FBK-20	T-FB/FB-20	E-FB/FB-20	N-FB/FB-20	
THERMOCOUPLE	20	Solid	J-FB/FB-20	K-FB/FB-20	T-FB/FB-20	E-FB/FB-20	N-FB/FB-20	
THERMOCOUPLE	20 7/28	Stranded	J-FB/FB-20F	K-FB/FB-20F	T-FB/FB-20F	E-FB/FB-20F	N-FB/FB-20F	
THERMOCOUPLE	24	Solid	J-FB/FB-24	K-FB/FB-24	T-FB/FB-24	E-FB/FB-24	N-FB/FB-24	
EXTENSION	16	Solid	JX-FB/FB-16	KX-SF/FB-16	TX-SF/FB-16	EX-SF/FB-16	NX-SF/FB-16	RSX-FB/FB-16
EXTENSION	20	Solid	JX-FB/FB-20	KX-FB/FB-20	TX-FB/FB-20	EX-FB/FB-20	NX-FB/FB-20	RSX-FB/FB-20

Color Code & Initial Calibration Tolerances for Thermocouple Wire:

Thermocouple Type		Color Code		Initial Calibration Tolerances		
Wire Alloys	**ANSI Symbol**	**+/- Individual**	**Jacket**	**Temperature Range**	**Standard Limits**	**Special Limits**
*Iron(+) vs. Constantan(-)	J	White/Red	Brown w/Black Tracer	+32°F (0°C) to +545°F (+285°C) +545°F (285°C) to +1400°F (+750° C)	± 4°F (2.2° C) ± .75%	± 2°F (1.1° C) ± .4%
Chromel®(+) vs. Alumel®(-)	K	Yellow/Red	Brown w/Yellow Tracer	-330°F -200°C) to -165°F (-110°C) -165 °F (-110°C) to +32°F (0°C) +32°F (0°C) to +545°F (+285°C) +545°F (285°C) to +2300°F (+1250°C)	± 2% ± 4°F (2.2° C) ± 4°F (2.2° C) ± .75%	± 2°F (1.1° C) ± .4%
Copper(+) vs. Constantan(-)	T	Blue/Red	Brown w/Blue Tracer	-330°F (-200°C) to -85°F (-65°C) -85°F (-65°C) to +270°F (+130°C) +270°F (130°C) to +660°F (+350° C)	± 1.5% ± 1.8°F (1° C) ± .75%	± .8% ± .9°F (.5° C) ± .4%
Chromel®(+) vs. Constantan(-)	E	Purple/Red	Brown w/Purple	-330°F -20(0°C) to -270°F (-170°C) -270°F (-170°C) to +480°F (+250° C) +480°F (+250°C) to +640°F (+340° C) +640°F (+340°C) to +1600°F (+900°C)	± 1% ± 3°F (1.7° C) ± 3°F (1.7° C) ± .5%	± 1.8°F (1° C) ± 1.8°F (1° C) ± .4% ± .4%
Nicrosil(+) vs. Nisil(-)	N	Orange/Red	Brown w/Orange Tracer	+32°F (0°C) to +545°F (+285°C) +545°F (285°C) to +2300°F (+1250°C)	± 4°F (2.2° C) ± .75%	± 2°F (1.1° C) ± .4%

Color Code & Initial Calibration Tolerances for Extension Wire:

Thermocouple Type		Color Code		Initial Calibration Tolerances		
Wire Alloys	**ANSI Symbol**	**+/- Individual**	**Jacket**	**Temperature Range**	**Standard Limits**	**Special Limits**
*Iron vs. Constantan	JX	White/Red	Black	+32°F (0°C) to +400°F (+200°C)	± 4°F (2.2°C)	± 2°F (1.1°C)
Chromel®vs. Alumel®	KX	Yellow/Red	Yellow	+32°F (0°C) to +400°F (+200°C)	± 4°F (2.2°C)	± 2°F (1.1°C)
Copper vs. Constantan	TX	Blue/Red	Blue	-75°F (-60°C) to +210°F (+100°C)	± 2°F (1.1°C)	± 1°F (.5°C)
Chromel® vs. Constantan	EX	Purple/Red	Purple	+32°F (0°C) to +400°F (+200°C)	± 3°F (1.7°C)	± 2°F (1.1°C)
Nicrosil vs. Nisil	NX	Orange/Red	Orange	+32°F (0°C) to +400°F (+200°C)	± 4°F (2.2°C)	± 2°F (1.1°C)
Copper vs. Copper Alloy	SX RX	Black/Red	Green	+75°F (25°C) to +400°F (+200°C)	± 9°F (5°C)	

NOTE: Percent limits apply directly to temperature in °C units, but for °F equivalents are applied to the numbers of °F above or below the ice point (+32°F).
(i.e. Limit (°F) = (Temp. °F-32°F) x Percentage)

Thermocouple wire cannot be expected to meet the limits of error at temperatures below the ice point unless specified at time of purchase.

** Magnetic

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FB/FB Physical Properties			Gauge	Nominal Insulation Wall (in.)	Nominal Jacket Wall (in.)	Nominal Diameter (in.)	Approx. Ship. Wt (lbs) per M
Characteristics	Insulation	Jacket					
Specific Gravity	2.54	2.54	16 20 20 7/28 24	.006 .006 .006 .006	.006 .006 .006 .006	.080 x .144 .060 x .106 .066 x .118 .048 x .082	22 10 11 6
Tensile Strength; psi (min)	250,000 at 1000°F (537°C)	250,000 at 1000°F (537°C)					
Elongation; %(min)	4.8	4.8					
Minimum Bend Radius	5 x O.D.	10 x O.D.					
Abrasion Resistance	Good	Good					
Cut Through Resistance	Very Good	Excellent					
Moisture Resistance	Good	Good					
Solder Iron Resistance	Excellent	Excellent					
Service Temperature	500°F(260°C) continuous 600°F (343°C) single exposure	500°F(260°C) continuous 1000°F (537°C) single exposure					
Flame Test	Non-flammable	Non-flammable					

Pricing Policy: Shipments will be invoiced at PMC's prices in effect at time of shipment. Quotations are given with an escalation clause and prices, terms, and conditions are subject to change without prior notice. PMC will however, make every attempt to hold to current quoted prices. All prices are in United States currency, and shall be subject to correction for errors, unless otherwise stated in writing to PMC.

Reels, Spools & Coils: All shipments, unless specified otherwise by PMC, are make on non-returnable reels, spools or coils in one continuous length.

Shortages & Returns: All claims for shortage or incorrect material must be made within 10 days after receipt of the goods to which such claim pertains. Goods may only be returned for credit within 1 month of the date of authorization. Goods that are special in any way shall not be returned to PMC. Material returned for any reason, without written authorization will be refused a n returned at shipper's expense. A return request must be processed through our Manchester, N.H. sales office.

Tolerances: Due to allowances in manufacturing processes for wire, cable and similar products, PMC-A Division of R-SCC reserves the right to ship variation of ± 10% from the quantity of such goods ordered. Physical tolerances shown are nominal. Shipping weights are an average of all types of conductors and are listed for estimation only. These weights can vary substantially due to different types of spools, reels and/or conductors.

The material contained in the document is presented in good faith and believed to be reliable and accurate. However, because testing conditions may vary and material quality or information that may be provided in whole or part by others may be beyond our control, no warranty, expressed or implied, is given PMC-A Division of R-SCC can assume no liability for results obtained or damages incurred through the application of the data tests presented.
Note: PMC-A Division of R-SCC reserves the right to substitute an equal product on all registered trademark items.

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