COMBINATION THERMOCOUPLES AND RTDS

JMS Southeast, Inc., manufactures a sensor that contains both a thermocouple and an RTD. The standard design allows the user to check and validate readings with one sensor while using another type for control or monitoring. Although two thermocouples can be used simultaneously, it is not advisable to use the thermocouple and RTD at the same time.

This type of sensor can be used in applications that require two different inputs. One advantage of this system is that the conditions which adversely affect a thermocouple may not affect the RTD and vice versa. Therefore, combination sensors provide a back-up sensor in the same probe. In extremely high temperature applications, this procedure is not recommended. JMS Southeast can also manufacture triple elements of just about any combination. Contact JMS for details.

| [| #1 | DESCRIPTION | | | | | | | | | | | |
|---|-----------------------------|---|--|-----------------------------|--|--------------------------------|---|---|---------------------------|---|---|----------------------------------|--|
| | 4C | Combination, 4 wire, dual element, 1/4" diameter, ungrounded/ non isolated thermocouple and RTD | | | | | | | | | | | |
| L | | #2 THERMOCOUPLE TYPE | | | | | | | | | | | |
| - | | J K T | J thermocouple K thermocouple T thermocouple | | | | | | | | | | |
| | | | #3 RTD TYPE | | | | | | | | | | |
| ų – | | | 3 | Single ele | element 100` Platinum RTD (.00385) X Other, specify | | | | | | | | |
| | _= | | | #4 | TEMPERATURE LIMITS Hollow tube < 662°F (T/C and RTD are not electrically connected) | | | | | | | | |
| | | | | 1 2 3 | Sheath < Hollow to | 1200°F (T | ype K & N nd RTDs a | ONLY - A | | al & TCs a | | lectically connected to RTD) | |
| | | | | | #5 | IMMERS | ION LENG | STH (L) | | | | | |
| | <u>↓_</u> ∥ | | | | " | Immersio | n in inches | S | | | | | |
| #6 | | | | | | | | STAND. INDUSTRIAL FITTING [6-13] COMPRE | | | | ESSION FITTINGS | |
| | | | | | | S W | Spring loaded 1/2"x x1/2" NPT SS fitting Stainless steel w/ SS ferrule Welded 1/2" x 1/2" NPT SS fitting H 1/8" NPT | | | | | | |
| SYMBOL #4=1 SYMBOL #4=2 SYMBOL #4=3 | | | | | | В | Bayonet s | style 1/2" p | | ocess connection | | 1/4" NPT | |
| (HOL | LOW TUBE) WHI | | TC (+) | TC (+) TC | | Х | Other, sp | ecity | | | P X | 1/2" NPT Other, specify | |
| TC (+) | →WHI | TE TE | 100 | Pt 100 | (') | | #7 | LEAD W | /IRE INSU | LATION A | ND LENGTI | H IN INCHES [3-2] | |
| TC (-) | ► REC |) TC (-) | TC (-) | TC (-) TC (-) TC | | Z No lead | | | | | | | |
| | RED ELECTRICALLY ONNECTED) | (ELECT | RICALLY IECTED) | (ELECTRICALLY CONNECTED) | | | 1_" | Fiberglas | SS | | 5_" X | Kapton (Standard) Other, specify | |
| | | | | | | | | #8 | | OF TRANSITION [1-16, 3-14] | | | |
| | | | | | | | X | | | Note: For extra high humidity / moisture environments, put "2" after your selection. For high temp at the transition area use X + type of transition and max temp. | | | |
| | | 1/4" Ø (STD) | 1/4" (STI | | | 1/4" Ø (STD) | | | #9 | COLD EN | ND TERMIN | IATION [Add'l options Pg 1-6] | |
| COMPACTED MGO INSULATION (SHEATH) 316SS TUBE— (STANDARD) | | | | | | SYMBOL 4-3 | | | A I K L M N O Q R V* W* X | Bare ends Explosion proof NEMA 4X head (6IA / 6B4) Spade lugs (6SL) Aluminum head w/ hinged cover (6L / 6B4) Aluminum head w/ screw cover & chain (6M / 6B4) Cast iron head w/ screw cover (6N / 6B4) Open ceramic terminal block (6B4) Black nylon Nema 4 head (6Q / 6B4) High dome head (6R) Hermetic connector (6DC) - Male Microphone style connector (6DA) - Male Other, use appropriate part numbers from sect.#6 | | | |
| | SYN (TYPE K | SYMBOL 4=1 SYMBOL 4=2 (TYPEKTC SHOWN) | | | | SYMBOL 4=3 (TYPE KTC SHOWN) | | | | Use only if applicable. See page 1-2 #14 for ordering selections. | | | |
| | | | | V | \ | ↓ ↓ | | | <u></u> | * Use dou female o | uble symbol for matching connector. i.e. W/WW (male tching female). | | |
| | 4C | K | 3 | 1 | 12" | W | Z | Z | N | | | | |