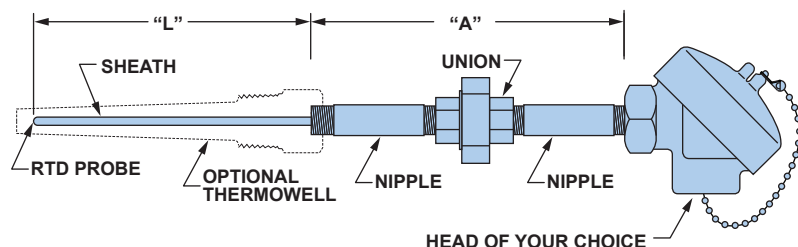


SANDELIUS R.T.D. ASSEMBLIES

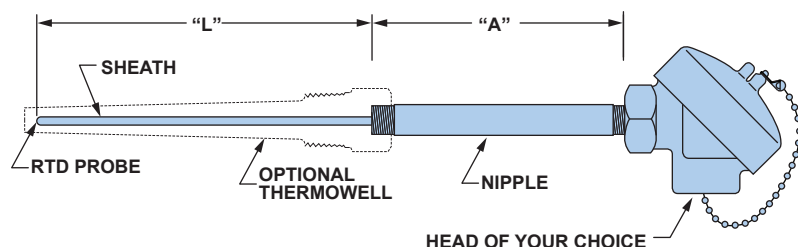
Style R1H – RTD with Nipple - Union - Nipple - Head

Style SR1H – Spring-Loaded RTD with Nipple - Union - Nipple - Head



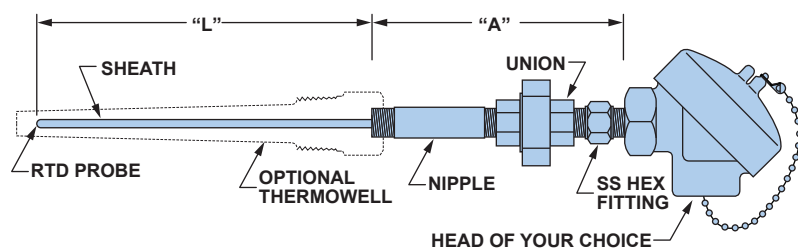
Style R2H – RTD with Nipple - Head

Style SR2H – Spring-Loaded RTD with Nipple - Head

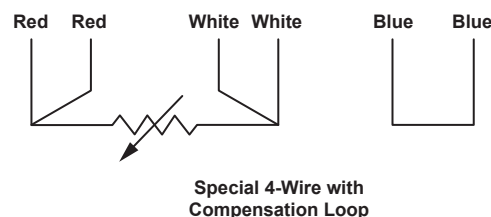
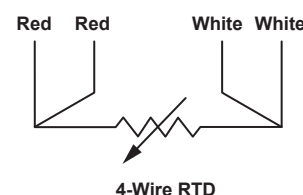
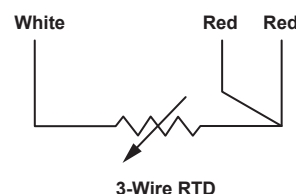
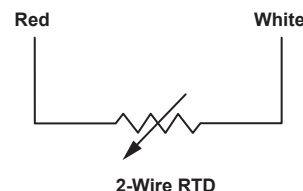


Style R7H – RTD with Nipple - Union - Brazed SS Fitting - Head

Style SR7H – RTD with Nipple - Union - Spring-loaded SS Fitting - Head



RTD Leadwire Configurations



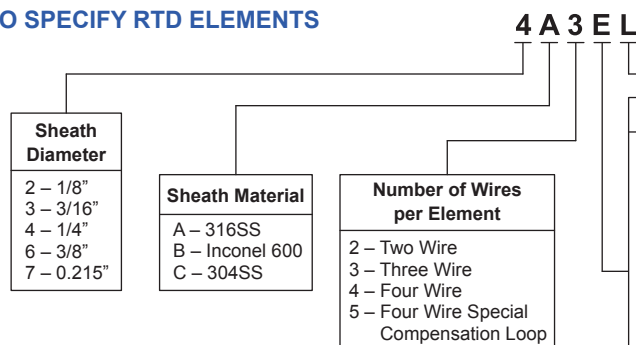
To Order specify:

SR7H-4A3EL-L16-4G6-C46C-(Optional Thermowell*)

Assembly Style	Element See Below	L – Length in inches	Head See Pages A-18 & A-19	See Catalog Section B-2
		Thread Size 4 – 1/2" NPT 6 – 3/4" NPT 8 – 1" NPT	Nipple & Union Material C – Carbon Steel G – Galvanized Steel S – Stainless Steel	Nominal A Length in inches

*To order an assembly complete with a thermowell simply insert the part number of the thermowell from Sandelius catalog Section B. When ordering an assembly complete with a thermowell, the "L" length may be shown as "00" as we will size the element to fit the thermowell.

HOW TO SPECIFY RTD ELEMENTS



Notes:

- Alpha = 0.00385 is the DIN 43760 standard and is the most commonly used.
- Not all items for which a part number can be made are available in actual fact.
- The temperature ranges shown are for platinum RTDs.
- Sandelius RTDs are normally manufactured for use at temperatures above -140° F. If an RTD is intended for use at temperatures below -140° F, this information must be specified on the order so the necessary modifications can be incorporated. (In very special cases, temperatures as low as -434° F are possible).

RTD Type

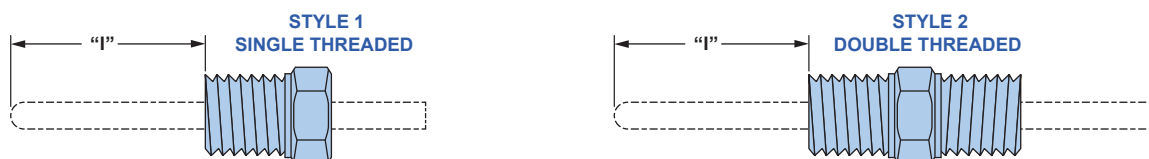
E	Platinum 100	@ 0° C.	α = 0.00385	– Single
EE	Platinum 100	@ 0° C.	α = 0.00385	– Dual
A	Platinum 100	@ 0° C.	α = 0.003916	– Single
AA	Platinum 100	@ 0° C.	α = 0.003916	– Dual
B	Platinum 100	@ 0° C.	α = 0.003902	– Single
P	Platinum 100	@ 0° C.	α = 0.003926	– Single
R	Platinum 100	@ 0° C.	α = 0.003911	– Single
W	Platinum 100	@	Sama Curve	– Single
N	Nickel 120	@ 0° C.		– Single
C	Copper 100	@ 25° C		– Single
Y	Other (Specify at end of part number)			

Temperature Range^{2 3} / Construction

L	– -328° F – 500° F with Teflon wire
K	– -328° F – 700° F with Kapton wire
M	– -328° F – 1000° F MgO with Kapton leads
C	– -20° C – 200° F with PVC wire (Recommended for cooling water)
F	– 50° – 700° F with Fiberglass wire
H	– -328° F – 1200° F MgO with Teflon leads, H range comes standard with Inconel 600 sheath material

ACCESSORIES

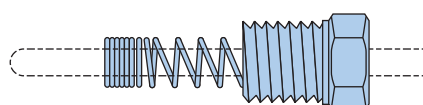
FIXED FITTINGS – ARE BRAZED OR WELDED TO THE SHEATH



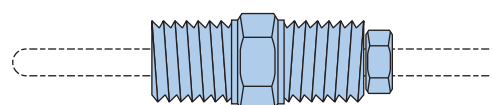
ORDER SYMBOL		THREAD SIZE	MATERIAL	AVAILABLE TO FIT THESE SHEATH O.D. SIZES
STYLE 1	STYLE 2			
F11	F21	1/8" NPT	304SS	0.063, 0.125, 0.188 & 0.250
F12	F22	1/4" NPT	304SS	0.063, 0.125, 0.188, 0.250, 0.313 & 0.375
F14	F24	1/2" NPT	304SS	0.063, 0.125, 0.188, 0.250, 0.313, 0.375 & 0.500
F16	F26	3/4" NPT	304SS	0.063, 0.125, 0.188, 0.250, 0.313, 0.375 & 0.500
F18	F28	1" NPT	304SS	0.063, 0.125, 0.188, 0.250, 0.313, 0.375 & 0.500

SPRING-LOADED FITTINGS

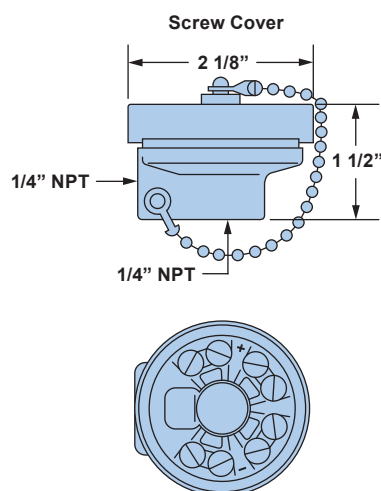
STYLE 1 – SINGLE THREADED



STYLE 2 – DOUBLE THREADED



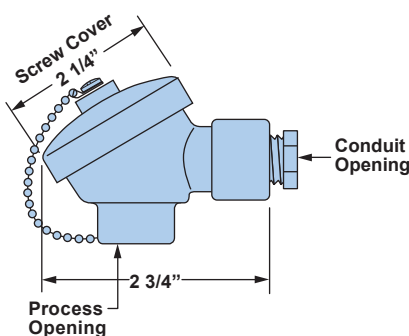
ORDER SYMBOL		THREAD NPT SIZE	MATERIAL	SPRING TYPE	AVAILABLE SHEATH SIZES
STYLE 1	STYLE 2				
SF14	SF24	1/2" NPT	304SS	Adjustable	0.125, 0.188, 0.250, 0.312 & 0.375
SB14	–	1/2" NPT	BRASS	Adjustable	0.125, 0.188, 0.250, 0.312 & 0.375
SPF14	SPF24	1/2" NPT	304SS	Adjustable with Liquid-tight O-Ring	0.125, 0.188 & 0.250



Miniature Weatherproof Thermoset Plastic Head

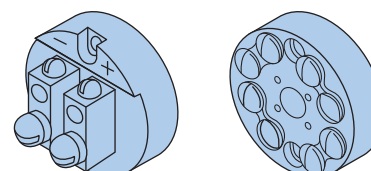
1/4" NPT x 1/4" NPT with 4 Integral Terminals

Part Number	Ambient Temperature Rating
N22	350° F
W22	800° F



Miniature Aluminum Head (Type M)

Part Number: M44* (1/2" x 1/2" NPT)
(Use "120" Series Terminal Blocks)
Max No. of Terminals: 4 + Ground
*See note on page A-18

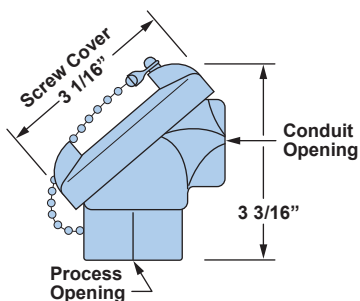


Ceramic Terminal Blocks

Fit Miniature Head Type: M

Part Number	Description
CP122	2 - Terminals
CP124	4 - Terminals

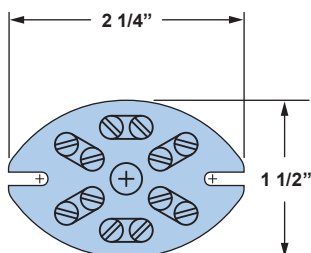
TERMINAL HEADS & CONNECTOR BLOCKS



Standard Weatherproof Heads

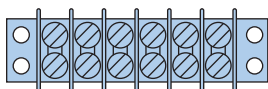
(Use "115F Series" Ceramic Terminal Blocks)
Max. number of terminals: 6+Ground.

Part Number ¹	Type	Description
P46*	P	Polypropylene
PW46*	PW	White Polypropylene ² (FDA Compliant)
Q46*	Q	Aluminum
R46*	R	Cast Iron
T46*	T	Cast Iron/Aluminum ⁵ Explosion Proof ⁴



115 Series Ceramic Terminal Blocks

Part Number ¹	Description
CP115F	2 Terminals



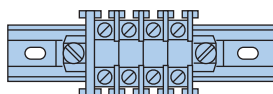
CP129 & CP130 Terminal Strips

CP129 (3/8" spacing) is standard in E & F type heads.
CP130 (7/16" spacing) available with compensated terminals is commonly used in junction boxes.

To Order Specify

CP130-12-K

- Type of Optional Compensated Terminals (Available on CP130 only)
- Number of Terminals (20 max.)
- Part Number



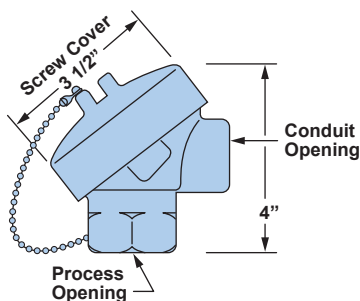
CP140 Tubular Clamp Type Terminal Strip

Commonly used in junction boxes. May be specified as an option for E & F type heads.

To Order Specify

CP140-10

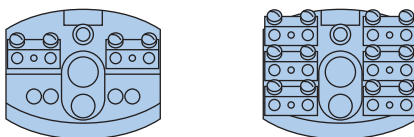
- Number of Terminals
- Part Number



Large Weatherproof Heads

(Use "100 Series" Ceramic Terminal Blocks)
Max. number of terminals: 6+Ground.

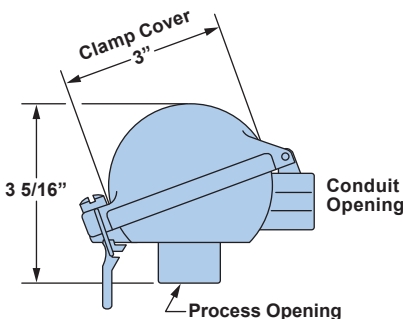
Part Number ¹	Type	Description
A46*	A	Aluminum
C46*	C	Cast Iron



100 Series Ceramic Terminal Blocks

Fit Head Types: A, B, C, D

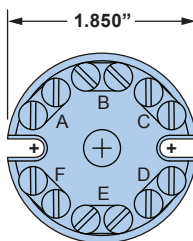
Part Number ¹	Description
CP102	2 Terminals
CP104	4 Terminals
CP106	6 Terminals



Weatherproof Aluminum Head

(Use "117 Series" Terminal Blocks)
Max No. of Terminals: 6 + Ground

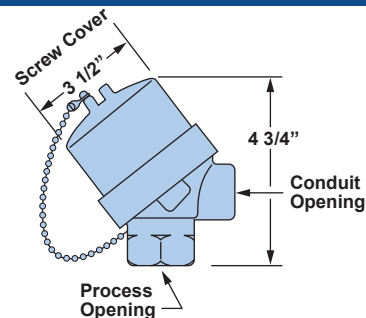
Part Number ¹	Type	Description
H44*	H	1/2" x 1/2" NPT
H46*	H	1/2" x 3/4" NPT



117 Series Ceramic Terminal Blocks

Fit Head Type: H44

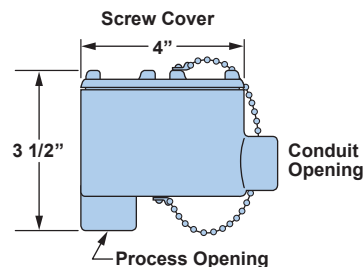
Part Number	Description
CP117	6 Terminals



Large Dome Cover Weatherproof Heads

(Use "100 Series" Ceramic Terminal Blocks)
Max. number of terminals: 6+Ground.

Part Number ¹	Type	Description
B46*	B	Aluminum
D46*	D	Cast Iron



Large Explosion Proof³ Heads

(Standard Terminal Block is CP129)
Max No. of Terminals: 6 + Ground

Part Number ¹	Type	Description
E46*	E	Aluminum
F46*	F	Cast Iron/Aluminum ⁵

To Order Any Head On This Page

C 4 6 B

- Connector block if required.
- B – 2 Terminals C – 3 Terminals
- D – 4 Terminals F – 6 Terminals
- Conduit Opening (See table A below)
- Process Opening (See table A below)
- Head Type
- If a tapped internal ground screw is required insert a "G" in front of the part number.

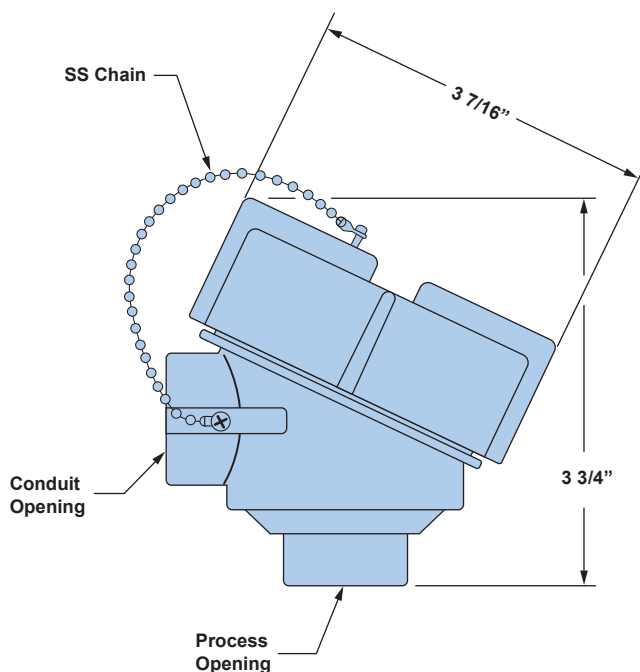
Table A -Connection Sizes⁷ (All heads on this page)

NPT SIZE	ORDER CODES	Available on Head Types	
		PROCESS	CONDUIT
1/2	4	All	All
3/4	6	All except H+P	All
1	8	A B C D E F & R	E & F

Notes:

- * To order heads complete with terminal block add suffix to specify the number of terminals required B=2 terminals, C=3 terminals, etc.
- 1. Unless otherwise noted, all head part numbers shown are for heads with 0.5" NPT process openings and 0.75" NPT conduit openings. See Table A for other available sizes.
- 2. PW series heads may be specially ordered with molded-in terminals. To order insert an "M" before the number of terminals required. Example: PW46MF would have 6 molded-in terminals.
- 3. Type E & F explosion proof heads are approved for Class 1, Groups B, C, & D; Class 2, Groups E, F & G; Class 3, All Groups.
- 4. Type T explosion proof heads are approved for Class 1, Groups C & D; Class 2, Groups E, F & G; Class 3, All Groups.
- 5. Type F & T explosion proof heads have cast iron bodies with aluminum covers.
- 6. Aluminum & Cast Iron heads are available with epoxy coating add an "X" after the type designation. Example: QX46D.
- 7. Some NPT sizes are achieved through the use of reducing bushings.

TERMINAL HEADS & CONNECTOR BLOCKS



To Order Specify

AE-46-D

Standard Terminal Block
B – 2 Terminal Block (CP162B)
C – 3 Terminal Block (CP162C)
D – 4 Terminal Block (CP162D)
F – 6 Terminal Block (CP162F)
Leave blank if no Terminal Block

Connection Code
(See Table B)

Basic Part Number
(See Table A)

TABLE A - Basic Part Numbers

Part Number	Material
AE	Aluminum, Explosion Proof
AEX	Epoxy Coated Aluminum, Explosion Proof
SE	316SS, Explosion Proof

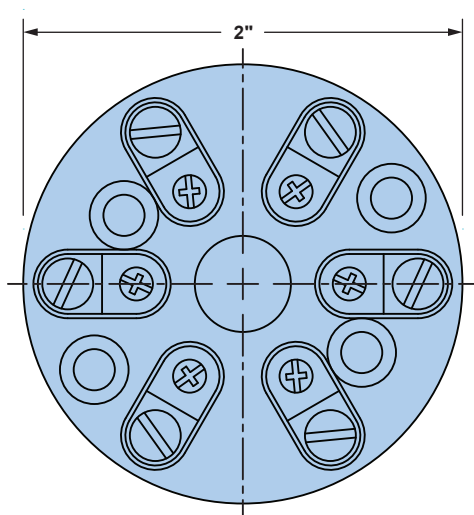
Table B – Connection Code

Code	Process Opening	Conduit Opening
44	1/2" NPT	1/2" NPT
45	1/2" NPT	M20 x 1.5
46	1/2" NPT	3/4" NPT
66	3/4" NPT	3/4" NPT

FM/CSA APPROVALS:
CLASS 1, DIV. 1, GROUPS B, C & D and
Dust Ignitionproof for Class II, Div. 1,
Group E, F and G, Class III
Type 4X and IP68

Ex II 2 G Ex d IIC Gb Ta, IP68
II 2 D Ex tb IIIC Db Ta, IP68

IECEx Approvals:
Ex d IIC Gb
Ex tb IIIC Db



Part Number	Number of Terminals
CP162B	2
CP162C	3
CP162D	4
CP162E	5
CP162F	6