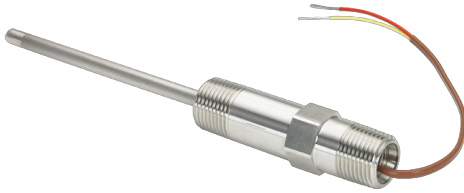


## Rosemount 183 Sensor and Thermowell



The Rosemount 183 Sensor and Thermowell have designs that provide flexible and reliable temperature measurements in process environments.

Features include:

- Industry-standard sensor types, including J, K, E, and T thermocouple varieties
- Variety of enclosure and connection head options
- Global hazardous-location approvals (Option Codes E5, E6, E7)
- Assemble to Transmitter option (Option Code XA)

[VIEW PRODUCT >](#)

### Online Product Configurator

Many products are configurable online using our Product Configurator. Select the **Configure** button or visit our [website](#) to start. With this tool's built-in logic and continuous validation, you can configure your products more quickly and accurately.

### Model codes

Model codes contain the details related to each product. Exact model codes will vary; an example of a typical model code is shown in [Figure 1](#).

**Figure 3: Model Code Example**

<b>3144P D1 A 1 NA</b>	<b>M5 DA1 Q4</b>
<b>1</b>	<b>2</b>

1. Required model components (choices available on most)
2. Additional options (variety of features and functions that may be added to products)

### Specifications and options

See the Specifications and options section for more details on each configuration. Specification and selection of product materials, options, or components must be made by the purchaser of the equipment. See the Material selection section for more information.

## Rosemount Series 183 Thermocouple Sensor Assemblies without Thermowell

### Required model components

#### Model

Code	Description	
0183	Thermocouple sensor	★

#### Connection head

Code	Description	
R	Aluminum connection head, six terminals, flat cover, unpainted	★
T	Aluminum connection head, six terminals, extended cover, unpainted	★
P	Aluminum connection head, six terminals, flat cover, painted	★
L	Aluminum connection head, six terminals, extended cover, painted	★
N	Sensor only with 6-in. PTFE-insulated, 24-gauge lead wires	★
D	Rosemount aluminum connection head with ½-in. entries	★
C	Polypropylene connection head	
G	Rosemount SST connection head with ½-in. entries	

#### Sensor type and junction for Capsule sensors

Not available with sensor lead wire termination codes R, P, or C or with approval options.

Codes A and C must be used with an extension length. Additional non-standard (E) lengths are available in ½-in. increments from 2.5- to 9-in.

Code	Sensor type	Junction	
01	Single	Grounded	★
02	Dual	Grounded	★
03	Single	Ungrounded	★
04	Dual, unisolated	Ungrounded	★
05	Dual, isolated	Ungrounded	★

#### Sensor type and junction for General purpose sensor

Available only with straight stem flanged thermowells.

Code	Sensor type	Junction	
11	Single	Grounded	★
12	Dual	Grounded	★
13	Single	Ungrounded	★
14	Dual, unisolated	Ungrounded	★
15	Dual, isolated	Ungrounded	★

**Sensor type and junction for Spring-loaded sensor**

Code	Sensor type	Junction	
21	Single	Grounded	★
22	Dual	Grounded	★
23	Single	Ungrounded	★
24	Dual, unisolated	Ungrounded	★
25	Dual, isolated	Ungrounded	★

**Sensor type and junction for Bayonet spring-loaded sensor**

Thermowells with an overall length (“U” + “T” + 1.75-in.) of 36-in. or less are machined from solid barstock. Thermowells with an overall length larger than 42-in. will be constructed using a welded 3-piece design and are available only with a stepped stem style. For lengths between 36 and 42-in. consult factory for construction method.

Code	Sensor type	Junction	
31	Single	Grounded	
32	Dual	Grounded	
33	Single	Ungrounded	
34	Dual, unisolated	Ungrounded	
35	Dual, isolated	Ungrounded	

**Thermocouple type and temperature range**

Code	Description		
J2	J	0 to 760 °C (32 to 1400 °F)	★
K2	K	0 to 1150 °C (32 to 2102 °F)	★
E2	E	0 to 871 °C (32 to 1600 °F)	★
T2	T	-180 to 371 °C (-292 to 700 °F)	★

**Extension type and material**

Code	Extension type	Material	
A <sup>(1)</sup>	Nipple coupling	300 series SST	★
C <sup>(1)</sup>	Nipple union	300 series SST	★
N	None (use with extension length option code 00)	None	

(1) Codes A and C must be used with an Extension Length.

**Extension length (E)**

Code	Description	
00	00-in.	★
30	3.0-in.	★
60	6.0-in.	★

**Thermowell material**

Code	Description	
N	No thermowell required	★

**Sensor immersion length (L)**

Code	Description	
010 <sup>(1)</sup>	1.0-in.	★
015	1.5-in.	★
020	2.0-in.	★
025	2.5-in.	★
030	3.0-in.	★
035	3.5-in.	★
040	4.0-in.	★
045	4.5-in.	★
050	5.0-in.	★
055	5.5-in.	★
060	6.0-in.	★
065	6.5-in.	★
070	7.0-in.	★
075	7.5-in.	★
080	8.0-in.	★
085	8.5-in.	★
090	9.0-in.	★
095	9.5-in.	★
100	10.0-in.	★
105	10.5-in.	★
110	11.0-in.	★
115	11.5-in.	★
120	12.0-in.	★
125	12.5-in.	★
130	13.0-in.	★
135	13.5-in.	★
140	14.0-in.	★
145	14.5-in.	★
150	15.0-in.	★
155	15.5-in.	★
160	16.0-in.	★

Code	Description	
165	16.5-in.	★
170	17.0-in.	★
175	17.5-in.	★
180	18.0-in.	★
185	18.5-in.	★
190	19.0-in.	★
195	19.5-in.	★
200	20.0-in.	★
205	20.5-in.	★
210	21.0-in.	★
215	21.5-in.	★
220	22.0-in.	★
225	22.5-in.	★
230	23.0-in.	★
235	23.5-in.	★
240	24.0-in.	★
245	24.5-in.	★
250	25.0-in.	★
260	26.0-in.	★
270	27.0-in.	★
280	28.0-in.	★
290	29.0-in.	★
300	30.0-in.	★
310	31.0-in.	★
320	32.0-in.	★
330	33.0-in.	★
340	34.0-in.	★
350	35.0-in.	★
360	36.0-in.	★
370	37.0-in.	★
380	38.0-in.	★
390	39.0-in.	★
400	40.0-in.	★
410	41.0-in.	★
420	42.0-in.	★
430	43.0-in.	★

Code	Description	
440	44.0-in.	★
450	45.0-in.	★
460	46.0-in.	★
470	47.0-in.	★
480	48.0-in.	★

(1) 1-in. length without extension is only available in capsule style.

## Additional options

### Approval options

Code	Description	
E1	ATEX Flameproof approval	★
E2	Ex d- CEPEL Flameproof approval- Brazil	★
E5	FM Explosion-proof approval	★
E6	CSA Explosion-proof approval	★
E7	IECEx Flameproof approval	★
EM	Technical Regulations Customs Union (EAC) Flameproof	★
KD	Combination of FM Explosion-proof, CSA Explosion-proof, and ATEX Flameproof approval	★
KF	Combination of ATEX Flameproof and CSA Explosion-proof approval	★

### Mounting adapters

Code	Description	
M5-M7	Mounting adapter: Sensor compression fitting: 1/8-27 NPT, M6 = 1/4-18 NPT, M7 = 1/2-14 NPT	★

### Assemble to options

Code	Description	
XA	Assemble connection head or transmitter to a sensor assembly	★

## Rosemount Series 183 Thermocouple Sensor Assemblies with Thermowell

### Required model components

#### Model

Code	Description	
0183	Thermocouple sensor	★

**Connection head**

Code	Description	
R	Aluminum connection head, six terminals, flat cover, unpainted	★
T	Aluminum connection head, six terminals, extended cover, unpainted	★
P	Aluminum connection head, six terminals, flat cover, painted	★
L	Aluminum connection head, six terminals, extended cover, painted	★
N	Sensor only with 6-in. PTFE-insulated, 24-gauge lead wires	★
D	Rosemount aluminum connection head with ½-in. entries	★
C	Polypropylene connection head	
G	Rosemount SST connection head with ½-in. entries	

**Sensor type and junction for Capsule sensors**

Not available with sensor lead wire termination codes R, P, or C or with approval options.

Codes A and C must be used with an extension length. Additional non-standard (E) lengths are available in ½-in. increments from 2.5- to 9-in.

Code	Sensor type	Junction	
01	Single	Grounded	★
02	Dual	Grounded	★
03	Single	Ungrounded	★
04	Dual, unisolated	Ungrounded	★
05	Dual, isolated	Ungrounded	★

**Sensor type and junction for General purpose sensor**

Available only with straight stem flanged thermowells.

Code	Sensor type	Junction	
11	Single	Grounded	★
12	Dual	Grounded	★
13	Single	Ungrounded	★
14	Dual, unisolated	Ungrounded	★
15	Dual, isolated	Ungrounded	★

**Sensor type and junction for Spring-loaded sensor**

Code	Sensor type	Junction	
21	Single	Grounded	★
22	Dual	Grounded	★
23	Single	Ungrounded	★
24	Dual, unisolated	Ungrounded	★

Code	Sensor type	Junction	
25	Dual, isolated	Ungrounded	★

#### Sensor type and junction for Bayonet spring-loaded sensor

Thermowells with an overall length (“U” + “T” + 1.75-in.) of 36-in. or less are machined from solid barstock. Thermowells with an overall length larger than 42-in. will be constructed using a welded 3-piece design and are available only with a stepped stem style. For lengths between 36 and 42-in. consult factory for construction method.

Code	Sensor type	Junction	
31	Single	Grounded	
32	Dual	Grounded	
33	Single	Ungrounded	
34	Dual, unisolated	Ungrounded	
35	Dual, isolated	Ungrounded	

#### Extension type and material

Code	Extension type	Material	
A <sup>(1)</sup>	Nipple coupling	300 series SST	★
C <sup>(1)</sup>	Nipple union	300 series SST	★
N	None (use with extension length option code 00)	None	

(1) Codes A and C must be used with an Extension Length.

#### Extension length (E)

Code	Description	
00	00-in.	★
30	3.0-in.	★
60	6.0-in.	★

#### Thermowell material

Code	Description	
A	316 SST	★
B	304 SST	★
C	Carbon steel	★
D	316L SST	★
E	304L SST	★
F	Alloy 20	
G	Alloy 400	
H	Alloy 600	
J	Alloy C-276	



Code	Description	
L	Alloy B	
M	304 SST with PTFE coating	
P	Chrome Molybdenum Grade F22	
R	Nickel 200	
T	Titanium	
U <sup>(1)</sup>	316 SST with tantalum sheath	
V	310 SST	
W	321 SST	
Z	Chrome Molybdenum Grade F11	

(1) Available only with straight stem flanged thermowells.

#### Immersion (U), Thermowell (L), and Lagging (T) Length

Code	Immersion length (U)	Thermowell length (L) <sup>(1)</sup>	Lagging length (T) <sup>(2)</sup>	
015 <sup>(3)</sup>	1.5-in.	4.0-in.	1.0-in.	★
020 <sup>(3)</sup>	2.0-in.	4.0-in.	0.5-in.	★
025 <sup>(3)</sup>	2.5-in.	4.0-in.	0.0-in.	★
030	3.0-in.	6.0-in.	1.5-in.	★
035	3.5-in.	6.0-in.	1.0-in.	★
040	4.0-in.	6.0-in.	0.5-in.	★
045	4.5-in.	6.0-in.	0.0-in.	★
050	5.0-in.	9.0-in.	2.5-in.	★
055	5.5-in.	9.0-in.	2.0-in.	★
060	6.0-in.	9.0-in.	1.5-in.	★
065	6.5-in.	9.0-in.	1.0-in.	★
070	7.0-in.	9.0-in.	0.5-in.	★
075	7.5-in.	9.0-in.	0.0-in.	★
080	8.0-in.	12.0-in.	2.5-in.	★
085	8.5-in.	12.0-in.	2.0-in.	★
090	9.0-in.	12.0-in.	1.5-in.	★
095	9.5-in.	12.0-in.	1.0-in.	★
100	10.0-in.	12.0-in.	0.5-in.	★
105	10.5-in.	12.0-in.	0.0-in.	★
110	11.0-in.	15.0-in.	2.5-in.	★
115	11.5-in.	15.0-in.	2.0-in.	★
120	12.0-in.	15.0-in.	1.5-in.	★
125	12.5-in.	15.0-in.	1.0-in.	★