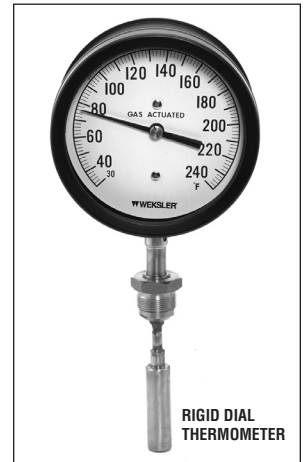
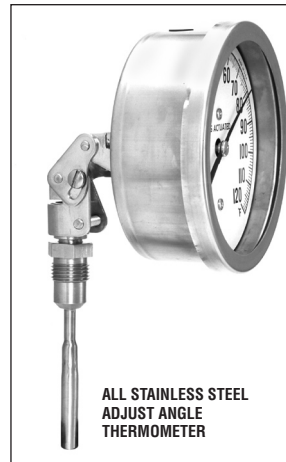
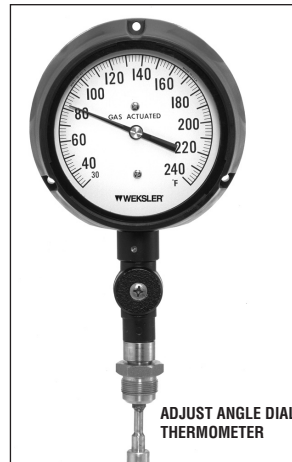
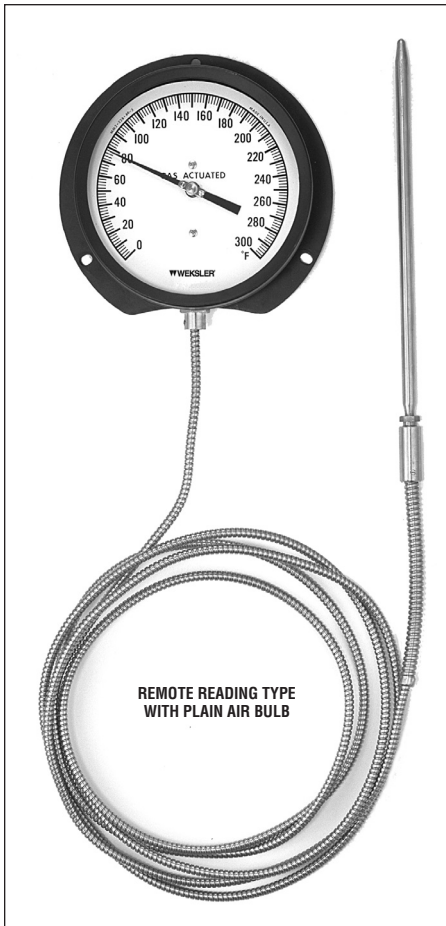


**STANDARD FEATURES**

- Uniformly graduated scales
- Accurate to  $\pm 1\%$  of range span
- 3½", 4½", 6" and 8½" dial sizes
- Adjustable pointer
- Fast response
- Inert gas fill – ideal for applications where Mercury is prohibited
- Stainless steel bulb
- Stainless steel (302) interlocked spiral armor over stainless steel (347) capillary tubing (lengths up to 100 ft.)
- Bronze bushed rotary type brass movement – stainless steel movement optional at extra cost
- Rigid or adjustable angle forms









**TABLE 1**

REMOTE AND DIRECT MOUNTED TYPES		
BASE CATALOG NO.	DIAL SIZE	TYPE
313B	3½"	REMOTE MOUNTED
413B	4½"	
613B	6"	
813B	8½"	
453B	4½"	ALL STAINLESS STEEL ADJUSTABLE ANGLE
333B	3½"	ADJUSTABLE ANGLE
433B	4½"	
633B	6"	
833B	8½"	RIGID (NOT ADJUSTABLE)
323B	3½"	
423B	4½"	
623B	6"	
823B	8½"	

**STANDARD TYPE "E" CAPILLARY TUBING**


0.280" O.D. Stainless Steel Interlocked Spiral (302) Armor Over Stainless Steel Capillary (347)

**TABLE 2 – BULB TYPE AND SIZE**

FOR ALL MOUNTED TYPES		CODE															
<b>PLAIN BULB FOR AIR TEMPERATURE</b>  <p><b>Optional Fittings:</b> A16 Bulb Mounting Bracket</p> <p>12" Long .375 Diameter</p>		<b>A</b>															
<b>PLAIN BULB FOR LIQUIDS IN OPENTANKS, VATS, SINKS, ETC.</b>  <p><b>Optional Fittings:</b> A1 1/2 NPT Compression Fitting A12-2 Set Screw Flange</p> <p>6" Long .50" Diameter</p>		<b>C</b>															
<b>PLAIN BULB WITH 12" BENDABLE EXTENSION</b>  <p>3" x .375" Diameter Bulb</p> <p>3" x .625" Diameter Bulb</p>		<b>1</b> <b>E</b>															
<b>SLIDING UNION CONNECTION WITH 12" BENDABLE EXTENSION</b>  <p>3" x .375" Diameter Bulb, 1/2 NPT Swivel Nut</p> <p><b>Optional Fittings:</b> All "K" Series Thermowells 2F2 Flange</p>		<b>3</b>															
<b>SLIDING UNION CONNECTION WITH 12" BENDABLE EXTENSION</b>  <p>3" x .625" Diameter Bulb, 1"-20 NEF-2B Swivel Nut</p> <p><b>Optional Fittings:</b> All "5F" Series Thermowells All "5F" Series Bushings</p>		<b>N</b>															
<p>3/8" O.D. – 1/2"-14 NPSM Swivel Nut</p> <p>Union Connection (fixed length) Wells, bushings or flanges required for installation</p> 	<table border="1"> <thead> <tr> <th>CODE</th> <th>STEM LENGTH</th> <th>FITS WELL*</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>4"</td> <td>4 1/4" O.A.</td> </tr> <tr> <td>6</td> <td>6"</td> <td>6 1/2" O.A.</td> </tr> <tr> <td>9</td> <td>9"</td> <td>9 1/4" O.A.</td> </tr> <tr> <td>2</td> <td>12"</td> <td>12 1/4" O.A.</td> </tr> </tbody> </table> <p>*Uses "K" Series Thermowells (See page )</p>	CODE	STEM LENGTH	FITS WELL*	4	4"	4 1/4" O.A.	6	6"	6 1/2" O.A.	9	9"	9 1/4" O.A.	2	12"	12 1/4" O.A.	
CODE	STEM LENGTH	FITS WELL*															
4	4"	4 1/4" O.A.															
6	6"	6 1/2" O.A.															
9	9"	9 1/4" O.A.															
2	12"	12 1/4" O.A.															
<p>5/8" O.D. – 1"-20 NEF-2B Swivel Nut**</p> 	<table border="1"> <thead> <tr> <th>CODE</th> <th>STEM LENGTH</th> <th>FITS WELL*</th> </tr> </thead> <tbody> <tr> <td>J</td> <td>3 1/2"</td> <td>4 1/4" O.A.</td> </tr> <tr> <td>K</td> <td>6"</td> <td>6 3/4" O.A.</td> </tr> <tr> <td>L</td> <td>9"</td> <td>9 3/4" O.A.</td> </tr> <tr> <td>M</td> <td>12"</td> <td>12 3/4" O.A.</td> </tr> </tbody> </table> <p>**Uses "5F" Series Thermowells "5F" Series Bushings (See page )</p>	CODE	STEM LENGTH	FITS WELL*	J	3 1/2"	4 1/4" O.A.	K	6"	6 3/4" O.A.	L	9"	9 3/4" O.A.	M	12"	12 3/4" O.A.	
CODE	STEM LENGTH	FITS WELL*															
J	3 1/2"	4 1/4" O.A.															
K	6"	6 3/4" O.A.															
L	9"	9 3/4" O.A.															
M	12"	12 3/4" O.A.															

**TABLE 3 – CASE STYLES**

WALL MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard – 4 1/2" dial size only.
A	Aluminum, Rear Flange Black Aluminum Bayonet Ring Standard – 3 1/2", 6" dial sizes. Extra cost option – 4 1/2" dial size.
G	Aluminum, Rear Flange Chrome Like Bayonet Ring Standard – 8 1/2" dial size only.
X	Stainless Steel, Rear Flange Stainless Steel Bayonet Ring Extra cost option – 4 1/2" and 8 1/2" dial sizes only.
FLUSH PANEL MOUNTED STYLES	
E	Aluminum Case Black Threaded Front Flange Ring Extra cost option – all dial sizes.
B	Aluminum Case, Semi-Flush Mounting Black Aluminum Bayonet Ring Extra cost option – 3 1/2", 4 1/2", 6" dial sizes.
H	Aluminum Case, Semi-Flush Mounting Chrome like Bayonet Ring Extra cost option – 8 1/2" dial size only.
V	Stainless Steel Case and Bayonet Ring Front Flange – Semi-Flush Mounting Extra cost option – 4 1/2" dial sizes only.
W	Aluminum Case Hinged Front Plastic Bezel Extra cost option – 4 1/2", 6" dial sizes only. (back conn. only)
DIRECT MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard on 4 1/2" dial size only.
C	Aluminum, Flangeless Black Aluminum Bayonet Ring. Standard on 3 1/2", 4 1/2" and 6" dial sizes.
Y	Stainless Steel, Flangeless Stainless Steel Bayonet Ring Standard on base catalog No. 453B Extra cost option for all other 4 1/2" dial sizes only.

For complete case description and dimensions refer to pages 108-111

**TABLE 4**

CONNECTION LOCATION CODE	AVAILABILITY			
	ALL SS ADJ. ANGLE	ADJUST ANGLE	RIGID TYPE	REMOTE MOUNT
C = Center Back	•	•		
L = Lower		•	•	•
R = Rear			•	•

**TABLE 5**

CODE	CASE FEATURE
0	None
2	Flush mounting ring and contact
F	Flush mounting ring only
C	Contact

**TABLE 6**

CODE	CAPILLARY TYPE
E	Stainless steel armored
Q	PVC coated
X	None required

**TABLE 7 – BULB DIMENSIONS**

CODE	LENGTH	DIAMETER
NE	12"	3/8 (.375)
GG	6"	1/2 (.50)
CE	3"	3/8 (.375)
CJ	3"	5/8 (.625)
EE	4"	3/8 (.375)
GE	6"	3/8 (.375)
KE	9"	3/8 (.375)
DJ	3 1/2"	5/8 (.625)
GJ	6"	5/8 (.625)
KJ	9"	5/8 (.625)
NJ	12"	5/8 (.625)

**TABLE 8**

CODE	OPTIONS
0	NONE
D	25" bendable extension
E	30" bendable extension

**TABLE 9 – STANDARD RANGES**

CODE	FAHRENHEIT	CODE	DUAL (F&C)	CODE	CELCIUS
FA	-100/100	DA	-40/104F & -40/40C	CA	-100/100
FB	-40/110	DB	-40/180F & -40/82C	CB	-40/180
FC	-40/180	DD	-20/120F & -30/50C	CC	-40/110
FD	-20/120	DD	0/120F & -20/50C	CD	0/100
FE	0/100	DE	0/150F & -18/66C	CE	0/120
FF	0/120	DF	0/300F & -20/120C	CF	0/150
FG	0/150	DG	0/500F & -18/260C	CG	0/200
FH	0/200	DH	30/240F & 0/115C	CH	0/300
FI	0/300	DI	50/550F & 10/290C	CI	0/400
FJ	0/400	DJ	200/1000F & 95/540C	CJ	0/500
FK	0/500	DK	400/1200F & 200/650C	CK	200/650
FL	20/240	DL	0/1000F & 18/38C	CM	30/50
FM	30/240	DO	50/750F & 10/399C	CR	30/150
FN	50/550				
FO	50/750				
FP	200/1000				
FQ	400/1200				

**TABLE 10**

CODE	LENGTH OF CAPILLARY TUBING LENGTHS UP TO 100'
00	None
02	2'
12	12'
1C	100'

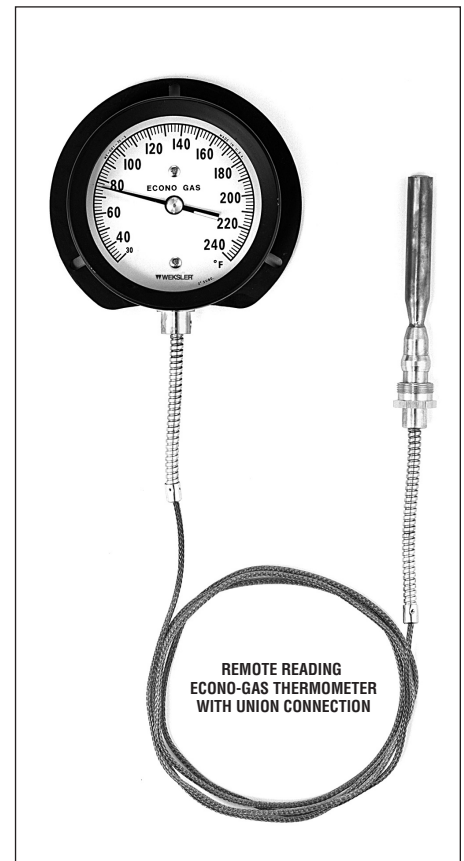
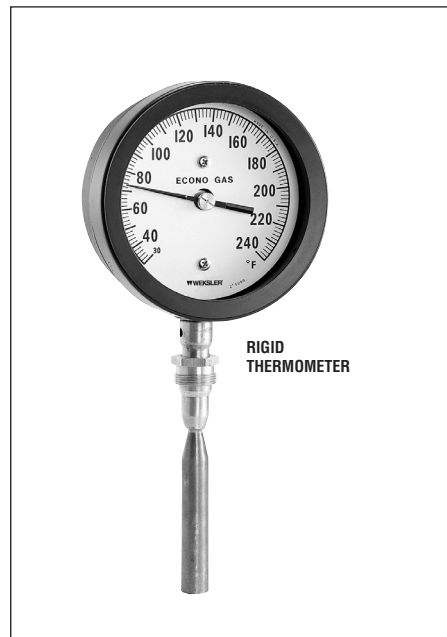
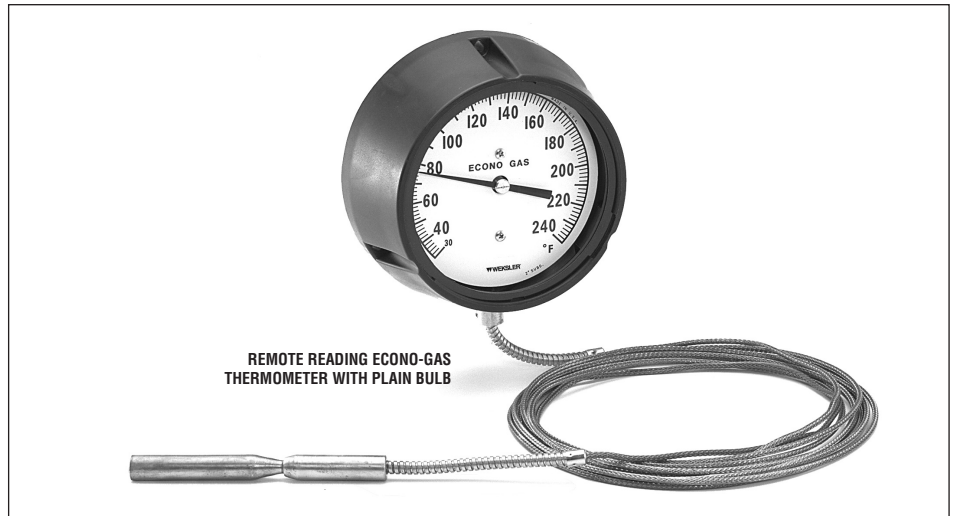
**HOW TO ORDER**

**4 5 3 B      4      Y      C      0      X      EE      0      FA      00      ( )**

- Specify 4-digit Base Catalog No. from Table 1 \_\_\_\_\_
- Add Bulb Digit from Table 2 \_\_\_\_\_
- Add Case Style Digit from Table 3 \_\_\_\_\_
- Add Connection Location Digit from Table 4 \_\_\_\_\_
- Add Case Feature Digit from Table 5 (enter "0" if none) \_\_\_\_\_
- Add Capillary Type Digit from Table 6 (enter "X" if none required) \_\_\_\_\_
- Add Bulb Dimension Digits from Table 7 \_\_\_\_\_
- Add Bendable extension Length Digit Options from Table 8 (enter "0" if none required) \_\_\_\_\_
- Add Range Code Digits from Table 9 \_\_\_\_\_
- Add Length of Capillary Digit(s) from Table 10 (enter "00" if none required) \_\_\_\_\_
- Add Optional Feature Code from Page 86 if needed \_\_\_\_\_

### STANDARD FEATURES

- Uniformly graduated scales
- Accurate to  $\pm 1\%$  of range span
- 3 $\frac{1}{2}$ " and 4 $\frac{1}{2}$ " dial sizes
- Adjustable pointer
- Fast response
- Inert gas fill – ideal for applications where Mercury is prohibited
- Copper Bulb,  $\frac{1}{2}$ " diameter with brass fittings
- Bronze bushed rotary type brass movement



### STANDARD TYPE "P" CAPILLARY TUBING



0.125" O.D. Copper Braided Protective Covering Over Copper Capillary  
**AVAILABLE LENGTHS:** 5, 10, 15, 20, 25 or 30 feet.



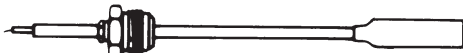

TABLE 1

REMOTE AND DIRECT MOUNTED TYPES		
BASE CATALOG NO.	DIAL SIZE	TYPE
313E 413E 613E	3½" 4½" 6"	REMOTE MOUNTED
333E 433E	3½" 4½"	ADJUSTABLE ANGLE
323E 423E	3½" 4½"	RIGID (NOT ADJUSTABLE)

TABLE 3 – CASE STYLES

WALL MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard – 4½" dial size only.
A	Aluminum, Rear Flange Black Aluminum Bayonet Ring Standard – 3½" dial size. Extra cost option – 4½" dial size.
X	Stainless Steel, Rear Flange Stainless Steel Bayonet Ring Extra cost option – 4½" dial size.
FLUSH PANEL MOUNTED STYLES	
E	Aluminum Case Black Threaded Front Flange Ring Extra cost option – all dial sizes.
B	Aluminum Case, Semi-Flush Mounting Black Aluminum Bayonet Ring Extra cost option
V	Stainless Steel Case and Bayonet Ring Front Flange – Semi-Flush Mounting Extra cost option – 4½" dial sizes only.
W	Aluminum Case Hinged Front Plastic Bezel Extra cost option – 4½" dial size.
DIRECT MOUNTED TYPES	
CODE	CASE TYPE
P	Molded polypropylene, Turret Type Standard on 4½" dial size. (Not available in other dial sizes.)
C	Aluminum, Flangeless Black Aluminum Bayonet Ring. Standard on 3½" dial size. Extra cost option for 4½" dial size.
Y	Stainless Steel, Flangeless Stainless Steel Bayonet Ring Extra cost option for 3½" or 4½" dial sizes

TABLE 2 – BULB TYPE AND SIZE

FOR ALL MOUNTED TYPES											
<b>PLAIN BULB FOR LIQUIDS IN OPEN TANKS, VATS, SINKS, ETC.</b>  <b>6" Long X .50" Diameter</b>	<hr/> <b>3.5"</b>	<b>C</b>									
<b>Optional Fittings:</b> A1 ½ NPT Compression Fitting A12-2 Set Screw Flange	<hr/> <b>6"</b>	<b>D</b>									
<b>PLAIN BULB WITH 12" BENDABLE EXTENSION</b>  <b>3" x .50" Diameter Bulb</b>		<b>E</b>									
<b>SLIDING UNION CONNECTION WITH 12" BENDABLE EXTENSION</b>  <b>3.5" x .625" Diameter Bulb, 1"-20 NEF-2B Swivel Nut</b>		<b>N</b>									
<b>Optional Fittings:</b> All "5F" Series Thermowells All "5F" Series Bushings											
DIRECT MOUNTED TYPES											
<b>½" O.D. Bulb – ¾"-24 NS-2 Swivel Nut with Compression Fitting</b> Union Connection (fixed length) Wells, bushings or flanges required for installation	<table border="1"> <thead> <tr> <th>CODE</th> <th>STEM LENGTH</th> <th>FITS WELL*</th> </tr> </thead> <tbody> <tr> <td>J</td> <td>3½"</td> <td>4½" O.A.</td> </tr> <tr> <td>K</td> <td>6"</td> <td>6½" O.A.</td> </tr> </tbody> </table>	CODE	STEM LENGTH	FITS WELL*	J	3½"	4½" O.A.	K	6"	6½" O.A.	
CODE	STEM LENGTH	FITS WELL*									
J	3½"	4½" O.A.									
K	6"	6½" O.A.									
	<b>Optional Fittings:</b> "4B Series" Thermowells "4B Series" Bushings All-2 Flange										

For complete case description and dimensions refer to pages 108-111

**TABLE 4**

CONNECTION LOCATION	AVAILABILITY	
	ADJUST ANGLE	RIGID TYPE
CODE		
L = Lower	•	•
R = Rear		•

**TABLE 5**

CODE	CASE FEATURE
0	None
2	Flush mounting ring and contact
F	Flush mounting ring only
C	Contact

**TABLE 6**

CODE	CAPILLARY TYPE
X	None required
P	Copper with braided copper covering

**TABLE 7 – BULB DIMENSIONS**

CODE	LENGTH	DIAMETER
DG	3 1/2"	1/2 (.50)
GG	6"	1/2 (.50)
CG	3"	1/2 (.50)

**TABLE 8**

CODE	OPTIONS
0	None
D	25" bendable extension
E	30" bendable extension

**TABLE 9 – STANDARD RANGES**

CODE	FAHRENHEIT	DIVISIONS
FD	-20 to 120°F	1°
FE	0 to 100°F	1°
FR	30 to 150°F	1°
FM	30 to 240°F	2°
FI	0 to 300°F	2°
CODE	CELSIUS	DIVISIONS
CM	-30 to 50°C	1°
CD	0 to 100°C	1°
CR	30 to 150°C	1°
CODE	DUAL	DIVISIONS
DL	0 to 100°F -18 to 38°C	1°
DH	30 to 240°F 0 to 115°C	2°
		1°

**TABLE 10**

CODE	LENGTH OF CAPILLARY TUBING
00	None
2	2'
12	12'
30*	30'

\*Maximum capillary length

**HOW TO ORDER**

**4 3 3 E J V L O X DG O FD 00 ( )**

1. Specify 4-digit Base Catalog No. from Table 1 \_\_\_\_\_
2. Add Bulb Digit from Table 2 \_\_\_\_\_
3. Add Case Style Digit from Table 3 \_\_\_\_\_
4. Add Connection Location Digit from Table 4 \_\_\_\_\_
5. Add Case Feature Digit from Table 5 (enter "0" if none) \_\_\_\_\_
6. Add Capillary Type Digit from Table 6 (enter "X" if none required) \_\_\_\_\_
7. Add Bulb Dimension Digits from Table 7 \_\_\_\_\_
8. Add Bendable extension Length Digit Options from Table 8 (enter "0" if none required) \_\_\_\_\_
9. Add Range Code Digits from Table 9 \_\_\_\_\_
10. Add Length of Capillary Digit(s) from Table 10 (enter "00" if none required) \_\_\_\_\_
11. Add Optional Feature Code from Page 112 if needed \_\_\_\_\_