

**MT Series
MINOX™ Thermocouples
Style B**

Give instrument Model Code when ordering.
*Parts preceded by an asterisk are recommended spare parts.
See Recommended Spare Parts Summary section for quantities.

TO ORDER PARTS, CALL 1-866-746-6477.

MODEL CODE

<u>Description</u>	<u>Model</u>
MINOX Thermocouple	MT
<u>Sensor Type (a)</u>	
Single Element	-1
Dual Element	-2
<u>Connection Head (a)</u>	
Weatherproof/General Purpose	3
Explosionproof and Weatherproof, FM and FMc Approvals (b)	4
Explosionproof and Weatherproof, CSA Certification (b)	5
Flameproof and Weatherproof, ATEX Certification (b) (c)	6
Flameproof and Weatherproof, IECEx Certification (b) (c)	7
Replacement Sensor (No Connection Head) (d)	R
<u>Construction (a)</u>	
Well Type, Nipple Coupler, steel (for connection to Well) (e)	N
Well Type, Nipple Coupler, 316 ss (for connection to Well) (e)	P
Well Type, Union Coupler, steel (for connection to Well) (c) (e)	U
Well Type, Union Coupler, 316 ss (for connection to Well) (e)	W
Bare Element with 316Lss threaded hex fitting (1/2 NPT external thread) welded on to sensor (f)	B
None (g); Replacement Sensor for use with Thermowell	E
<u>Thermocouple Type (h)</u>	
Type E	E
Type J	J
Type K	K
Type N	N
Type T	T
<u>Measuring Junction</u>	
Isolated	I
Grounded (Earthed) - Not with Type T Thermocouple	G
<u>Sheath - 6.35 mm (0.25 in) O.D.</u>	
316 ss	S
Inconel	I
<u>Length "U" or "U + T" Dimension (i)</u>	
51 mm (2.0 in)	-002
76 mm (3.0 in)	-00A
90 mm (3.5 in)	-003
102 mm (4 in)	-004
127 mm (5 in)	-005
152 mm (6 in)	-006
178 mm (7 in)	-007
203 mm (8 in)	-008
229 mm (9 in)	-009
254 mm (10 in)	-010
279 mm (11 in)	-011
305 mm (12 in)	-012
330 mm (13 in)	-013
356 mm (14 in)	-014
381 mm (15 in)	-015
406 mm (16 in)	-016
432 mm (17 in)	-017
457 mm (18 in)	-018

MODEL CODE

Description	Model
Length "U" or "U & T" Dimension (Cont.) (i)	
483 mm (19 in)	-019
508 mm (20 in)	-020
533 mm (21 in)	-021
559 mm (22 in)	-022
584 mm (23 in)	-023
610 mm (24 in)	-024
635 mm (25 in)	-025
787 mm (31 in)	-031
660 mm (26 in)	-026
686 mm (27 in)	-027
711 mm (28 in)	-028
737 mm (29 in)	-029
762 mm (30 in)	-030
813 mm (32 in)	-032
838 mm (33 in)	-033
864 mm (34 in)	-034
889 mm (35 in)	-035
914 mm (36 in)	-036
Nonstandard length are whole inches from 37 through 300 inches; specify desired length by substituting numerical values for Xs; e.g., -048 = 48 inches	-XXX
Optional Selections	
Sensor Length 0.5 in longer than the specified length; not available with Length Codes 00A or 003	-H
Shipped without Thermowell; for customer to install thermowell (j)	-W
Thermowell other than the Standard -T Series Wells	-X
Wake Frequency Calculation (k)	-WF
Metric Conduit Thread Adapter (1/2 NPT by M20 X 1.5) (l)	-A3
Three Point Calibration with Certificate	-C1
Cleaned and Prepared for Oxygen Service (m)	-C5
Examples: MT-13NEIS-012-C1; MT-14BJGS-024-WFC1	

- a. See PSS 1-1B6 A and DP 016-130 for thermocouple assembly configurations.
- b. Thermowells for Explosionproof/Flameproof atmospheres are only available in the following materials: carbon steel C-1018, 316 ss, 316L ss, 304 ss, 304L ss, Alloy 20 Cb-3, nickel alloy equivalent to Hastelloy® B, nickel alloy equivalent to Hastelloy® C-276, Inconel™ 600, R-Monel™ 405, K-Monel 500™, Nickel 200, Titanium, and Cr/Moly steels. Hastelloy is a registered trademark of Haynes International, Inc.
- c. ATEX and IECEx, d, not available with Construction Code U, carbon steel union coupler.
- d. Use only with Construction Codes B or E.
- e. For Well Type construction, the well must be specified separately. Refer to PSS 3-3D1 A for T Series Wells, and to PSS 3-3C1 A for W Series Wells.
- f. Use for Bare Sensor replacement when Connection Head type R is used
- g. Use only with Connection Head type R. Used for replacement of sensors for Construction types N, P, U and W.
- h. See PSS 1-1B6 A for Calibration Curve Accuracy.
- i. With a bare sheath assembly, the "U" or "U + T" dimension is identified as the "A" dimension. See Dimensional Print 016-130.
- j. No Agency electrical safety certifications required.
- k. Not available with Construction B (Bare Element). Requires completed data sheet.
- l. Option -A3 is only available with Connection Head types 6 and 7.
- m. Customer is responsible for cleaning of customer supplied thermowells. For certification of cleaning, select Auxiliary Specification Cert G.

PARTS

Figure 1. MINOX Thermocouple Assemblies
Weatherproof/General Purpose Connection Head Well Type with Nipple Coupler

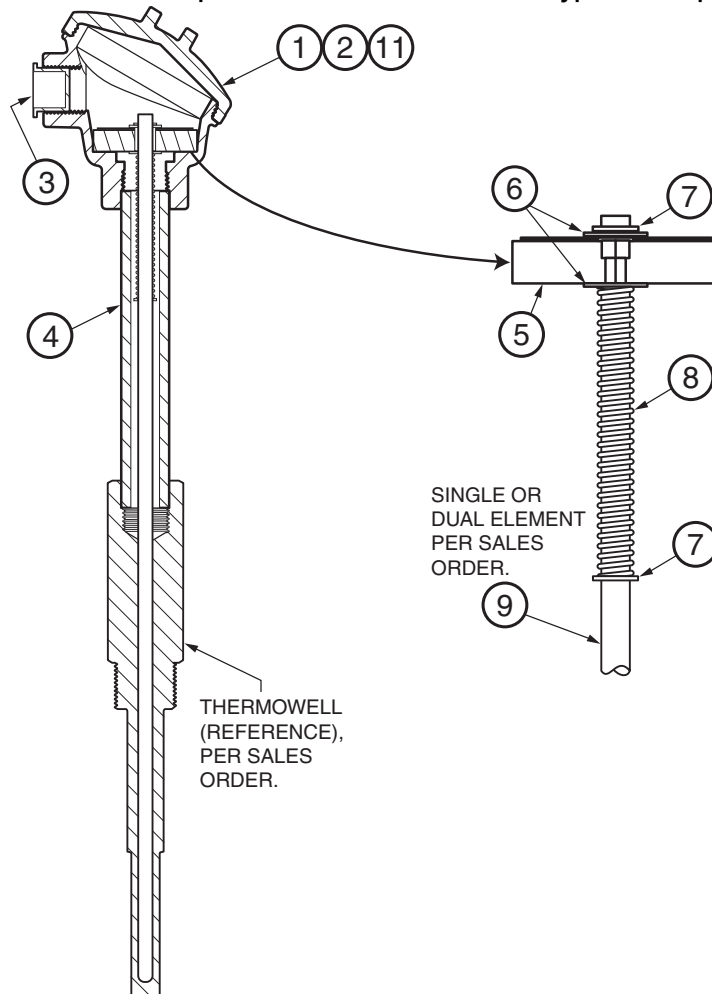


Table 1. Parts for Figure 1, MINOX Thermocouple Assemblies Weatherproof/General Purpose Connection Head Well Type with Nipple Coupler

Item	Part No.	Qty.	Part Name
1	D0179CG	1	Connection Head Assembly; includes cover and cover gasket
*2	D0179EF	1	Gasket, Cover; Part of Item 1 but may be ordered separately
3	S0102BT	1	Plug, Cap
4	Below	1	Coupler, Nipple; 1/2 NPT
	D0179HL		Galvanized Steel, 5.5 in long
	D0187FM		Stainless Steel, 5.5 in long
5	B0154ZF	1	Terminal Block Assembly
6	X0102BC	2	Washer
7	X0170YA	2	Ring, Retaining
8	B0154ZP	1	Spring
9	Model Code with MT-1R or -2R	1	Single or Dual Element
11	X0114AT	A/R	Lubricant; 14-ounce can

— NOTE —

Item 10 is intentionally not used.

Figure 2. MINOX Thermocouple Assemblies
Weatherproof/General Purpose Connection Head Well Type with Union Coupler

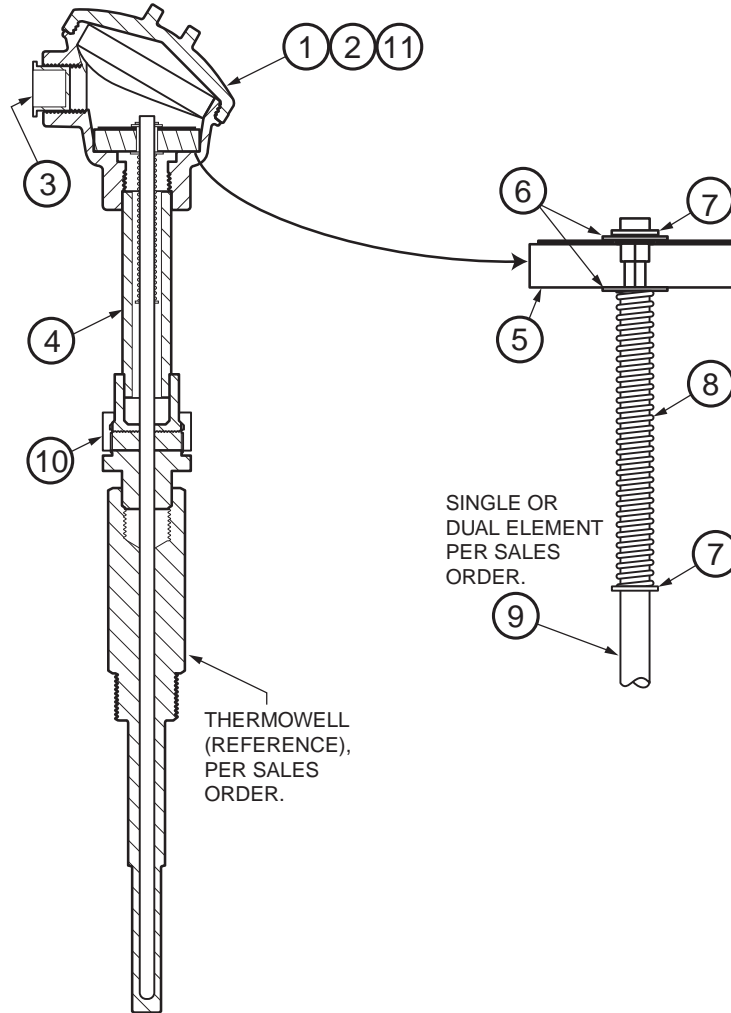


Table 2. Parts for Figure 2, MINOX Thermocouple Assemblies Weatherproof/General Purpose Connection Head Well Type with Union Coupler

Item	Part No.	Qty.	Part Name
1	D0179CG	1	Connection Head Assembly; includes cover and cover gasket
*2	D0179EF	1	Gasket, Cover; Part of Item 1 but may be ordered separately
3	S0102BT	1	Plug, Cap
4	Below	1	Coupler, Nipple; 1/2 NPT
	D0154ZN		Galvanized Steel, 3.5 in long
	D0187FP		Stainless Steel, 3.5 in long
5	B0154ZF	1	Terminal Block Assembly
6	X0102BC	2	Washer
7	X0170YA	2	Ring, Retaining
8	B0154ZP	1	Spring
9	Model Code with MT-1R or -2R	1	Single or Dual Element
10	Below	1	Coupler, Union; 1/2 NPT external and internal thread
	B0107WC		Plated Steel, 2.25 in long
	D0179SJ		Stainless Steel, 2.25 in long
11	X0114AT	A/R	Lubricant; 14-ounce can

Figure 3. MINOX Thermocouple Assemblies
Weatherproof/General Purpose Connection Head Bare Element Type

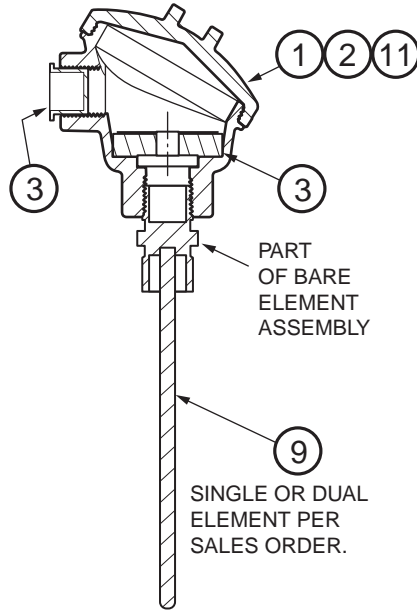


Table 3. Parts for Figure 3, MINOX Thermocouple Assemblies Weatherproof/General Purpose Connection Head Bare Element Type

Item	Part No.	Qty.	Part Name
1	D0179CG	1	Connection Head Assembly; includes cover and cover gasket
*2	D0179EF	1	Gasket, Cover; Part of Item 1 but may be ordered separately
3	S0102BT	1	Plug, Cap
5	B0154ZF	1	Terminal Block Assembly
9	Model Code with MT-1R or -2R	1	Single or Dual Element
11	X0114AT	A/R	Lubricant; 14-ounce can

— NOTE —
Items 4, 6, 7, 8, and 10 are intentionally not used.

Figure 4. MINOX Thermocouple Assemblies
Explosionproof/Flameproof Connection Head Well Type with Nipple Coupler

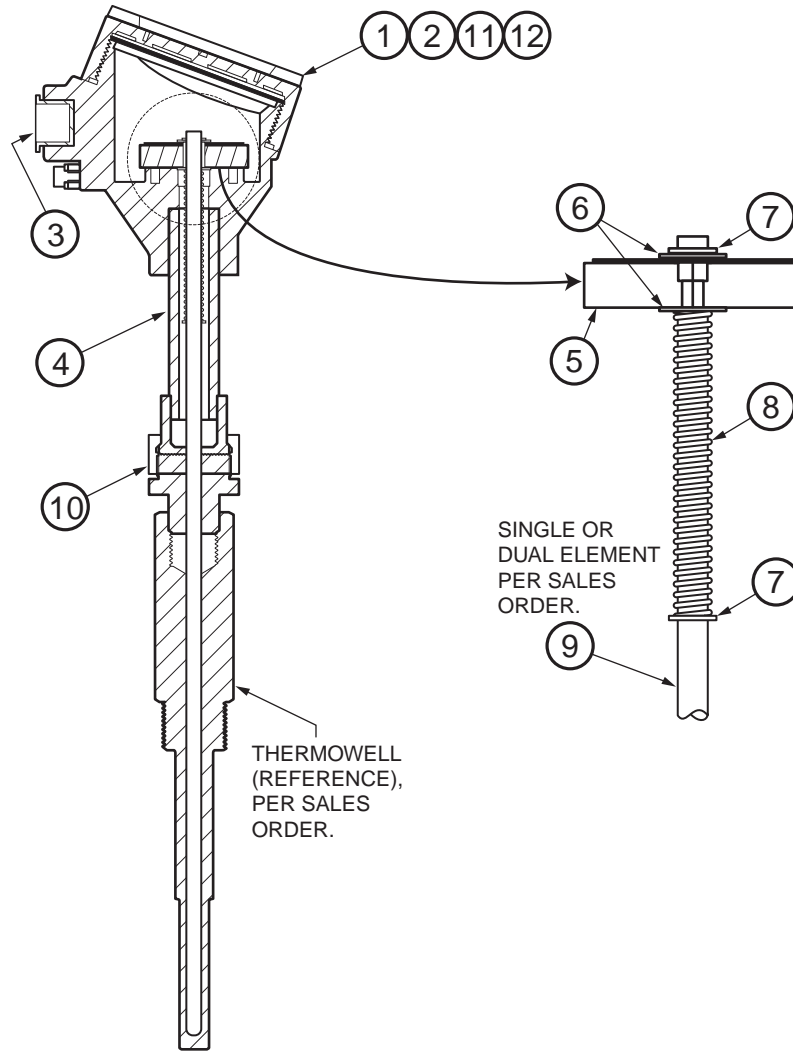


Table 4. Parts for Figure 4, MINOX Thermocouple Assemblies Explosionproof/Flameproof Connection Head Well Type with Nipple Coupler

Item	Part No.	Qty	Part Name
1	D0179CH	1	Connection Head Body
2	D0179YV	1	Connection Head Cover
3	S0102BT	1	Plug, Cap
4	Below	1	Coupler, Nipple; 1/2 NPT
	D0179HL		Galvanized Steel, 5.5 in long
	D0187FM		Stainless Steel, 5.5 in long
5	B0154ZF	1	Terminal Block Assembly
6	X0102BC	2	Washer
7	X0170YA	2	Ring, Retaining
8	B0154ZP	1	Spring
9	Model Code with MT-1R or -2R	1	Single or Dual Element
10	-		Item 10 intentionally not used.
*11	D0179EG	1	Gasket, Cover
12	X0114AT	A/R	Lubricant; 14-ounce can

Figure 5. MINOX Thermocouple Assemblies
Explosionproof/Flameproof Connection Head Well Type with Union Coupler

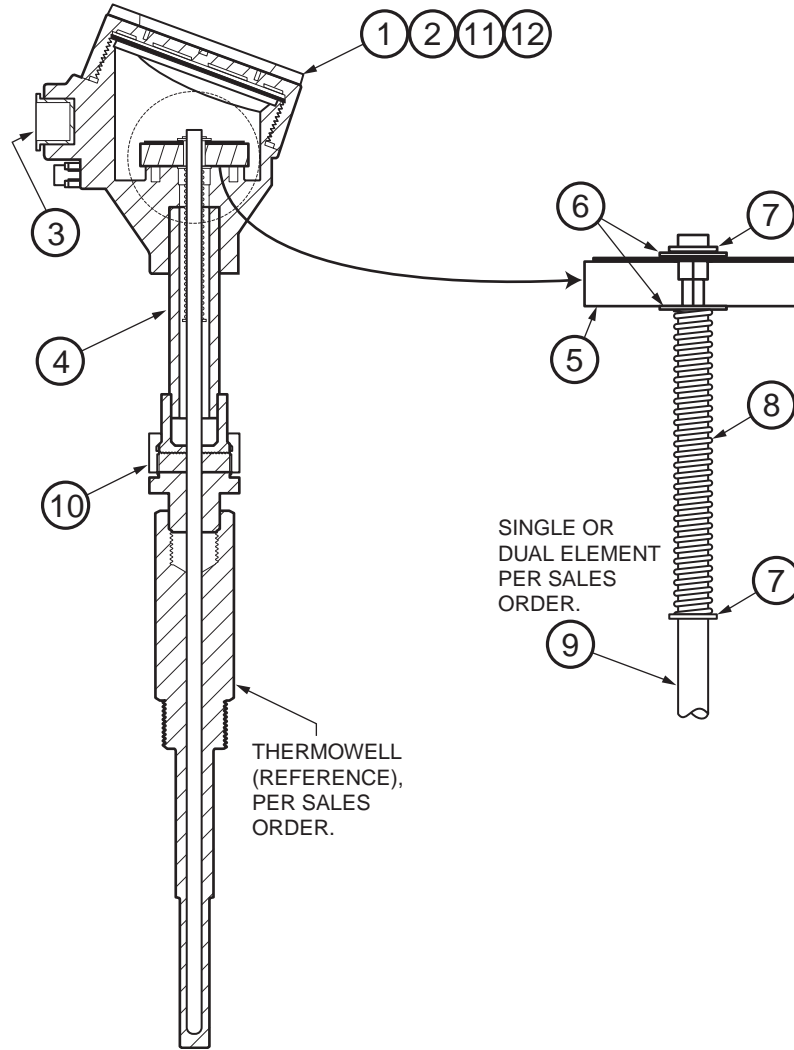


Table 5. Parts for Figure 5, MINOX Thermocouple Assemblies Explosionproof/Flameproof Connection Head Well Type with Union Coupler

Item	Part No.	Qty	Part Name
1	D0179CH	1	Connection Head Body
2	D0179YV	1	Connection Head Cover
3	S0102BT	1	Plug, Cap
4	Below	1	Coupler, Nipple; 1/2 NPT
	D0179HM		Galvanized Steel, 3.0 in long
	D0187FN		Stainless Steel, 3.0 in long
5	B0154ZF	1	Terminal Block Assembly
6	X0102BC	2	Washer
7	X0170YA	2	Ring, Retaining
8	B0154ZP	1	Spring
9	Model Code with MT-1R or -2R	1	Single or Dual Element
10	Below	1	Coupler, Union; 1/2 NPT external and internal thread
	D0107WC		Plated Steel, 2.25 in long
	D0179SJ		Stainless Steel, 2.25 in long
*11	D0179EG	1	Gasket, Cover
12	X0114AT	A/R	Lubricant; 14-ounce can

Figure 6. MINOX Thermocouple Assemblies
Explosionproof/Flameproof Connection Head Bare Element Type

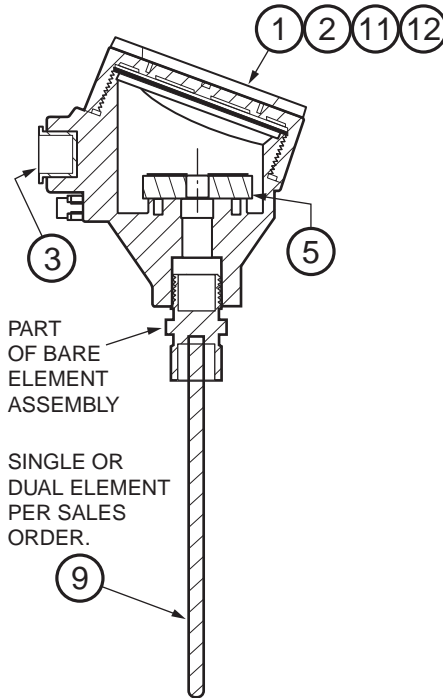


Table 6. Parts for Figure 6, MINOX Thermocouple Assemblies Explosionproof/Flameproof Connection Head Bare Element Type

Item	Part No.	Qty.	Part Name
1	D0179CH	1	Connection Head Body
2	D0179YV	1	Connection Head Cover
3	S0102BT	1	Plug, Cap
5	B0154ZF	1	Terminal Block Assembly
9	Model Code with MT-1R or -2R	1	Single or Dual Element
*11	D0179EG	1	Gasket, Cover
12	X0114AT	A/R	Lubricant; 14-ounce can

— NOTE —

Items 4, 6, 7, 8, and 10 are intentionally not used.

RECOMMENDED SPARE PARTS SUMMARY

Figure Number	Item Number	Part Number	Part Name	Number of Parts Recommended for		
				1 Installation	5 Installations	20 Installations
1	2	D0179EF	Gasket, Cover (a)	0	1	3
2	2	D0179EF	Gasket, Cover (a)	0	1	3
3	2	D0179EF	Gasket, Cover (a)	0	1	3
4	11	D0179EG	Gasket, Cover (b)	0	1	3
5	11	D0179EG	Gasket, Cover (b)	0	1	3
6	11	D0179EG	Gasket, Cover (b)	0	1	3

- a. Cover gasket used with general purpose connection head.
- b. Cover gasket used with explosionproof connection head.