

## TEMPERATURE SENSOR ASSEMBLY SYSTEM FOR THE MAINTENANCE PROFESSIONAL

### How to build a part number:

The basic Sensor Box™, part number EK1000, comes complete with the common parts listed below, along with your choice of any 6 of the sensor pods listed on this page, e.g., "EK1000 with (3) RT1260, (1) MI1113JU and (2) MI1113KU."

### EK1000 Common Parts:

Part Number	Description	Quantity
HS2524	Housing, 0.250" O.D. x 24" long, 316 stainless steel	6
PH02	Aluminum terminal head for NEMA 4, 1/2" NPT process connection and 3/4" conduit connection with 4-post ceramic terminal block.	3
AC1087	Spring-loading kit for PH02 head	6
NC1002	Nipple, 1/2" NPT x 2" long, carbon steel	6
UC1011	Union, 1/2" NPT, carbon steel	3
TS1092	Wire guide grommet for housing	1 bag of 10
Tools:	Crimper, tube cutter, screwdriver, tape measure, wire stripper	1 each

### Standard Sensor Pods\* (pick 6, any combination)

Part Number	Description
RT1260	100-ohm platinum RTD, 3-wire, Teflon® insulation
RT1254	100-ohm platinum RTD, 3-wire, fiberglass insulation
MI1113_U	Ungrounded thermocouple, fiberglass leads, specify calibration (J, K, E, T) – e.g., MI1113JU
MI1113_G	Grounded thermocouple, fiberglass leads, specify calibration (J, K, E, T) – e.g., MI1113JG
MI1113TF_U	Ungrounded thermocouple, Teflon® leads, specify calibration (J, K, E, T) – e.g., MI1113TFJU
MI1113TF_G	Grounded thermocouple, Teflon® leads, specify calibration (J, K, E, T) – e.g., MI1113TFJG

### Options:

Many parts can be added to the basic EK1000 to address specific needs. See page 4-1b for a listing of additional parts.

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### \*Notes:

- Standard pods are 4" long and have 48" leads; designed to fit into 0.250" housings.
- Pods with fiberglass leads are rated to 900°F; those with Teflon® leads are rated to 400°F.

RTD Sensor Pods (100-ohm, Class B, 0.00385 alpha with 48" leads)	
Part Number	Description
<i>Pods for 0.250" O.D. Housings</i>	
RT1254	3-wire, fiberglass insulation (std)
RT1260	3-wire, Teflon® insulation (std)
RT1257	4-wire, Teflon® insulation
RT1276	4-wire, fiberglass insulation
<i>Pods for 0.188" O.D. Housings</i>	
RT1184	3-wire, fiberglass insulation
RT1256	3-wire, Teflon® insulation
Thermocouple Sensor Pods* (standard limits of error with 48" leads)	
<i>Pods for 0.250" O.D. Housings</i>	
MI1113_U	Ungrounded junction, fiberglass insulation (specify J, K, E or T calibration; e.g., MI1113KU)
MI1113_G	Grounded junction, fiberglass insulation (specify J, K, E or T calibration; e.g., MI1113KG)
MI1113TF_U	Ungrounded junction, Teflon® insulation (specify J, K, E or T calibration; e.g., MI1113TFJU)
MI1113TF_G	Grounded junction, Teflon® insulation (specify J, K, E or T calibration; e.g., MI1113TFJG)
<i>Pods for 0.188" O.D. Housings</i>	
MI1115_U	Ungrounded junction, fiberglass insulation (specify J, K, E or T calibration; e.g., MI1115KU)
MI1115_G	Grounded junction, fiberglass insulation (specify J, K, E or T calibration; e.g., MI1115KG)
MI1115TF_U	Ungrounded junction, Teflon® insulation (specify J, K, E or T calibration; e.g., MI1115TFJU)
MI1115TF_G	Grounded junction, Teflon® insulation, 48" long (specify J, K, E or T calibration; e.g., MI1115TFJG)
*For dual element, specify as JJ, KK, EE or TT	
Housings (stainless steel, one closed end)	
HS2512	0.250" O.D. x 12" long
HS2524	0.250" O.D. x 24" long (std. with kit)
HS2536	0.250" O.D. x 36" long
HS2548	0.250" O.D. x 48" long
HS1812	0.188" O.D. x 12" long
HS1824	0.188" O.D. x 24" long
HS1836	0.188" O.D. x 36" long
HS1848	0.188" O.D. x 48" long
Compression Fittings	
<i>For 0.250" housings</i>	
PF65	1/4" NPT, 316 stainless steel body and ferrule
PF66	1/4" NPT, 316 stainless steel body; Teflon® ferrule
PF73	1/2" NPT, 316 stainless steel body and ferrule
PF74	1/2" NPT, 316 stainless steel body; Teflon® ferrule
<i>For 0.188" housings</i>	
PF55	1/4" NPT, 316 stainless steel body and ferrule
PF56	1/4" NPT, 316 stainless steel body; Teflon® ferrule
PF59	1/2" NPT, 316 stainless steel body and ferrule
PF60	1/2" NPT, 316 stainless steel body; Teflon® ferrule
Unions (1/2" NPT)	
UC1011	Carbon steel, ordinary location
US1011	Stainless steel, ordinary location
HF1091	Plated steel, explosion-proof

## THE SENSOR BOX™ EK1000

### AVAILABLE ACCESSORIES

Terminal Heads with 4-Post Terminal Block Included (1/2" NPT process conn.)		
Part Number	Conduit Connection	Description
PH01	1/2"	Aluminum, ordinary locations
PH02	3/4"	Aluminum, ordinary locations (Std. with kit)
PH04	1/2"	Cast iron, ordinary locations
PH05	3/4"	Cast iron, ordinary locations
PH23	3/4"	Black polypropylene, ordinary locations
PH24	3/4"	White polypropylene, ordinary locations
PH47	3/4"	316 stainless steel, ordinary locations
PH50	1/2"	Aluminum, explosion-proof, 3-post block
PH51	3/4"	Aluminum, explosion-proof, 3-post block
Terminal Blocks		
Part Number	Description	
PH44	4-post, ceramic	
PH48	3-post, ceramic, for PH50 and PH51 heads	
Carbon Steel Nipples (1/2" NPT)		
NC1001	1" long	
NC1002	2" long	
NC1003	3" long	
NC1004	4" long	
NC1006	6" long	
Stainless Steel Nipples (1/2" NPT)		
NS1001	1" long	
NS1002	2" long	
NS1003	3" long	
NS1004	4" long	
NS1006	6" long	
Spring-Loaded Kits		
AC1088	For 0.188" housings	
AC1087	For 0.250" housings	
Spring-Loaded Hex Fittings		
PF14	Stainless steel, for 0.250" housings	
PF13	Stainless steel, for 0.188" housings	
Plugs and Jacks		
PT05-	Thermocouple plug (specify J, K, E or T); e.g., PT05-J	
PT05-3	3-pin RTD plug	
PT06-	Thermocouple jack (specify J, K, E or T); e.g., PT06-K	
PT06-3	3-pin RTD jack	
PA10	Wire clamp	
B1250	Brass crimp insert, for 0.250" housings	
B1188	Brass crimp insert, for 0.188" housings	
Strain Reliefs (Bag of 10)		
TS1092	Nylon grommet for 0.250" housings	
TS1094	Teflon® strain relief for 0.188" housings	
Armor Cable Kit		
TS1093	3' stainless armor and adaptor for 0.250" housings	

Note: Pods with fiberglass insulation are rated to 900°F; those with Teflon® leads are rated to 400°F.

**Note: Many non-standard options, including additional sheath diameters and materials, may also be available – consult AST for specific requirements.**