



RTD

FM Certified Explosion-Proof Assembly

United Electric Controls is
ISO 9001:2015 certified



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EXPLOSION-PROOF ASSEMBLY WITH MINERAL INSULATED EXTENSION CABLE AND HEAD FOR REMOTE MOUNTING

How to build a part number:

Select the requirements for the categories listed below and fill in the corresponding boxes with your selection. Consult UE-AST for custom solutions.

SENSOR TYPE	ASSEMBLY STYLE	SHEATH LENGTH	OPTIONS
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SENSOR TYPE (see page 4 for optional elements)
RTP1 – Platinum; DIN 0.00385; 100 ohm +/- 0.12% @ 0 °C; 3-wire construction

ASSEMBLY STYLE
79 – Sheath with cast aluminum head remote mounted with 2.50" sheath and 1' to 60' mineral insulated extension cable; FM certified explosion proof assembly; cast aluminum head with screw cover and chain and gasketed O-ring; ceramic terminal block; 1/2" NPT conduit and process connections.

Note: See page 9 for agency approvals.

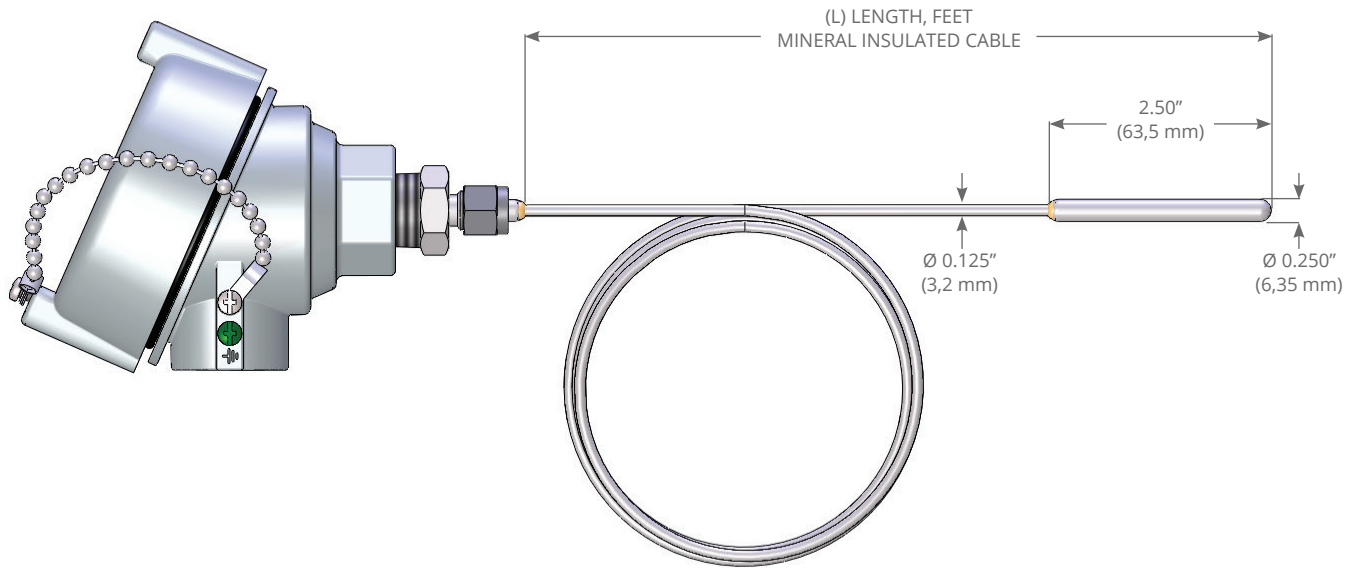
SHEATH DIAMETER
 0,250"

SHEATH MATERIAL
 316 stainless steel sheath
 304 stainless steel mineral insulated cable

TEMPERATURE RANGE
 -300 °F to 1000 °F (- 184 °C to 538 °C)

MINERAL INSULATED CABLE LENGTH (must be specified)
L# - (e.g., L6 = 6 feet M.I. cable) 1' to 60'

OPTIONS – see page 4



STYLE 79

AVAILABLE OPTIONS and MODIFICATIONS

OPTIONAL ELEMENTS

RTDs are standardly platinum, 100-ohm, DIN-curve elements with a 0.00385 alpha.

OPTION CODES	ACCURACY (AT 0 °C)	CONSTRUCTION
RTP1 (std.)	±0.12%	3-wire
RTP7	±0.12%	4-wire

ASSEMBLY OPTIONS

OPTION CODE	DESCRIPTION
TAG1	Stainless steel tag and wire
CAL1	NIST traceable calibration, specify point(s)
CRT1	Certificate of conformance

COMPRESSION FITTINGS

OPTION CODE	DESCRIPTION
CF33	1/2" NPT to fit over 0.125" mineral insulated extension cable

EXPLOSION-PROOF TERMINAL HEAD OPTIONS

OPTION CODE	PROCESS CONNECTION	CONDUIT CONNECTION
HD82	1/2"	3/4"

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



REPLACES RTD/STYLE 77

EXPLOSION-PROOF ASSEMBLY WITH SPRING-LOADED HEX FITTING, CONNECTION HARDWARE AND HEAD

How to build a part number:

Select the requirements for the categories listed below and fill in the corresponding boxes with your selection. Consult UE-AST for custom solutions.

SENSOR TYPE	ASSEMBLY STYLE	CONNECTION	CONNECTION LENGTH	SHEATH DIAMETER	SHEATH MATERIAL	CALIBRATION	HOT JUNCTION	SHEATH LENGTH	OPTIONS

SENSOR TYPE (see page 6 for optional elements)

RTP1 - Platinum; DIN 0.00385; 100 ohm +/- 0.12% @ 0 °C; 3-wire construction

(for dual element, add prefix "D"- e.g., DRTP1)

ASSEMBLY STYLE

83 - Sheath with cast aluminum head; 1/2" NPT spring-loaded hex fitting with connection hardware; FM certified explosion proof rated assembly; cast aluminum head with screw cover and chain and gasketed O-ring; ceramic terminal block; 1/2" NPT conduit and process connections. Replaces RTD/Style 77.

CONNECTION

N - 1/2" NPT spring loaded st/st hex fitting (1.75" Conn. Lgth)

NU - 1/2" NPT spring loaded st/st hex fitting with st/st union (3.25" Conn. Lgth)

NUNS - 1/2" NPT spring loaded st/st hex fitting with st/st union and st/st nipple

CONNECTION LENGTH (NUNS only)

See Table 1 for standard available length.

Note: See page 9 for agency approvals.

CODE	INCHES
004	4.00
005	5.00
006	6.00
008	8.00
010	10.00
012	12.00
014	14.00

Table 1

SHEATH DIAMETER (See Table 2)

6 - 0.188"

7 - 0.250"

SHEATH MATERIAL

3 - 316 stainless steel

TEMPERATURE RANGE - Minimum and maximum operating temperatures

2 - -45 to 482 °C (-50 to 900 °F)

3 - -45 to 788 °C (-50 to 1450 °F)

4 - -200 to 260 °C (-328 to 500 °F)

5 - -45 to 260 °C (-50 to 500 °F)

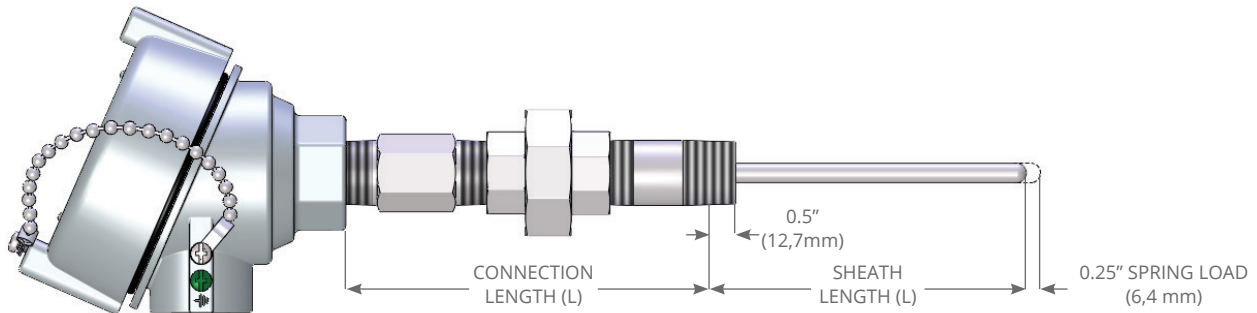
SHEATH LENGTH: (for lengths greater than L=36", consult UE-AST)

L# - (e.g., L6 = 6 inch)

OPTIONS - see page 6

SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.188			0.188	0.188		
5	0.188	0.188	0.188	0.188	0.188	0.188	0.188
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
2	0.25	0.25	0.25	0.188			
3	0.25			0.25			
4	0.188			0.188			
5	0.188	0.188	0.188	0.188			

Table 2



STYLE 83

OPTIONAL ELEMENTS

RTDs are standardly platinum, 100-ohm, DIN-curve elements with a 0.00385 alpha.

OPTION CODE*	ACCURACY (AT 0°C)	CONSTRUCTION
RTP1 (std.)	±0.12%	3-wire
RTP1A	±0.06%	3-wire
RTP1AA	±0.01%	3-wire
RTP6	±0.12%	2-wire
RTP7	±0.12%	4-wire
RTP7A	±0.06%	4-wire
RTP7AA	±0.01%	4-wire

* For dual element, add prefix "D" (e.g., DRTP6)
Additional materials, curves and resistance values are available - consult UE-AST.

ASSEMBLY OPTIONS

OPTION CODES	DESCRIPTION
TAG1	Stainless steel tag and wire
CAL1	NIST traceable calibration, specify point(s)
CRT1	Certificate of conformance

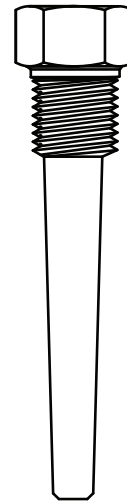
AVAILABLE OPTIONS and MODIFICATIONS

EXPLOSION-PROOF TERMINAL HEAD OPTIONS

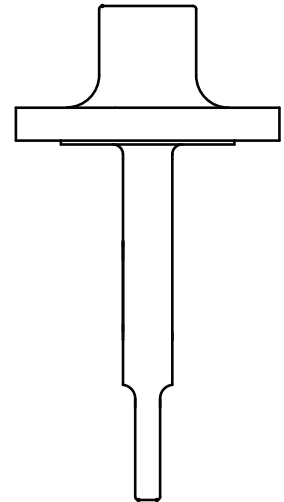
OPTION CODE	PROCESS CONNECTION	CONDUIT CONNECTION
HD82	1/2"	3/4"

THERMOWELLS & PROTECTION TUBES

For a complete offering of metal, ceramic and composite material thermowells and protection tubes, please see the Thermowell and Protection Tube datasheets.



H260
THERMOWELL



F260
THERMOWELL

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

REPLACES RTD/STYLE 78

EXPLOSION-PROOF ASSEMBLY WITH WELDED HEX FITTING AND HEAD

How to build a part number:

Select the requirements for the categories listed below and fill in the corresponding boxes with your selection. Consult UE-AST for custom solutions.

SENSOR TYPE	ASSEMBLY STYLE	SHEATH DIAMETER	SHEATH MATERIAL	CALIBRATION	HOT JUNCTION	SHEATH LENGTH	OPTIONS
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SENSOR TYPE (See page 8 for optional elements)
RTP1 - Platinum; DIN 0.00385; 100 ohm +/- 0.12% @ 0°C; 3-wire construction
(For dual element, add prefix "D" - e.g., DRTP1)

ASSEMBLY STYLE
84 - Sheath with cast aluminum head and 1/2" NPT welded stainless steel process connection; FM certified explosion proof rated assembly; cast aluminum head with screw cover and chain and gasketed O-ring; ceramic terminal block; 1/2"NPT conduit and process connection. Replaces RTD/Style 78.

SHEATH DIAMETER (See Table 1)
6 - 0.188"
7 - 0.250"

SHEATH MATERIAL
3 - 316 stainless steel

Note: See page 9 for agency approvals.

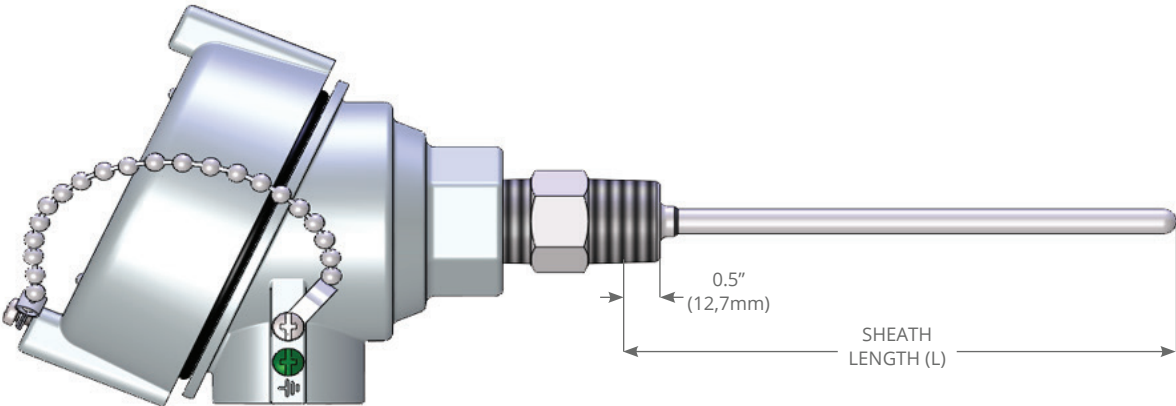
TEMPERATURE RANGES — Minimum and maximum operating temperatures
2 - -45 to 482 °C (-50 to 900 °F)
3 - -45 to 788 °C (-50 to 1450 °F)
4 - -200 to 260 °C (-328 to 500 °F)
5 - -45 to 260 °C (-50 to 500 °F)

SHEATH LENGTH (for lengths greater than L=36", consult UE-AST)
L# - (e.g., L6 = 6 inch sheath).

OPTIONS - see page 8

SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.188			0.188	0.188		
5	0.188	0.188	0.188	0.188	0.188	0.188	0.188
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
2	0.250	0.250	0.250	0.188			
3	0.250			0.250			
4	0.188			0.188			
5	0.188	0.188	0.188	0.188			

Table 1



STYLE 84

AVAILABLE OPTIONS and MODIFICATIONS

OPTIONAL ELEMENTS

RTDs are standardly platinum, 100-ohm, DIN-curve elements with a 0.00385 alpha.

OPTION CODE*	ACCURACY (AT 0 °C)	CONSTRUCTION
RTP1 (std.)	±0.12%	3-wire
RTP1A	±0.06%	3-wire
RTP1AA	±0.01%	3-wire
RTP6	±0.12%	2-wire
RTP7	±0.12%	4-wire
RTP7A	±0.06%	4-wire
RTP7AA	±0.01%	4-wire

* For dual element, add prefix "D" (e.g., DRTP6)
Additional materials, curves and resistance values are available.
Consult UE-AST.

ASSEMBLY OPTIONS

OPTION CODE	DESCRIPTION
TAG1	Stainless steel tag and wire
CAL1	NIST traceable calibration, specify point(s)
CRT1	Certificate of conformance




EXPLOSION-PROOF TERMINAL HEAD OPTIONS

OPTION CODE	PROCESS CONNECTION	CONDUIT CONNECTION
HD82	1/2"	3/4"

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



Certifications

	Region	Agency	Classification
	North America	FM	Certificate #: FM24US0225X, FM24CA0059X Class I, Div 1, Groups B, C, D Class II, Div 1, Groups E, F, G Class III $-40\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ Type 4X, IP66/68
	Europe	ATEX	Certificate #: FM24ATEX0030X II 2 G Ex db IIC T5 Gb $-20\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ II 2 D Ex tb IIIC T90C Db $-40\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ IP66/68
	International	IECEx	Certificate #: IECEx FMG 24.0032X Ex db IIC T5 Gb $-20\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ Ex tb IIIC T90C Db $-40\text{ }^{\circ}\text{C} \leq T_a \leq +85\text{ }^{\circ}\text{C}$ IP66/68

TERMS AND CONDITIONS OF SALE



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UE specifications subject to change without notice.



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