



RTD

NEMA 4 Terminal Head

United Electric Controls is
ISO 9001:2015 certified



AST-WPRTD 01

Table of Contents

Style 15	.....	page 3
Style 21	.....	page 5
Style 45	.....	page 7
Style 48	.....	page 9
Style 65	.....	page 11
Style 75	.....	page 13

NEMA 4 CONNECTION HEAD WITH WELDED PROCESS CONNECTION

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	TEMPERATURE RANGE	SHEATH LENGTH	OPTIONS

SENSOR TYPE (See page 4 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

15 – Sheath with cast aluminum head and 1/2" NPT welded stainless steel process connection; head conforms to NEMA 4 requirements; 3/4" NPT conduit connection; ceramic terminal block; gasketed screw cover with stainless steel chain

SHEATH DIAMETER (see Table 1 for restrictions)

- 4 – 0.125"
- 6 – 0.188"
- 7 – 0.250"
- 9 – 0.375"

SHEATH MATERIAL

- 3 – 316 stainless steel

TEMPERATURE RANGE - Minimum and maximum operating temperatures

- 1 – -45 to 260 °C (-50 to 500 °F)
- 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)

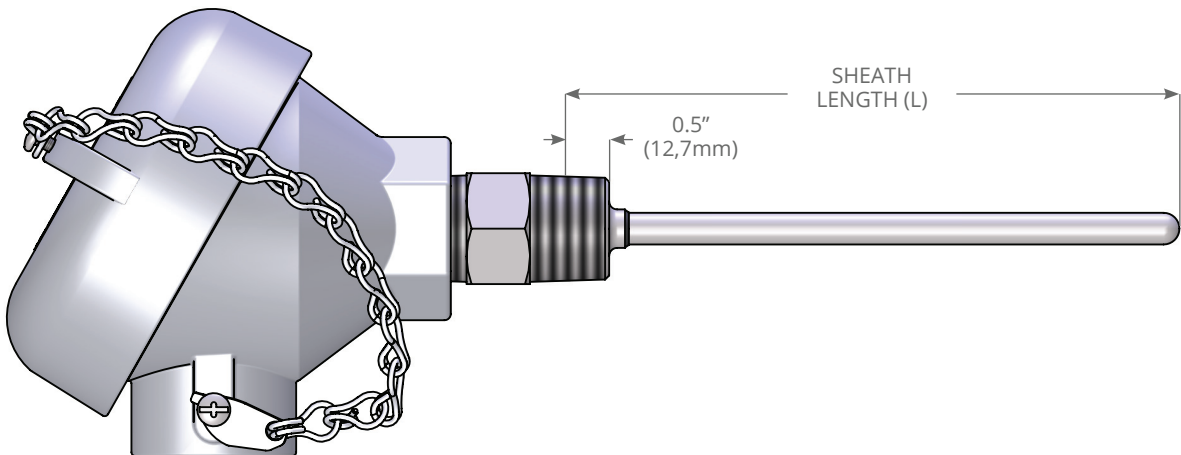
SHEATH LENGTH (for lengths greater than L=36", consult AST)

L# – (e.g., L6 = 6 inch sheath)

OPTIONS – see page 4

SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
1	0.125	0.125	0.125	0.125	0.188	0.188	0.188
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.125			0.125	0.188		
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
1	0.188	0.188	0.188	0.188			
2	0.250	0.250	0.250	0.188			
3	0.250			0.250			
4	0.188			0.188			

Table 1



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
PC25	1/4" NPT process connection
PC75	3/4" NPT process connection
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

TRANSMITTER OPTIONS

TR11	4-20 mA, 2-wire transmitter, single input, isolated output; specify range, units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-S)
TR12	4-20 mA, 2-wire transmitter, single input, non-isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Styles TC2, RTD2)
TR13	HART®/ 4-20 mA, 2-wire transmitter, single input, isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-H)

For complete specifications, see datasheet AST-TEMP-TRANSMITTER.

STYLE 15

AVAILABLE OPTIONS and MODIFICATIONS

NEMA 4 OR 4X TERMINAL HEAD OPTIONS

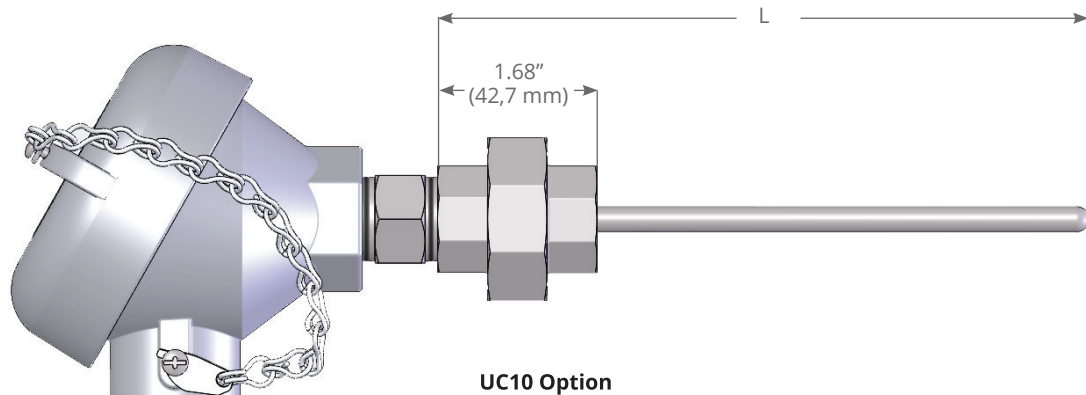
HEAD WITHOUT GROUND SCREW	HEAD WITH INTERNAL GROUND SCREW	PROCESS CONNECTION	CONDUIT CONNECTION
CAST ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4			
HD10*	HD11*	1/2"	1/2"
Std.*	HD13*	1/2"	3/4"
EPOXY-COATED ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4X			
HD50*	HD51*	1/2"	1/2"
HD52*	HD53*	1/2"	3/4"
CAST IRON, SCREW COVER WITH CHAIN, NEMA 4			
HD20*	HD21*	1/2"	1/2"
HD22*	HD23*	1/2"	3/4"
316 STAINLESS STEEL, SCREW COVER WITH CHAIN, NEMA 4X			
HD40*	HD41*	1/2"	3/4"
WHITE POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD30	N/A	1/2"	3/4"
BLACK POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD31	N/A	1/2"	3/4"
NYLON, SCREW COVER			
HD32	N/A	1/2"	1/2"

*can be used with transmitters

UNION CONNECTOR – CONVERTS MALE CONNECTION TO FEMALE

OPTION CODE	DESCRIPTION
UC10	Stainless steel, 1/2" x 1/2" NPT, ordinary location

Note: adding the union connector reduces the sensor's L length by 1.68" (see below). Adjust L dimension accordingly.



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

CONNECTION HEAD WITH WELDED HEX FITTING

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	TEMPERATURE RANGE	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

21 – Sheath with cast aluminum head; head conforms to NEMA 4 requirements: 3/4” NPT conduct connection; ceramic terminal block; gasketed screw cover with stainless steel chain for use as ambient sensor or with compression fitting for process mounting. See page 6 for head options.

SHEATH DIAMETER (in inches) (see Table 1)

4 – 0.125”

6 – 0.188”

7 – 0.250”

9 – 0.375”

SHEATH MATERIAL

3 – 316 stainless steel

TEMPERATURE RANGE - Minimum and maximum operating temperatures

1 – -45 to 260 °C (-50 to 500 °F)

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)

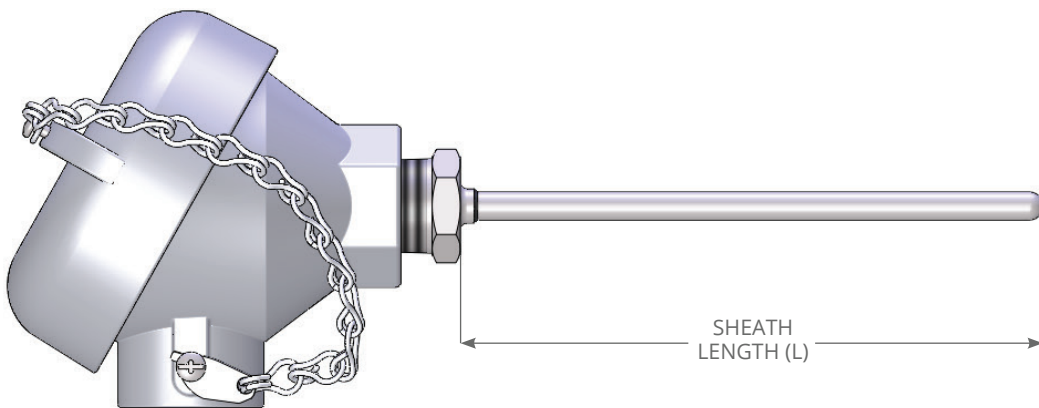
SHEATH LENGTH (for lengths greater than L=36”, consult AST)

L# – (e.g., L6 = 6” sheath)

OPTIONS – see page 6

SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
1	0.125	0.125	0.125	0.125	0.188	0.188	0.188
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.125			0.125	0.188		
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
1	0.188	0.188	0.188	0.188			
2	0.250	0.250	0.250	0.188			
3	0.250			0.250			
4	0.188			0.188			

Table 1



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
B45-	45° bend in sheath (specify length from tip in inches e.g., B45-6 [minimum length = 3"])
B90-	90° bend in sheath (specify length from tip in inches e.g., B90-6 [minimum length = 3"])
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

TRANSMITTER OPTIONS *

TR11	4-20 mA, 2-wire transmitter, single input, isolated output; specify range, units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-S)
TR12	4-20 mA, 2-wire transmitter, single input, non-isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Styles TC2, RTD2)
TR13	HART®/ 4-20 mA, 2-wire transmitter, single input, isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-H)

* For complete specifications, see datasheet AST-TEMP-TRANSMITTER.

COMPRESSION FITTINGS (FOR DIAMETERS 4, 6, 7)

OPTION CODE	NPT	MATERIAL	FERRULE
CF10	1/8"	Stainless steel	Stainless steel
CF11	1/8"	Stainless steel	Teflon®
CF12	1/8"	Brass	Brass
CF20	1/4"	Stainless steel	Stainless steel
CF21	1/4"	Stainless steel	Teflon®
CF22	1/4"	Brass	Brass
CF30	1/2"	Stainless steel	Stainless steel
CF31	1/2"	Stainless steel	Teflon®
CF32	1/2"	Brass	Brass

STYLE 21

AVAILABLE OPTIONS and MODIFICATIONS

NEMA 4 OR 4X TERMINAL HEAD OPTIONS

HEAD WITHOUT GROUND SCREW	HEAD WITH INTERNAL GROUND SCREW	PROCESS CONNECTION	CONDUIT CONNECTION
CAST ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4			
HD10*	HD11*	1/2"	1/2"
Std.*	HD13*	1/2"	3/4"
EPOXY-COATED ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4X			
HD50*	HD51*	1/2"	1/2"
HD52*	HD53*	1/2"	3/4"
CAST IRON, SCREW COVER WITH CHAIN, NEMA 4			
HD20*	HD21*	1/2"	1/2"
HD22*	HD23*	1/2"	3/4"
316 STAINLESS STEEL, SCREW COVER WITH CHAIN, NEMA 4X			
HD40*	HD41*	1/2"	3/4"
WHITE POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD30	N/A	1/2"	3/4"
BLACK POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD31	N/A	1/2"	3/4"
NYLON, SCREW COVER			
HD32	N/A	1/2"	1/2"

*can be used with transmitters

WELD PAD OPTIONS

WP00	Horizontal pad/flat
FOR MATCHING PIPE RADIUS	
WP10	1" nominal pipe size
WP15	1.5" nominal pipe size
WP20	2" nominal pipe size
WP25	2.5" nominal pipe size
WP30	3" nominal pipe size
WP35	3.5" nominal pipe size
WP40	4" nominal pipe size

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

STYLE 45

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
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

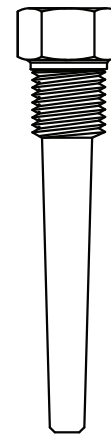
NEMA 4 OR 4X TERMINAL HEAD OPTIONS

HEAD WITHOUT GROUND SCREW	HEAD WITH INTERNAL GROUND SCREW	PROCESS CONNECTION	CONDUIT CONNECTION
CAST ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4			
HD10	HD11	1/2"	1/2"
Std.	HD13	1/2"	3/4"
EPOXY-COATED ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4X			
HD50	HD51	1/2"	1/2"
HD52	HD53	1/2"	3/4"
CAST IRON, SCREW COVER WITH CHAIN, NEMA 4			
HD20	HD21	1/2"	1/2"
HD22	HD23	1/2"	3/4"
316 STAINLESS STEEL, SCREW COVER WITH CHAIN, NEMA 4X			
HD40	HD41	1/2"	3/4"

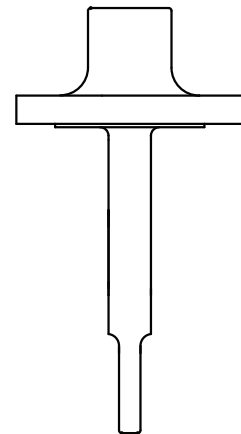
THERMOWELLS & PROTECTION TUBES

For a complete offering of metal, ceramic and composite material thermowells and protection tubes, please see the following datasheets:

- AST-THERMOWELLS
- AST-PROTECTB



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.

SPRING-LOADED PROCESS MOUNTING HARDWARE WITH OPTIONAL TERMINAL 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 TYPE AND MATERIAL	CONNECTION LENGTH	SHEATH DIAMETER	SHEATH MATERIAL	TEMPERATURE RANGE	SHEATH LENGTH	LEADWIRE LENGTH	OPTIONS

SENSOR TYPE (See page 10 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
48 - Sheath with spring-loaded hex connector and connection hardware; see page 10 for head options.

CONNECTION TYPE AND MATERIAL

CODE	UNION TYPE	UNION MATERIAL	LOWER NIPPLE MATERIAL
NU	Ordinary location	Carbon steel	None
NUS	Ordinary location	Stainless steel	None
NUN	Ordinary location	Carbon steel	Carbon steel
NUNS	Ordinary location	Stainless steel	Stainless steel

CONNECTION LENGTH (For NU, NUS, use 002.5)
(e.g., 006 = 6 inch) (See Table 1 for available standard lengths)

SHEATH DIAMETER (in inches) (see Table 2 for restrictions)
4 - 0.125" **7** - 0.250"
6 - 0.188" **9** - 0.375"

SHEATH MATERIAL
3 - 316 stainless steel

TEMPERATURE RANGE - Minimum and maximum operating temperatures
1 - -45 to 260 °C (-50 to 500 °F) **3** - -45 to 788 °C (-50 to 1450 °F)
2 - -45 to 482 °C (-50 to 900 °F) **4** - -200 to 260 °C (-328 to 500 °F)

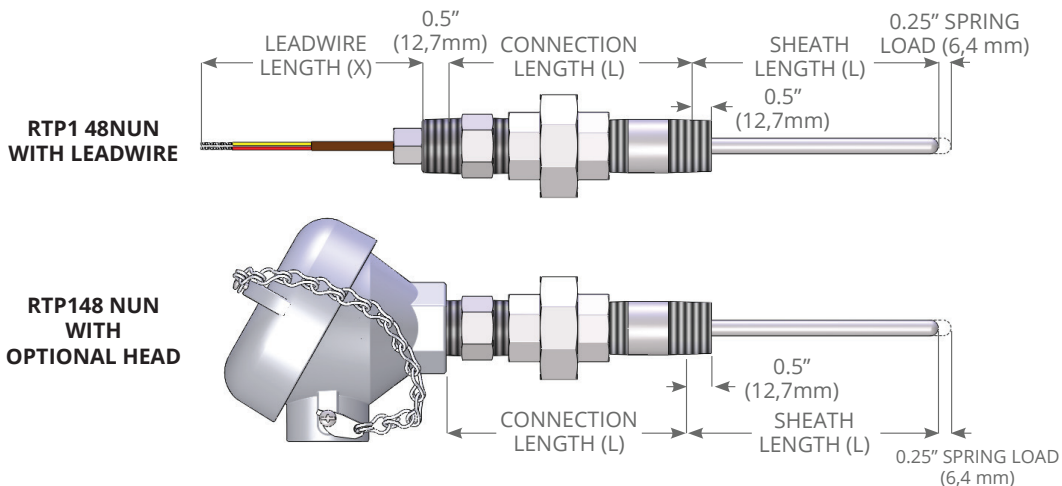
SHEATH LENGTH (for lengths greater than L=36", consult AST)
L# - (e.g., L6 = 6 inch sheath)

LEADWIRE LENGTH
X# - (e.g., X3 = 3 inch length; X3 is standard if specifying optional head)

OPTIONS - see page 10

SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
1	0.125	0.125	0.125	0.125	0.188	0.188	0.188
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.125			0.125	0.188		
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
1	0.188	0.188	0.188	0.188			
2	0.250	0.250	0.250	0.188			
3	0.250			0.250			
4	0.188			0.188			

Table 2



STANDARD AVAILABLE CONNECTION LENGTHS FOR NUN CONNECTIONS (INCHES)
3.00
3.50
4.00
4.50
5.00
6.00
7.00
8.00
9.00

Table 1

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

Notes: 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
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

WIRING CONNECTION OPTIONS

OPTION CODE	DESCRIPTION
WC76	#6 spade terminals, plated copper
WC70	#10 spade terminals, plated copper
WC84	1/4" push-on insulated terminals, plated copper
WC90	#10 ring terminals
WC98	#8 ring terminals

TRANSMITTERS OPTIONS *

TR11	4-20 mA, 2-wire transmitter, single input, isolated output; specify range, units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-S)
TR12	4-20 mA, 2-wire transmitter, single input, non-isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Styles TC2, RTD2)
TR13	HART®/ 4-20 mA, 2-wire transmitter, single input, isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-H)

* For complete specifications, see datasheet AST-TEMP-TRANSMITTER.

THERMOWELLS & PROTECTION TUBES

For a complete offering of metal, ceramic and composite material thermowells and protection tubes, please see the following datasheets:

- AST-THERMOWELLS
- AST-PROTECTB

STYLE 48

AVAILABLE OPTIONS and MODIFICATIONS

NEMA 4 OR 4X TERMINAL HEAD OPTIONS

HEAD WITHOUT GROUND SCREW	HEAD WITH INTERNAL GROUND SCREW	PROCESS CONNECTION	CONDUIT CONNECTION
CAST ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4			
HD10*	HD11*	1/2"	1/2"
HD12*	HD13*	1/2"	3/4"
EPOXY-COATED ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4X			
HD50*	HD51*	1/2"	1/2"
HD52*	HD53*	1/2"	3/4"
CAST IRON, SCREW COVER WITH CHAIN, NEMA 4			
HD20*	HD21*	1/2"	1/2"
HD22*	HD23*	1/2"	3/4"
316 STAINLESS STEEL, SCREW COVER WITH CHAIN, NEMA 4X			
HD40*	HD41*	1/2"	3/4"
WHITE POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD30	N/A	1/2"	3/4"
BLACK POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD31	N/A	1/2"	3/4"
NYLON, SCREW COVER			
HD32	N/A	1/2"	1/2"

*can be used with transmitters

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

NEMA 4 CONNECTION HEAD WITH FLEXIBLE ARMOR CABLE

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	TEMPERATURE RANGE	SHEATH LENGTH	ARMOR LENGTH	OPTIONS
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SENSOR TYPE

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

65 – Cast aluminum head with flexible 0.250” stainless steel armor cable; head conforms to NEMA 4 requirements; 3/4” NPT conduit connection; ceramic terminal block; gasketed screw cover with stainless steel chain; Teflon® insulated conductors

65P – PVC coated armor

65T – Teflon® coated armor

SHEATH DIAMETER (in inches) (see Table 1 for restrictions)

4 – 0.125”

7 – 0.250”

6 – 0.188”

9 – 0.375”

SHEATH MATERIAL

3 – 316 stainless steel

TEMPERATURE RANGE – Minimum and maximum operating temperatures

1 – -45 to 260 °C (-50 to 500 °F) **3** – -45 to 788 °C (-50 to 1450 °F)

2 – -45 to 482 °C (-50 to 900 °F) **4** – -200 to 260 °C (-328 to 500 °C)

SHEATH LENGTH (For lengths greater than L=36”, consult AST)

L# – Specify overall length of sheath (e.g., L12 = 12” from tip to transition)

ARMOR LENGTH

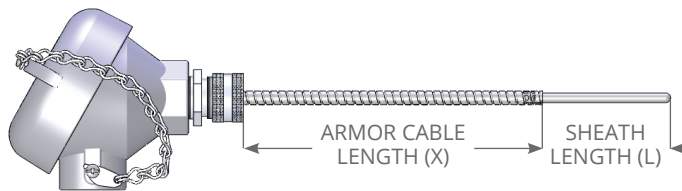
X# – Specify overall length of flexible armor (e.g., X72 = 72” from terminal head to transition)

OPTIONS – see page 12

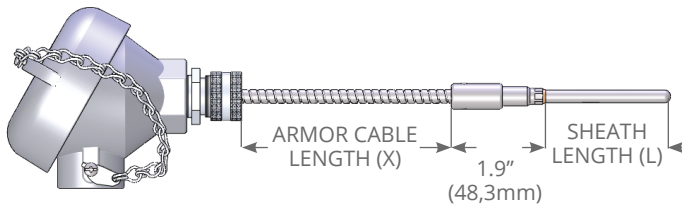
SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
1	0.125	0.125	0.125	0.125	0.188	0.188	0.188
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.125			0.125	0.188		
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
1	0.188	0.188	0.188	0.188			
2	0.250	0.250	0.250	0.188			
3	0.250			0.250			
4	0.188			0.188			

Table 1

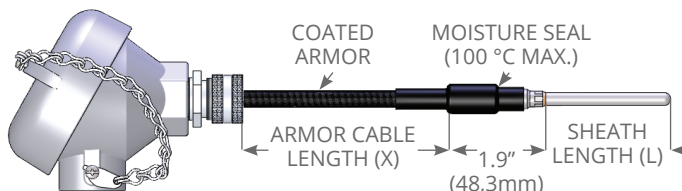
STYLE RT65
Temperature Range: 1



STYLE RT65
Temperature Range: 2,3,4



Style RT65P & RT65T



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
B45-	45° bend in sheath (specify length from tip in inches e.g., B45-6 [minimum length = 3"])
B90-	90° bend in sheath (specify length from tip in inches e.g., B90-6 [minimum length = 3"])
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

TRANSMITTER OPTIONS *

TR11	4-20 mA, 2-wire transmitter, single input, isolated output; specify range, units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-S)
TR12	4-20 mA, 2-wire transmitter, single input, non-isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Styles TC2, RTD2)
TR13	HART®/ 4-20 mA, 2-wire transmitter, single input, isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UN15-H)

* For complete specifications, see datasheet AST-TEMP-TRANSMITTER.

WELD PAD OPTIONS

WP00	Horizontal pad/flat
FOR MATCHING PIPE RADIUS	
WP10	1" nominal pipe size
WP15	1.5" nominal pipe size
WP20	2" nominal pipe size
WP25	2.5" nominal pipe size
WP30	3" nominal pipe size
WP35	3.5" nominal pipe size
WP40	4.0" nominal pipe size

STYLE 65

AVAILABLE OPTIONS and MODIFICATIONS

NEMA 4 OR 4X TERMINAL HEAD OPTIONS

HEAD WITHOUT GROUND SCREW	HEAD WITH INTERNAL GROUND SCREW	PROCESS CONNECTION	CONDUIT CONNECTION
CAST ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4			
HD10*	HD11*	1/2"	1/2"
Std.*	HD13*	1/2"	3/4"
EPOXY-COATED ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4X			
HD50*	HD51*	1/2"	1/2"
HD52*	HD53*	1/2"	3/4"
CAST IRON, SCREW COVER WITH CHAIN, NEMA 4			
HD20*	HD21*	1/2"	1/2"
HD22*	HD23*	1/2"	3/4"
316 STAINLESS STEEL, SCREW COVER WITH CHAIN, NEMA 4X			
HD40*	HD41*	1/2"	3/4"
WHITE POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD30	N/A	1/2"	3/4"
BLACK POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD31	N/A	1/2"	3/4"
NYLON, SCREW COVER			
HD32	N/A	1/2"	1/2"

*can be used with transmitters

ARMOR OPTIONS

BA50	Bayonet cap on armor (Style 65, temperature range 1 only)
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COMPRESSION FITTINGS

OPTION CODE	NPT	MATERIAL	FERRULE
CF10	1/8"	Stainless steel	Stainless steel
CF11	1/8"	Stainless steel	Teflon®
CF12	1/8"	Brass	Brass
CF20	1/4"	Stainless steel	Stainless steel
CF21	1/4"	Stainless steel	Teflon®
CF22	1/4"	Brass	Brass
CF30	1/2"	Stainless steel	Stainless steel
CF31	1/2"	Stainless steel	Teflon®
CF32	1/2"	Brass	Brass

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



**DOUBLE-SIDED, SPRING-LOADED PROCESS MOUNTING WITH TERMINAL HEAD
OPTIONS**

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	TEMPERATURE RANGE	SHEATH LENGTH	LEADWIRE LENGTH	OPTIONS

SENSOR TYPE (See page 14 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
75 - Sheath with double-sided, spring-loaded fitting; Teflon® insulated conductors; 1/2" NPT stainless steel connection. See page 14 for terminal head options.

SHEATH DIAMETER (in inches) (see Table 1 for restrictions)
4 - 0.125"
6 - 0.188"
7 - 0.250"
9 - 0.375"

SHEATH MATERIAL
3 - 316 stainless steel

TEMPERATURE RANGE - Minimum and maximum operating temperatures
1 - -45 to 260 °C (-50 to 500 °F)
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)

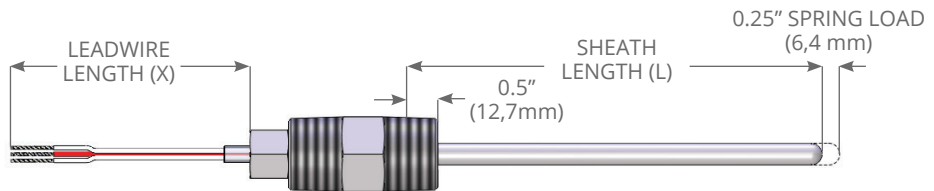
SHEATH LENGTH (for lengths greater than L=36", consult AST)
L# - (e.g., L6 = 6 inch sheath)

LEADWIRE LENGTH
X# - (e.g., X3=3 inch length; X3 is standard if specifying a terminal head)
OPTIONS - see page 14

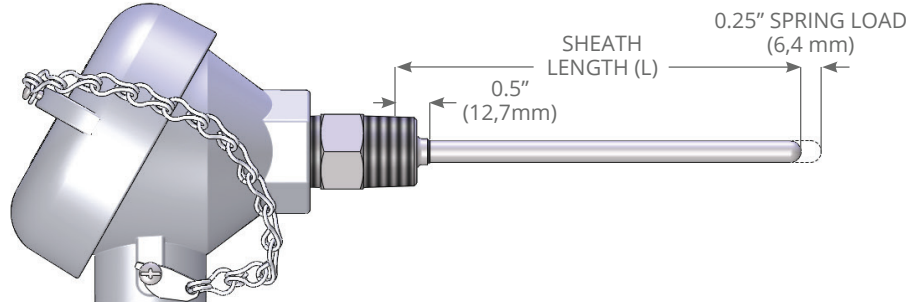
SMALLEST DIAMETER SHEATH AVAILABLE BY SENSOR TYPE AND TEMPERATURE RANGE							
TEMP RANGE	SINGLE						
	RTP1	RTP1A	RTP1AA	RTP6	RTP7	RTP7A	RTP7AA
1	0.125	0.125	0.125	0.125	0.188	0.188	0.188
2	0.188	0.188	0.188	0.188	0.188	0.188	0.188
3	0.188			0.188	0.188		
4	0.125			0.125	0.188		
TEMP RANGE	DUAL						
	DRTP1	DRTP1A	DRTP1AA	DRTP6	DRTP7	DRTP7A	DRTP7AA
1	0.188	0.188	0.188	0.188			
2	0.250	0.250	0.250	0.188			
3	0.250			0.250			
4	0.188			0.188			

Table 1

RTP175 WITH LEADWIRE



RTP175 WITH OPTIONAL HEAD



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
WC20	Wiring cable gland for 0.187 - 0.312 diameter cables, for terminal heads with 1/2" NPT conduit connections
WC21	Wiring cable gland for 0.125 - 0.187 diameter cables, for terminal heads with 1/2" NPT conduit connections

WIRING CONNECTION OPTIONS

OPTION CODE	DESCRIPTION
WC76	#6 spade terminals, plated copper
WC70	#10 spade terminals, plated copper
WC84	1/4" push-on insulated terminals, plated copper
WC90	#10 ring terminals
WC98	#8 ring terminals

TRANSMITTERS OPTIONS *

TR11	4-20 mA, 2-wire transmitter, single input, isolated output; specify range, units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UNI5-S)
TR12	4-20 mA, 2-wire transmitter, single input, non-isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Styles TC2, RTD2)
TR13	HART@/ 4-20 mA, 2-wire transmitter, single input, isolated output; specify range and units of measure (e.g., 0-200 °C) and terminal head option codes marked *. (Transmitter Style UNI5-H)

* For complete specifications, see datasheet AST-TEMP-TRANSMITTER.

THERMOWELLS & PROTECTION TUBES

For a complete offering of metal, ceramic and composite material thermowells and protection tubes, please see the following datasheets:

- AST-THERMOWELLS
- AST-PROTECTB

STYLE 75

AVAILABLE OPTIONS and MODIFICATIONS

NEMA 4 OR 4X TERMINAL HEAD

HEAD WITHOUT GROUND SCREW	HEAD WITH INTERNAL GROUND SCREW	PROCESS CONNECTION	CONDUIT CONNECTION
CAST ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4			
HD10*	HD11*	1/2"	1/2"
HD12*	HD13*	1/2"	3/4"
EPOXY-COATED ALUMINUM, SCREW COVER WITH CHAIN, NEMA 4X			
HD50*	HD51*	1/2"	1/2"
HD52*	HD53*	1/2"	3/4"
CAST IRON, SCREW COVER WITH CHAIN, NEMA 4			
HD20*	HD21*	1/2"	1/2"
HD22*	HD23*	1/2"	3/4"
316 STAINLESS STEEL, SCREW COVER WITH CHAIN, NEMA 4X			
HD40*	HD41*	1/2"	3/4"
WHITE POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD30	N/A	1/2"	3/4"
BLACK POLYPROPYLENE, SCREW COVER WITH CHAIN, NEMA 4			
HD31	N/A	1/2"	3/4"
NYLON, SCREW COVER			
HD32	N/A	1/2"	1/2"

*can be used with transmitters

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

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