

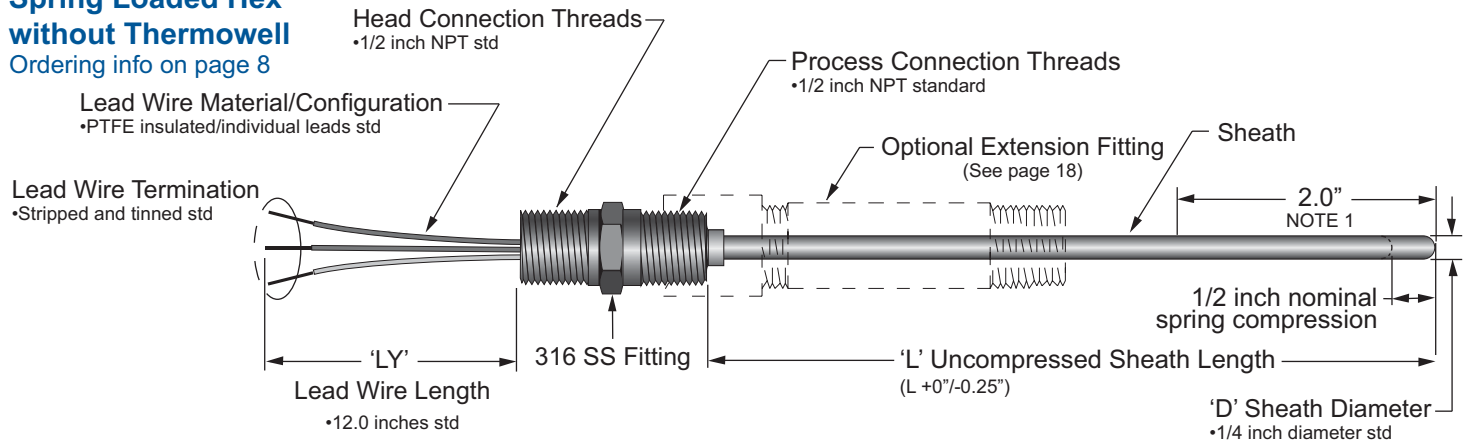
'L' Style Spring Loaded Hex Fitting Sensors

Specifications

'L' Style

Spring Loaded Hex without Thermowell

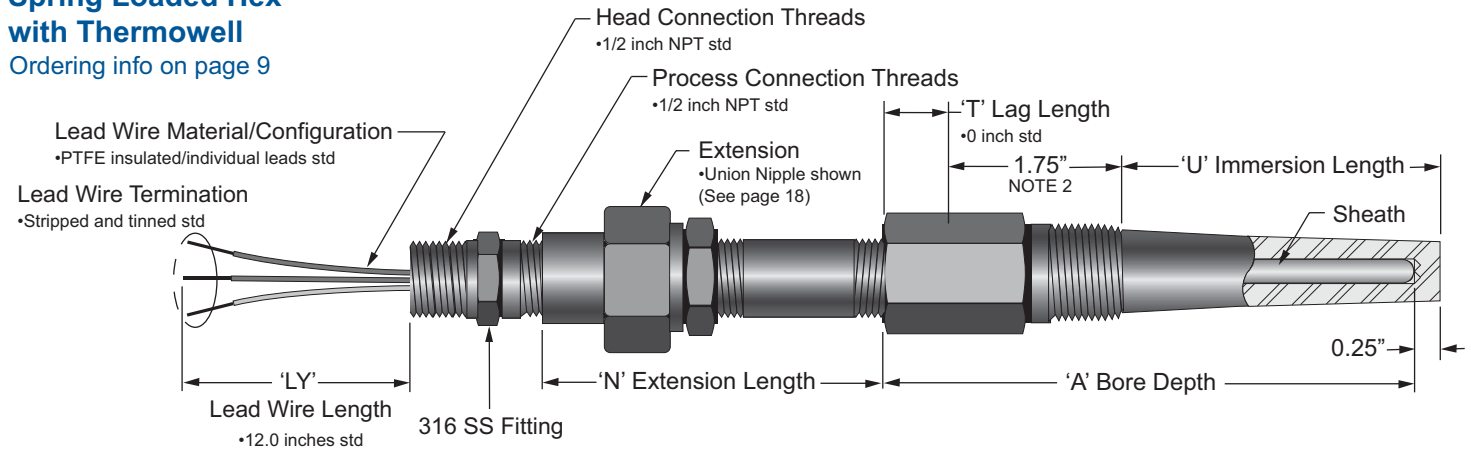
Ordering info on page 8



'L' Style

Spring Loaded Hex with Thermowell

Ordering info on page 9



'L' Style Application

Adaptable to a variety of connection heads or direct to conduit. Union connection allows for easy removal for calibration without disconnecting the leads.

Length Code Definitions and Equations for 'L' Style Assemblies		
Length Codes	For Threaded & Socket Wells	For Flanged Wells
'L' Uncompressed Sheath Length	$L = N + A$	$L = N + A$
'U' Immersion Length	$L = N + U + T + 1.5$	$L = N + U + T + 2$
'N' Extension Length	$A = U + T + 1.5$	$A = U + T + 2$
'A' Well Bore Depth		
'T' Well Lag Length		

NOTE 1: 1st 2.0 inches of Series 200 and 300 sensors Do Not Bend

NOTE 2: 1.75 inch length is used on threaded and socket weld thermowells. A 2.25 inch length is used with flanged wells

'L' Style Spring Loaded Hex Fitting Sensors without Thermowell

Ordering Information

200 Burns Series 200
300 Burns Series 300

Sensor Style

L Spring Loaded, Hex Fitting

RTD Accuracy

10 Standard RTD +/- 0.10% of resistance at 0 degrees C
05 Precision RTD +/- 0.05% of resistance at 0 degrees C (not available with the Series 300 model)

RTD Element Lead Configuration

A Three Wire Single
B True Four Wire Single
C Three Wire Dual

Connection Head (See NOTE 1)

Sensor/Head Connection

1C	Cast Iron Head	1/2" NPT
2A	Aluminum Head	1/2" NPT
2E	Aluminum Head, Epoxy Coated	1/2" NPT
3A	Aluminum Head with Water Proof Kit	1/2" NPT
3E	Aluminum Head, Epoxy Coated with Water Proof Kit	1/2" NPT
5A	Aluminum Head	1/2" NPT
5E	Aluminum Head, Epoxy Coated	1/2" NPT
9P	Polypropylene Head, White	1/2" NPT
14S	Stainless Steel Head	1/2" NPT
19A	Aluminum Head with LED Indicator	1/2" NPT
24S	Stainless Steel Head with Battery Powered LCD Indicator	1/2" NPT
25A	Aluminum Head with Option for Remote Mount	3/4" NPT
N	No Connection Head	

Extension Type (See Illustrations - page 18)

Standard 'N' Extension Length

1C	Gavlanized Coupling Nipple	3 inches
2C	304 SS Coupling Nipple	3 inches
3C	316 SS Coupling Nipple	3 inches
1D	Gavlanized Union Nipple	3 inches
2D	304 SS Union Nipple	3 inches
3D	316 SS Union Nipple	3 inches
N	No Extension	0 inches

'L' Uncompressed Sheath Length (See NOTE 2)

035	3.5 inch (minimum)
055	5.5 inch
085	8.5 inch
115	11.5 inch
175	17.5 inch
LLL	Specify 'L' Length in inches for 'L' ≤ 99.9" (LLLL for 'L' > 99.9". ex: 150"=1500)

Basic Order Codes

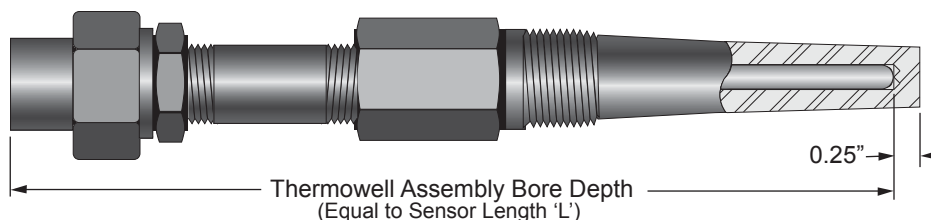
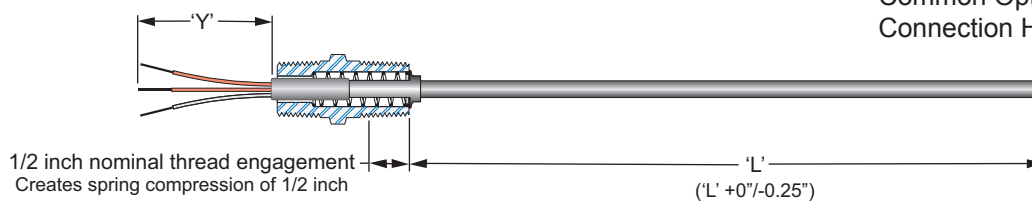
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Options

Transmitter

See pages 17-19

Example Configuration



FOR REFERENCE:

RTD Specifications, page 3 and 4

Common Options, pages 17 – 19

Connection Head Descriptions, page 20

NOTE 1: See our Connection Head Supplement for all available connection heads and full details.

NOTE 2: For sensor sheath lengths 'L' greater than 200 inches, contact Burns Customer Service.

'L' Style Spring Loaded Hex Fitting Sensors with Thermowell

Ordering Information (1 of 2)

200	Burns Series 200
300	Burns Series 300

Sensor Style	
L	Spring Loaded, Hex Fitting

RTD Accuracy		Sheath Material
10	Standard RTD +/- 0.10% of resistance at 0 degrees C	316 SS
05	Precision RTD +/- 0.05% of resistance at 0 degrees C (not currently available with the Series 300 model)	316 SS

RTD Element Lead Configuration	
A	Three Wire Single
B	True Four Wire Single
C	Three Wire Dual

Connection Head (See NOTE 1)		Sensor/Head Connection
1C	Cast Iron Head	1/2" NPT
2A	Aluminum Head	1/2" NPT
2E	Aluminum Head, Epoxy Coated	1/2" NPT
3A	Aluminum Head with Water Proof Kit	1/2" NPT
3E	Aluminum Head, Epoxy Coated with Water Proof Kit	1/2" NPT
5A	Aluminum Head	1/2" NPT
5E	Aluminum Head, Epoxy Coated	1/2" NPT
9P	Polypropylene Head, White	1/2" NPT
14S	Stainless Steel Head	1/2" NPT
19A	Aluminum Head with LED Indicator	1/2" NPT
24S	Stainless Steel Head with Battery Powered LCD Indicator	1/2" NPT
25A	Aluminum Head with Option for Remote Mount	3/4" NPT
N	No Connection Head	

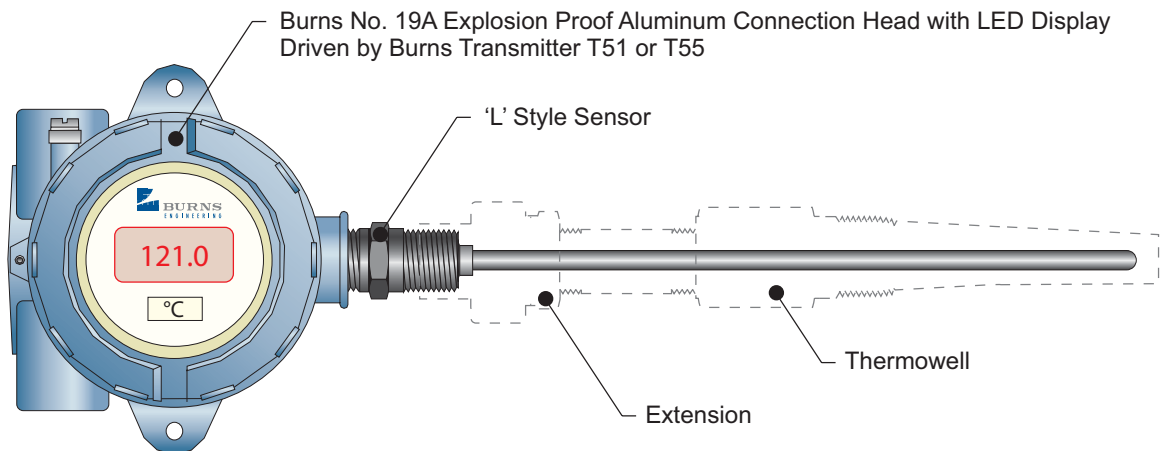
Extension Type (See Illustrations - page 18)		Standard 'N' Extension Length
1C	Gavlanized Coupling Nipple	3 inches
2C	304 SS Coupling Nipple	3 inches
3C	316 SS Coupling Nipple	3 inches
1D	Gavlanized Union Nipple	3 inches
2D	304 SS Union Nipple	3 inches
3D	316 SS Union Nipple	3 inches
N	No Extension	0 inches

'U' Immersion Length (See NOTE 2)	
025	2.5 inch (minimum)
040	4.0 inch
045	4.5 inch
070	7.0 inch
075	7.5 inch
100	10.0 inch
105	10.5 inch
135	13.5 inch
160	16.0 inch
Specify 'U' Immersion Length in inches	

Basic Order Codes

Required basic order codes continued on next page

Example Configuration



NOTE 1: See our Connection Head Supplement for all available connection heads and full details.

NOTE 2: For Thermowells with Bore Depths ('A') greater than 42 inches contact Burns Customer Service. Long length wells can be constructed from welded bar stock segments or from pipe. Specifics of the application must be verified to ensure the thermowell design meets your process needs.

FOR REFERENCE:
RTD Specifications, page 3 and 4
Common Options, pages 17 – 19
Connection Head Descriptions, page 20

'L' Style Spring Loaded Hex Fitting Sensors with Thermowell

Ordering Information (2 of 2)

Thermowell Type (See NOTE 3)

Threaded Thermowells

TT2	Tapered Threaded, 1/2" NPT process threads
TT3	Tapered Threaded, 3/4" NPT process threads
TT4	Tapered Threaded, 1" NPT process threads
RT2	Reduced Tip Threaded, 1/2" NPT process threads
RT3	Reduced Tip Threaded, 3/4" NPT process threads
RT4	Reduced Tip Threaded, 1" NPT process threads
ST2	Straight Threaded, 1/2" NPT process threads
ST3	Straight Threaded, 3/4" NPT process threads
ST4	Straight Threaded, 1" NPT process threads

Socket Weld Thermowells

TW3	Tapered Welded, 3/4" pipe size
TW4	Tapered Welded, 1" pipe size
TW5	Tapered Welded, 1 1/4" pipe size
RW3	Reduced Tip Welded, 3/4" pipe size
RW4	Reduced Tip Welded, 1" pipe size
RW5	Reduced Tip Welded, 1 1/4" pipe size
SW3	Straight Welded, 3/4" pipe size
SW4	Straight Welded, 1" pipe size
SW5	Straight Welded, 1 1/4" pipe size

Flanged Thermowells

TF4A	Tapered Flanged, 1.0" flange, 150 LB
TF6A	Tapered Flanged, 1.5" flange, 150 LB
TF8A	Tapered Flanged, 2.0" flange, 150 LB
TF4B	Tapered Flanged, 1.0" flange, 300 LB
TF6B	Tapered Flanged, 1.5" flange, 300 LB
TF8B	Tapered Flanged, 2.0" flange, 300 LB
RF4A	Reduced Tip Flanged, 1.0" flange, 150 LB
RF6A	Reduced Tip Flanged, 1.5" flange, 150 LB
RF8A	Reduced Tip Flanged, 2.0" flange, 150 LB
RF4B	Reduced Tip Flanged, 1.0" flange, 300 LB
RF6B	Reduced Tip Flanged, 1.5" flange, 300 LB
RF8B	Reduced Tip Flanged, 2.0" flange, 300 LB
SF4A	Straight Flanged, 1.0" flange, 150 LB
SF6A	Straight Flanged, 1.5" flange, 150 LB
SF8A	Straight Flanged, 2.0" flange, 150 LB
SF4B	Straight Flanged, 1.0" flange, 300 LB
SF6B	Straight Flanged, 1.5" flange, 300 LB
SF8B	Straight Flanged, 2.0" flange, 300 LB

Sanitary Thermowells (1/2" NPT, 16 AMP Cap)

TS15	Tapered Sanitary, 1 1/2" Sanitary Cap
TS20	Tapered Sanitary, 2" Sanitary Cap
TS25	Tapered Sanitary, 2 1/2" Sanitary Cap
RS15	Reduced Tip Sanitary, 1 1/2" Sanitary Cap
RS20	Reduced Tip Sanitary, 2" Sanitary Cap
RS25	Reduced Tip Sanitary, 2 1/2" Sanitary Cap
SS15	Straight Sanitary, 1 1/2" Sanitary Cap
SS20	Straight Sanitary, 2" Sanitary Cap
SS25	Straight Sanitary, 2 1/2" Sanitary Cap

Thermowell Material

02	304 Stainless Steel
03	316 Stainless Steel
04	Carbon Steel
05	304L Stainless Steel
06	316L Stainless Steel
07	Hastelloy® C276
08	Chrome-Moly
09	Aluminum 6061 T6
10	Monel™
11	PTFE
12	Inconel® 600
13	Brass
14	Titanium

Basic Order Codes

(Leave Options blank if not required)

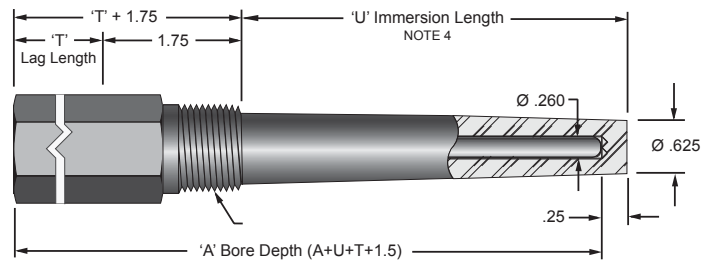
Explosion Proof
(NOTE 5)

Options

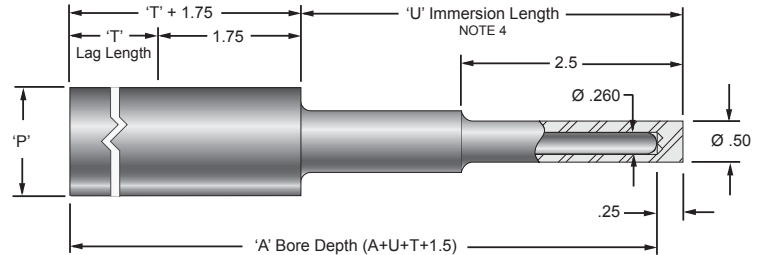
Transmitter

See pages 17-19

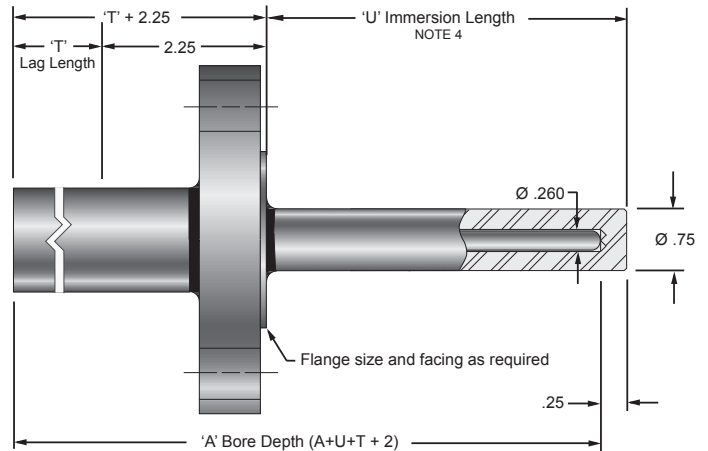
(TT) Threaded Thermowell shown with Tapered Stem



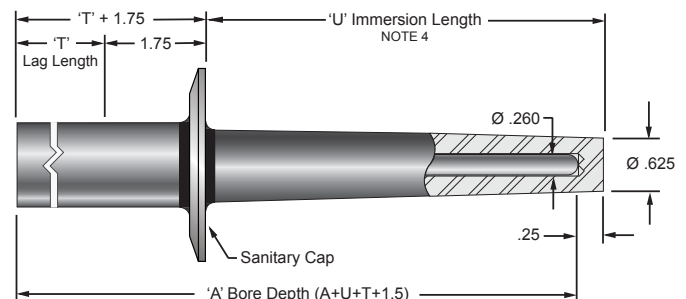
(RW) Socket Weld Thermowell shown with Reduced Tip Stem



(SF) Flanged Thermowell shown with Straight Stem



(TS) Sanitary Thermowell shown with Tapered Stem



NOTE 3: See our Thermowell catalog or visit us on-line at burnsengineering.com for a full line of standard thermowell styles along with information on custom thermowells.

NOTE 4: For Thermowells with Bore Depths ('A') greater than 42 inches contact Burns Customer Service. Long length wells can be constructed from welded bar stock segments or from pipe. Specifics of the application must be verified to ensure the thermowell design meets your process needs.

NOTE 5: For FM explosion proof approved assembly, enter 'AFM' code. See page 4 for ratings and [drawing # 18938](#) for approved product structure details.