

Product Features

- Sanitary RTD assemblies with agency 3-A Approval
- Specially designed for hygienic and aseptic applications
- Type 16 AMP Tri-Clamp process connection standard
- Temperature range -50 to 200 °C (-58 to 392 °F) standard
- White polypropylene head and SS316 head with screw cap available
- Various probe sizes and with reduced tips available
- 4-wire Pt100 Class A element selection very accurate
- Pressure range up to 580 psi (40 bar)
- Up to IP68 (NEMA 4x) degree of protection



Description

The RS80 sensor assemblies are 3-A agency approved and meet the PMO requirements as a recording thermometers by US FDA for dairies. The RTD assemblies most commonly use Pt100 temperature element according to IEC 60751. Wide range of process connections and probe diameters are available. They offer good price-performance ratio and fast delivery times. Many standard connection heads are available that offer various degrees of protection.

Stock RS80 Assemblies

The stock RS80 Series RTD assemblies are available in SS316 probe lengths from 2.5" to 6" and 1/4" diameter, with 4-wire Pt100 Class A element that is compatible with 3-wire instrumentation. Standard features include 1.5" and 2" 16 AMP Tri-Clamp fitting, type PO3 white polypropylene or machined SS316 protection head with screw cap. To order, see the table below and place the SKU number on your purchase order.

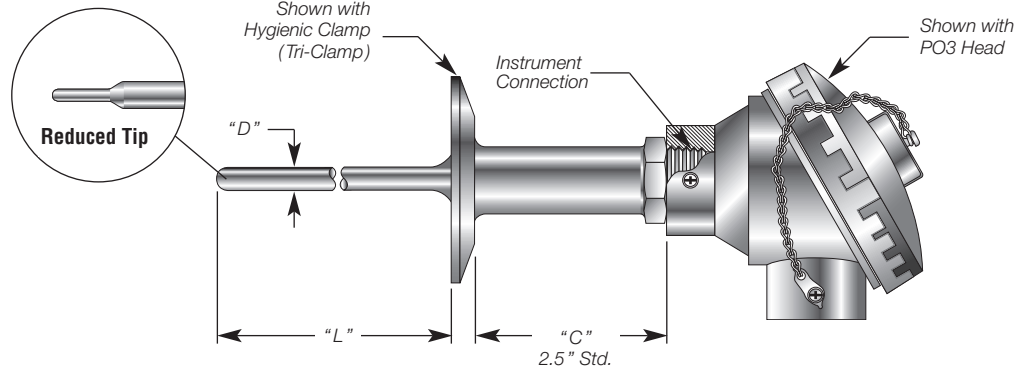
- Probe temperature range of -50 to 200 °C (-58 to 392 °F)
- RTD element 100 Ω DIN EN 60751, $\alpha = 0.00385 (\Omega / \Omega) / ^\circ\text{C}^{-1}$, Class A, single, 4 wire (can be used as 3-wire)
- 1.5" and 2" hygienic clamp union sizes available, 32 μ-in finish
- 1/4" probe diameter, stainless steel 316, 32 μ-in finish
- Probe lengths available are 2.5", 4" and 6"
- White polypropylene head (PO3) with 3/4" NPT and stainless steel (SS2) head with 1/2" NPT electrical conduit connections are available



Model Number	SKU Number	Probe Dia.	Probe Dim. "L"	Clamp Size	RTD Circuit Type	Comments
RS80-L-P-2-S4-D-S-025-N25-EE-T15-PO3-SF	509-140-L025	0.25"	2.5"	1.5"	4-wire	Poly head PO3, 1.5" Tri-clamp
RS80-L-P-2-S4-D-S-040-N25-EE-T15-PO3-SF	509-140-L040	0.25"	4.0"	1.5"	4-wire	Poly head PO3, 1.5" Tri-clamp
RS80-L-P-2-S4-D-S-060-N25-EE-T15-PO3-SF	509-140-L060	0.25"	6.0"	1.5"	4-wire	Poly head PO3, 1.5" Tri-clamp
RS80-L-P-2-S4-D-S-025-N25-EE-T20-PO3-SF	509-141-L025	0.25"	2.5"	2.0"	4-wire	Poly head PO3, 2" Tri-clamp
RS80-L-P-2-S4-D-S-040-N25-EE-T20-PO3-SF	509-141-L040	0.25"	4.0"	2.0"	4-wire	Poly head PO3, 2" Tri-clamp
RS80-L-P-2-S4-D-S-060-N25-EE-T20-PO3-SF	509-141-L060	0.25"	6.0"	2.0"	4-wire	Poly head PO3, 2" Tri-clamp
RS80-L-P-2-S4-D-S-025-N25-EE-T15-SS2-SF	509-142-L025	0.25"	2.5"	1.5"	4-wire	SS316 head SS2, 1.5" Tri-clamp
RS80-L-P-2-S4-D-S-040-N25-EE-T15-SS2-SF	509-142-L040	0.25"	4.0"	1.5"	4-wire	SS316 head SS2, 1.5" Tri-clamp
RS80-L-P-2-S4-D-S-060-N25-EE-T15-SS2-SF	509-142-L060	0.25"	6.0"	1.5"	4-wire	SS316 head SS2, 1.5" Tri-clamp
RS80-L-P-2-S4-D-S-025-N25-EE-T20-SS2-SF	509-143-L025	0.25"	2.5"	2.0"	4-wire	SS316 head SS2, 2" Tri-clamp
RS80-L-P-2-S4-D-S-040-N25-EE-T20-SS2-SF	509-143-L040	0.25"	4.0"	2.0"	4-wire	SS316 head SS2, 2" Tri-clamp
RS80-L-P-2-S4-D-S-060-N25-EE-T20-SS2-SF	509-143-L060	0.25"	6.0"	2.0"	4-wire	SS316 head SS2, 2" Tri-clamp

Model RS80

Sanitary RTD Assembly with Connection Head



Custom Builder

MODEL 1 2 3 4 5 6 7 8 9 10 11 12

RS80 - - - - - - - - - - - - -

BOX 1 CODE	Probe Temperature Range
L	Low Temp. -50 to 200°C
M	Med. Temp. -50 to 400°C
C	CRYO Temp. -196 to 150°C

BOX 2 CODE	Element Type
P	Pt100Ω, α = 0.00385, EN 60751
T	Pt1000Ω, α = 0.00385, EN 60751

Other elements available. Consult factory.

BOX 3 CODE	Element Tolerance
1	±0.12% (±0.3°C) @ 0°C, Class B
2	±0.06% (±0.15°C) @ 0°C, Class A
3	±0.04% (±0.1°C) @ 0°C, Class AA

Other tolerances available. Consult factory.

BOX 4 CODE	Output RTD Circuit Type
S2	Single, 2 wire
S3	Single, 3 wire
S4	Single, 4 wire
D2	Dual, 2 wire
D3	Dual, 3 wire

BOX 4 CODE	Output Transmitter Type (Installed)
TA	Model RT810, 4-20mA 2-wire
TB	Model RT820, 4-20mA 2-wire
TH	Model 5437B, 4-20mA w/HART
TX	Other, specify model type

Specify temp. range at the end of part number.
 Ex.: RS80-L-P-1-TA...SF, (0/100 °C)
 Model RT810 transmitter, range 0/100 °C

BOX 5 CODE	Probe Diameter "D"
C	3/16"
D	1/4"
F	3/8"
H	1/2"

CODE	Sheath O.D.	Tip O.D.
DB	1/4"	1/8"
FC	3/8"	3/16"
HC	1/2"	3/16"
HD	1/2"	1/4"
JD	5/8"	1/4"

Other diameters available. Consult factory.

BOX 6 CODE	Probe Material
S	Stainless steel 316/316L

Other materials available. Consult factory.

BOX 7 CODE	Probe Length "L"
---	In 0.1" increments Ex.: 065 = 6.5" long Ex.: 120 = 12" long

BOX 8 CODE	Extension Length "C"
N --	In 0.1" increments (2.5" Std.) Ex.: N25 = 2.5" long

BOX 9 CODE	Instrument Connection
EN	1/2" NPT male
EE*	1/2" NPS male

* Code EE is standard when ordering with a head.

BOX 10 CODE	Process Fitting Type / Size
T10	1.0" Hygienic clamp, (1.984" OD)
T15	1.5" Hygienic clamp, (1.984" OD)
T20	2" Hygienic clamp, (2.516" OD)
T25	2.5" Hygienic clamp, (3.047" OD)
T30	3" Hygienic clamp, (3.579" OD)
T40	4" Hygienic clamp, (4.682" OD)

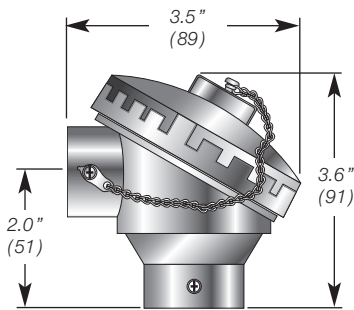
Other sanitary fittings available. Consult factory.

BOX 11 CODE	Head / Termination
0	No head, supplied with 6" single Teflon® leads
P03*	White polypropylene screw cover, meets NEMA 4X/IP65 requirements
P0A	White polypropylene screw cover, with M12 male cable connector
SS2*	Machined & polished stainless steel 316/316L screw cover, meets NEMA 4X/IP66 requirements
SSA	Machined & polished stainless steel 316/316L screw cover, with M12 male cable connector
CS2*	Cast stainless steel 316 screw cover, meets NEMA 4X/IP66 requirements
CX2*	Cast stainless steel, explosion proof, CSA, FM Approval Class I, Div. 1, Gps. B, C & D Class II, Div. 1, Gps. E, F & G, NEMA 4X

* 2 = 1/2" NPT Conduit * 3 = 3/4" NPT Conduit

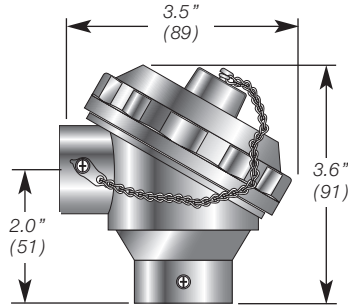
BOX 12 CODE	Surface Finish
SF	32μ-in (0.8μm) Ra max. or better
F1	20μ-in (0.5μm) Ra max. w/o EP
F4	15μ-in (0.4μm) Ra max. with EP

Polypropylene Type PO*



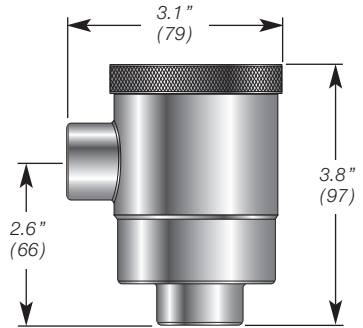
- Polypropylene molded screw cover head
- General purpose, FDA approved polypropylene
- Meets NEMA 4X and IP65 requirements
- Buna-N O-ring
- 1/2" or 3/4" NPTF conduit connection
- 1/2" NPTF instrument connection
- Temp. range: -40 to 100°C
- Stainless steel chain & hardware
- Finish : white color
- Weight : 120 grams
- Std. 33mm & 40mm C-C mounting

Bakelite BA2



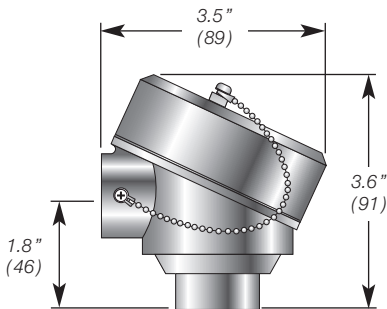
- Bakelite screw cover head
- General purpose weather proof
- Meets NEMA 4X and IP65 requirements
- Buna-N O-ring
- 1/2" NPTF conduit connection
- 1/2" NPTF instrument connection
- Temp. range : -40 to 125°C
- Stainless steel chain & hardware
- Finish : black color
- Weight : 140 grams
- Std. 33mm & 40mm C-C Mounting

Stainless Steel Type SS2



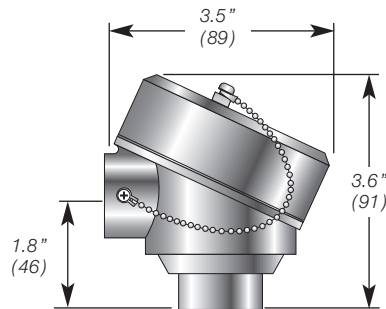
- Stainless steel 316/316L, machined head
- Hygienic
- Meets NEMA 4X and IP66 requirements
- Buna-N O-ring
- 1/2" NPTF conduit connection
- 1/2" NPTF instrument connection
- Temp. range : -50 to 125°C
- Finish : machined and polished
- Weight : 600 grams
- Std. 33mm C-C mounting
- Max. space for transmitter : 50mm dia. x 50mm high

Stainless Steel Cast Type CS*



- SS316 heavy duty cast screw cover head
- Meets NEMA 4X and IP66 requirements
- Buna-N O-ring
- 1/2" or 3/4" NPTF conduit connection
- 1/2" NPTF instrument connection
- Temp. range: -40 to 125°C
- Stainless steel chain & hardware
- Finish : cast and electropolished
- Weight : 900 grams
- Std. 33mm & 40mm C-C mounting

Stainless Steel Cast Type CX*



- SS316 heavy duty cast screw cover head
- CSA & FM explosion proof certified Class I, Div. 1, Gps. B,C & D, Class II, Div. 1, Gps. E, F & G, NEMA 4X
- Buna-N O-ring
- 1/2" or 3/4" NPTF conduit connection
- 1/2" NPTF instrument connection
- Temp. range: -40 to 125°C
- Stainless steel chain & hardware
- Finish : cast and electropolished
- Weight : 900 grams
- Std. 33mm & 40mm C-C mounting