



# TEMPERATURE SENSORS FOR FOOD AND PHARMA



#### **AUTOCLAVES / STEAM STERILIZERS**

The environmental conditions found in pharmaceutical autoclave chambers are extreme for any equipment. These conditions are a major cause of sensor failure in chamber/load probes, due to the ingress of moisture into the sensor and the unacceptable leakage of steam/condensate through cable termination.

#### **CONTINUOUS USE**

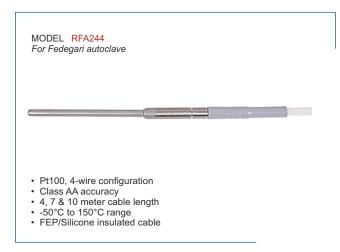
#### RTD

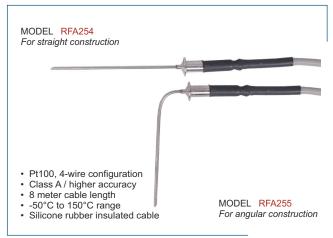
MODEL RAC244

Silicone rubber iacketed cable

RAC244 has a completely sealed construction. As a result, the entire sensor assembly, including the probe and cables extending from the RTD, can be completely submerged in water without affecting accuracy or long-term stability.

- Pt100, 3/4-wire
- Class A / higher accuracy
- 0 to 150°C measuring range
- Single / dual elements





#### **VALIDATION**

A critical factor when validating any autoclave is the calibration of measurement probes, especially temperature probes.

RAC243 is a highly accurate special purpose RTD. It's Teflon insulated cable with SS and reinforced tip gives it rugged and leakproof construction. Its compact design permits multiple sensors installation through a single validation port

- Pt100, 3/4-wireClass A / higher accuracy
- 0 to 150°C
- · Single element



MODEL RAC243 Teflon insulated cable

#### **THERMOCOUPLE**

Teflon insulated cable with insulated tip prevents penetration of steam/condensate through cable termination

- Copper / constantan (T type) thermocouple Special limits of error (Class 1)
- Stranded wires for flexibility
- 0 to 150°C measuring range



MODEL TAC243 Teflon insulated tip



#### FOR DRY HEAT STERILIZER (DHS)

RDH245 is designed to withstand temperatures up to 265°C (482°F) in continuous use.

#### MODEL RDH245

- Pt100, 3-wire
- · Class A accuracy
- 0 to 265°C
   Teflon insulated cable with stress relieving spring
- · Single/dual element



#### **TUNNEL VALIDATION**

#### **THERMOCOUPLE**

TTV246 tunnel validation thermocouples are suitable for temperatures upto 316°C continuous use and which can be used up to 360°C (15% extra) for intermittent use.

#### MODEL TTV246

- T- type or K-type calibrationsSpecial limits of error (Class 1)
- Upto 360°C measuring range
- Kapton insulated cable



#### **VALIDATION PORTS FOR AUTOCLAVE**



Used with teflon insulated cable

#### MODEL VPA241

- Individual slots for up to 18 RTD/Thermocouples
- Gland body: SS316L Mounting: 1.5" Tri-clover Pressure rating: 3 bar
- Temperature rating : Up to 150°C
- Sealant: Medical grade silicone rubber, FDA USP Class IV
- Cap : Barstock brass Compression disc & screw : SS304
- 'Y' or 'T' adaptor for doubling the quantity
- Optional: Expander, mounting clamp & gasket



Used with silicone rubber insulated cable

#### MODEL VPA242

- Individual slots for up to 8 RTDs

- SS316 construction
  Mounting: 2" Tri-clover
  Pressure rating: 3 bar
  Temperature rating: Up to 150°C
- Sealant : Medical grade silicone rubber, FDA USP Class IV
- Optional: "Y" or "T" adaptor, mounting clamp & gasket



#### LYOHPHILIZER & DEEP FREEZER

#### PTF

RFL248 is designed to withstand the low temperature and vacuum that are found inside lyophilizers during the dehydration process.

- Pt100, 3-wire
- · Class A / better accuracy
- -100 to 200°C measuring range
- · PTFE insulated cable



# MODEL RFL248

#### **THERMOCOUPLE**

Teflon insulated cable with Insulated tip prevents penetration of steam / condensate through cable termination.

- Copper / constantan (T type) thermocouple
- Special limits of error (Class 1)
- Stranded wires for flexibility
- -100 to 200°C measuring range



MODEL TFL248
Teflon insulated tip

#### MEASUREMENT OF SHELF TEMPERATURE UNIFORMITY IN A LYOPHILIZER

Pucks or discs made of copper, brass or aluminum are offered with thermocouples as well as RTD.

#### RTD

- Pt100, 3-wire
- Class A / higher accuracy
  Copper, SS316 or brass body
- Copper, SS316 c
  -80°C to 100°C



#### **THERMOCOUPLE**

- · T type
- Class 1 accuracy
- Copper or brass body-80°C to 100°C



MODEL TFL249

#### **SUITABLE FOR USE WITH RABBITS & LARGE ANIMALS**

#### RECTAL PROBE

- Pt100, 3-wire, others on request
- Class A A accuracy
- 0 to 100°C
- 2 & 5 mtr cable lengths
- Offered without connector



Also known as Veterinary Implantation Probe

MODEL RRP240

#### **MEASUREMENT OF GELATIN TEMPERATURE**

#### RTD FOR CAPSULE BANDING MACHINE

- Pt100, 3-wire, others on request
- Class A / higher accuracy
- -50 to 200°C measuring range
- Offered without connector



MODEL RCB200



#### **RTD WITH M12 CONNECTOR**

#### **GENERAL PURPOSE**

- Pt100, 3-wire, others on request
- Class A / higher accuracy
- -50 to 200°C measuring range

- Threaded, fixed process connections
  4-pin M12 plug-in connector
  Optional connection cable with M12 matching connector



MODEL RCM202



#### FOR PIPE LINES

- · Pt100, 3-wire, others on request
- Class A / higher accuracy
  -50 to 250°C measuring range
  4-20 mA output optional
- For pipelines from 15NB onwards
- Threaded process connections
- 4-pin M12 plug-in connector
  Optional, connection cable with M12 matching connector
- Mating Sanitary Fittings on request

#### FOR WELD-IN BOSS / THERMOWELL

- -50 to 150°C measuring range
  G1/8" for mounting to weld-in boss
  Weld-in boss, dummy plug & thermowell optional
  4-pin M12 plug-in connector
- Optional connection cable with M12 matching connector





MODEL RCP602



MODEL RCP612

#### WITH FIXED SANITARY FITTINGS

- · Pt100, 3-wire, others on request
- Class A / higher accuracy
- -50 to 250°C measuring range
- With / without 4-20 mA output With 3/4" & 1" Tri-clovers

- 4-pin M12 plug-in connector
   Optional connection cable with M12 matching connector

#### **ACCESSORIES FOR RCM AND RCP SERIES**





#### **RTD FOR VESSELS & PIPES**

#### FOR TEMPERATURE MEASUREMENT IN TUBES

#### Hygienic sensors for weld-in boss or thermowell

- Pt100, 3/4-wire
- Maximum temperature 200°C

- Class A accuracy15/25mm probe lengthsG1/8" process connection
- · Weld-in boss, dummy plug & thermowell optional
- With aluminium / stainless steel heads
- · Head mounted transmitter optional



MODEL RHP502

- Pt100, 3/4-wire
- Maximum temperature 200°C

- Class A accuracy15/25 mm probe lengthsCable length in 5/10/15 mtr
- PFA cable for RTP502 & PVC cable for RTP503 models
- G1/8" process connection
- Weld-in boss, dummy plug & thermowell optional







MODEL RHV200

#### WITH G1/2 HYGIENIC

- · Measurement in vessels with agitators with front flush version
- Temperature monitoring in milk vessels
- SS316L wetted parts
- Head mounted transmitter optional
   Weatherproof / Flameproof / Stainless Steel termination head
- Pt100, 3-wire, single / dual element
- Class A accuracy or better
- 0 to 200°C range

#### WITH INGOLD PORT

- Pt100, 3-wire-50 to 200°C
- Class A accuracy or better
- 3/4" BSP (F) or 1 1/4" BSP (F), nut Ingold fitting design for easy installation
- Sanitary O-ring for moisture proof operation
  Stainless steel locking nut for Ingold port
  Optional reduced tip for faster response

- Weatherproof / Flameproof / Stainless Steel termination head
- Head mounted transmitter optional





#### **SANITARY RTDS & THERMOCOUPLES**

#### TRI-CLOVER CONNECTION

- · SS316L wetted parts
- Reduced tip design option for fast response
- Optional head mounted transmitter, mounting clamp & gasket
- · Pt100, 3-wire, other calibrations available
- -50 to 250°C, other ranges available
- Class A / higher, accuracy
  ½" / 1" / 2" / 2.5", Tri-clover sizes









**RHS SERIES** 

#### **PIPE LINE RTD**

RHP series is a true CIP & SIP design. This series of RTD's are used where direct insertion, viscosity or flow rate would affect accuracy. They are available with different pipe length and diameter.

#### WELD-IN CONNECTION

Offered with Sanitary Tri-clover RTD, Weld-in Tee joint with / without mounting clamps and gaskets



MODEL RHP602

#### **CLAMP-IN CONNECTION**

Offered with Sanitary Tri-clover RTD, Clamp-in Tee joint with / without mounting clamps and gaskets



MODEL RHP612

#### WITH FIXED SANITARY FITTINGS

- Pt100, 3-wire, others on request
- Class A / higher accuracy
  -50 to 250°C measuring range
- With integral cable
  With 3/4" & 1" Tri-clovers



MODEL RTS602



# **GENERAL PURPOSE ASSEMBLIES WEATHERPROOF & FLAMEPROOF TERMINATIONS** • Pt100, 3/4-wire, others on request Optional Class A / higher accuracy Single / dual circuits · Process connection SS304 / SS316 heads -50 to 400°C measuring range · ATEX certified FLP head Cast aluminium head as standard Cable glands

#### RHG SERIES FOR WP & RFG SERIES FOR FLP MODELS





- · Offered in K thermocouple & Pt100, 3-wire
- · Grounded hot junction in thermocouples
- -50 to 400°C for K type & -50 to 200°C for RTD
- Pointed tip for easy penetration
  Retractable PVC cable for K type
  Silicone rubber cable for RTD
- · Hand held digital indicator available





#### **HVAC AND GAS TEMPERATURE MEASUREMENT**

- · Wall mountable aluminium housing
- Cable gland, temperature transmitter and cable are optional
- Pt100, 3-wire
- · Class B accuracy
- -50 to 100°C measuring range





MODEL RAV212



MODEL RAV210

MODEL RAV220

#### RTD FOR AIR AND GAS

Perforated tip RTD is suitable for measuring temperature of flowing non-corrosive air and gas (indoor use only)

- · Thin film element for fast response
- Weatherproof head
- Measuring range up to 400°C
- · Different process connections

#### AIR / GAS / DUCT TEMPERATURE MEASUREMENT

- Light in weight, easy to use
- ABS housing
  PG 9, polyamide cable gland
- · Optional temperature transmitter and cable







MODEL RAV310

MODEL RAV311

MODEL RAV301

#### THERMOWELL ASSEMBLIES

Thermowells are tubular fittings used to protect temperature sensors installed in industrial processes

- Straight, Stepped or Tapered designs
- One piece barstock / fabricated constructions
- Wide selection of sizes, material and dimensions
  Threaded / Flanged / Weldstock / Sanitary mountings
  1/2", 3/4" and 1" NPT/BSP threads
  Bore size: 7, 9, 10mm....

- MOC: SS316L/316/304, Hastalloy, AL6XN, Brass
- Up to 1300mm in single piece barstock







#### **DIAL THERMOMETERS**

- · Bimetal & Gas designs
- $\cdot\,$  -100 to 600°C
- In 6/8/10mm diameters
  Up to 2000mm in rigid version
- · With capillary for remote mounting
- · In 63, 100 & 150mm dial sizes
- · Class 1 accuracy to EN 13190
- $\cdot \ \ \text{Various process connections on request}$



#### **PRESSURE / VACUUM GAUGES**

- · Bourdon / Diaphragm Gauges
- Vacuum to 1000 bar
  Bottom, Back, Panel & Surface mounting
- With capillary for remote mounting
   In 63, 100 & 150mm dial sizes
   Class 1 accuracy to EN 837-1
   1/8" to 1" BSP/NPT threads







#### PRESSURE TRANSMITTERS

- · Compact stainless steel construction
- ± 0.5% accuracyIP67 protection
- G1/4 thread as standard
- · Wide range of mechanical
- connections
   -25°C to 85°C usable temperature range



PTD201



PTF601





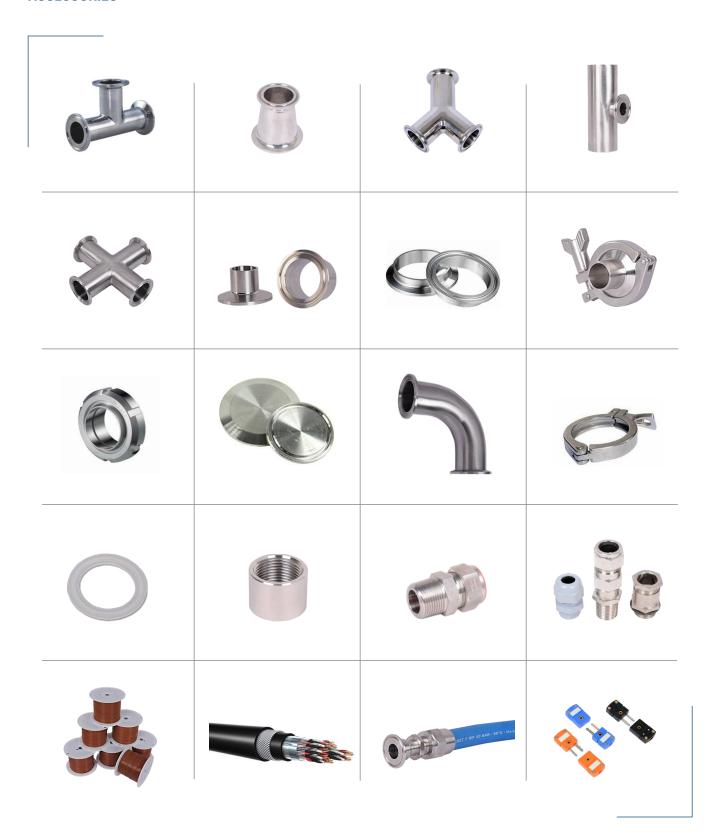


PTD251

PTF602



# **ACCESSORIES**





# **OTHER PRODUCTS**

#### INSTRUMENTS



# BMS PRODUCTS



## LEVEL PRODUCTS



## DOOR INTERLOCK SYSTEMS



#### AUTOMATION



#### DWYER INTERNATIONAL DISTRIBUTOR



CAT598R1

**ENQUIRIES** 

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