**CLASSIC™ 814 Flanged Retractable Packing Gland**

- Flanged Retractable Process Connection
- Exotic Alloys, Custom ‘U’ Lengths and Remote Mounted Electronics Available
- Digital Microprocessor Technology - Settings configurable by user for Flow, Level, Interface & Temperature Sensing
- No Jumpers - All Configurable Options are stored in Non-Volatile Memory
- FM Explosion-proof Class I, Div. 1, Groups B, C & D
- CSA/ANSI UL Flameproof Class I, Div. 1, Groups B, C & D

**Display Panel & Intelligent User Interface**

The KAYDEN CLASSIC 800 Series Electronics Module is designed for quick and easy setup. All CLASSIC 800 models, regardless of the type of sensor, use the same Electronics Module.

**Display Panel Indicators:**
- Relay 1 & 2  Set Point 1 & 2
- Fault Alarm  Run Mode
- Start-up Bypass Timer (for pump control)
- LED Bar Graph for Flow Rate, Level or Interface Indication

**Configuration Mode Features:**
- Adjustable Sensitivity
- Zero & Span Adjustment
- Modbus Addressable

**Electronics Modules Feature:**
- Easy setup; no jumpers or trim pots
- Continuous Self-test Diagnostics with Fault Indicator
- Temperature Compensation
- Universal Power 12-24 VDC & 115-230 VAC standard
- Two SPDT Relays - independently adjustable
- 4-20 mA Analog Output
- “Smart Heater” function for power economy and increased heater life
- Start-up Bypass Timer (for pump control)

**Applications:**

- GAS VENT
- OVERFLOW
- INLET
- PROCESS TANK
- INTERFACE
- LEAK PROTECTION
- HIGH LEVEL
- LOW LEVEL
- PUMP PROTECTION
- LEAK DETECTION
- SIDE OF SWITCH
- BACK OF SWITCH

(Typical)
# CLASSIC™ 814 Flanged Retractable Packing Gland

**Sensor Type**
- **R** -45°C to +160°C (-50°F to +320°F) Continuous Service

**Sensor Material**
- **A** 316/316L Stainless Steel
- **X** Titanium Gr. 2
- **T** Hastelloy C-276

**Process Connection - Flange Type**
- **A** Raised Face
- **B** RTJ - Ring Type Joint

**Flange Material**
- **A** 316/316L SST
- **T** Hastelloy C-276

**Retraction Assembly**
- **T** Low Pressure; 316/316L Stainless Steel (MWP 50 psi)
- **J** Low Pressure c/w Retaining Chain; 316/316L Stainless Steel (MWP 125 psi)
- **X** Medium Pressure; 316/316L Stainless Steel (MWP 275 psi)

**Insertion 'U' Lengths**
- Custom 'U' Lengths: Use 4 digits preceded by an 'I' (i.e. 3.5° 'U' = I0035) ('M' = cm)

**Input Power**
- **C** 12-24 VDC and 115-230 VAC, 50 to 60 Hz

**Electronics**
- Microprocessor Controlled with User Interface. Two SPDT sealed relay contacts. Modbus via RS-485. 4-20 mA current loop.

**Local Enclosure**
- **1** Flameproof - Aluminum

**Remote Electronics Enclosure & Cover**
- **0A** Not Required
- **1B** Blind Cover - Flameproof
- **1G** Glass Lens Cover - Flameproof

**Agency Approvals**
- **1** UL & CSA
- **9** FM

## Model Number Legend
- **DOC#:** ML-814-004

*Sensor only.* The Packing Gland Assembly is available as standard in 316/316L Stainless Steel. For exotic alloys contact Telematic.

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Applications:
- Flow, Level, Interface & Temperature

Process Connections:
- 1/2", 3/4", 1", 1-1/4", 1-1/2" & 2" MNPT
- 3/4" FNPT & Flanged InLine
- Flanged & Sanitary 1" to 3.5" Tri-Clamp®
- Threaded (1" MNPT) & Flanged Retractable Packing Glands

Insertion ‘U’ Lengths:
- Imperial:
  - 1.2", 2", 3", 4", 6", 9", 12" & 18" standard
  - Model 828 (Sanitary) - 2", 3", 4" & 6" only
- Metric:
  - 3, 5, 7.5, 10, 15, 23, 30 & 45 cm standard
  - Model 828 (Sanitary) - 5, 7.5, 10 & 15 cm only
- Custom Lengths:
  - Available in 1/2" or 1 cm increments
  - Min. 1.2" - Max. 120" (3.0 - 305 cm) model dependant

Wetted Materials:
- 316/316L Stainless Steel - standard
- Titanium Gr. 2, Hastelloy C-276
- 316/316L Stainless Steel c/w Nickel Braze (830 & 832 InLine Models)
- Highly Saturated Nitrile (Pressure Seal - 814 & 816 Packing Gland Models)

Enclosure Material:
- Copper-free Aluminum (does not exceed 0.4% copper)
- Powder Coated Polyester TGIC (polyester triglycidyl isocyanurate)
- NEMA 4X / Type 4 / IP55
- 1" FNPT Conduit Connection
- Buna O-ring on Cover

Temperature Range – Continuous Service:
- Sensors:
  - -45°C to +200°C (-50°F to +392°F)
  - (Models 814 & 816: -45°C to +160°C [-50°F to +320°F])

- Electronics:
  - -55°C to +65°C (-67°F to +149°F)
  - Note: For temperatures above +65°C (+149°F) electronics must be remotely mounted.

- Storage:
  - -55°C to +75°C (-67°F to +167°F)

Operating Pressure - Sensor:
- Threaded Style:
  - Maximum Working Pressure: 24 MPa (3500 psig) dependent on model and material of construction

- Flanged Style:
  - Maximum Working Pressure: per flange rating

- Sanitary Tri-Clamp® Style:
  - Maximum Working Pressure: per flange rating

Switch / Transmitter Switch Point Range (Insertion Style - 1/2" to 2"MNPT, Flanged):
- Water-based Liquids:
  - 0.01 to 3.0 ft./sec. (0.003 to 0.9 meters/sec.)

- Hydrocarbon-based Liquids:
  - 0.01 to 5.0 ft./sec. (0.003 to 1.5 meters/sec.)

- Gases:
  - 0.25 to 254 sfps (0.076 to 77 smps)
  - Standard conditions: 21°C (70°F) at 14.7 psi (1 atm)

Switch / Transmitter Switch Point Range (InLine Style):
- Water-based Liquids:
  - 0.015 to 50 cc/sec.

- Hydrocarbon-based Liquids:
  - 0.033 to 110 cc/sec.

- Gases:
  - 0.6 to 20,000 cc/sec.
  - Standard conditions: 21°C (70°F) at 14.7 psi (1 atm)

Accuracy:
- Flow Service:
  - ±1% set point velocity over operating range of ±28°C (±50°F)

- Level Service:
  - ±0.25 inches (±0.64 cm)
CLASSIC™ 800 Specifications

### Response Time:
- Approximately 0.5 to 30 seconds

### Remote Electronics Option:
- Maximum recommended cable length - 200 feet (60 m)
- Cable type - 24 AWG minimum - twisted pairs

### Heater Power:
- Field adjustable to optimize performance

### Input Power:
- Universal Power standard
  - 12-24 VDC and 115-230 VAC, 50-60 Hz
- Consumption: Maximum: 6.0 watts (fully configured)

### Outputs:
- 4-20 mA current loop
- Two (2) independent SPDT sealed relay contacts rated @ 4 amps resistive 230 VAC or 30 VDC Max.; individually adjustable

### Start-Up Bypass Timer:
- Adjustable for 0 to 100 seconds

### Communications:
- Modbus via RS-485

### RCMS (Remote Control & Monitoring Software) Functions and Features:
- Display Panel Lock-Out
- Set Points configuration
- Relay Actuation Delay Timer
  - Independently configurable for both On and Off, increasing or decreasing
  - Adjustable from 0 - 5,000 seconds
- Start-up Bypass Timer
  - Adjustable from 0 - 100 seconds
- Relay Mode Configuration
  - Energized above or below set point
- Relay Temperature Mode Configuration
- Heater Power setting
- Zero and Span settings
- Analog (4-20 mA) output configuration
- View and Print Graphing (Trend) function
- Configuring settings; write to device, save to file and print
- Fault Event Log

### Diagnostics:
- Primary watchdog circuit monitors microprocessor parameter anomalies
- Secondary watchdog circuit monitors microprocessor health
- Heater monitored for out-of-range conditions
- Fault Mode de-energizes relay(s) and halts power to the heater

### Agency Approvals:
- CSA - ANSI/UL
  - Class I, Div. 1, Groups B, C and D; Ex d IIB + H2; AEx d IIB+H2
  - T3; Enclosure Type 4 / IP55
- Single Seal Approval
  - Per ANSI/ISA 12.27.01-2003
- CRN
  - Canadian Registration Number

### Weights and Dimensions:
- 810 Threaded: 2” U length - 7 lbs (3.18 kg)
- Carton Size - 15” x 5” x 6” (38 cm x 13 cm x 15 cm)
- Other models/sizes - consult Telematic

### Warranty:
- One (1) Year from shipment date from factory (see Terms & Conditions on telematic.com for details)

Visit telematic.com for CRN information per model and jurisdiction.

Note: CRN approvals available.