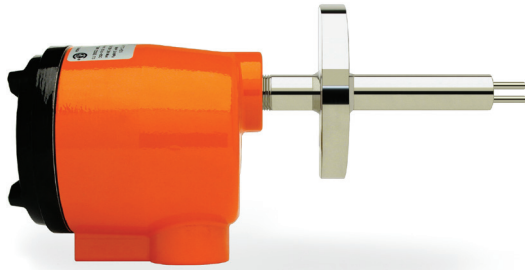


CLASSIC™ 812 Flanged



Flow, Level, Interface & Temperature Switch & Transmitter

- Flanged Process Connections - 316/316L Stainless Steel sensor standard
- 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
- 316/316L SST & Exotic Alloy versions designed to ASME Section VIII Div. 1 2007 Latest Addenda and/or to be inserted in system complying with ASME/ANSI B31.3-2006 +2007 Addenda. Canadian Registration Number (CRN): 0F13782.2 & 0F13787.2

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:

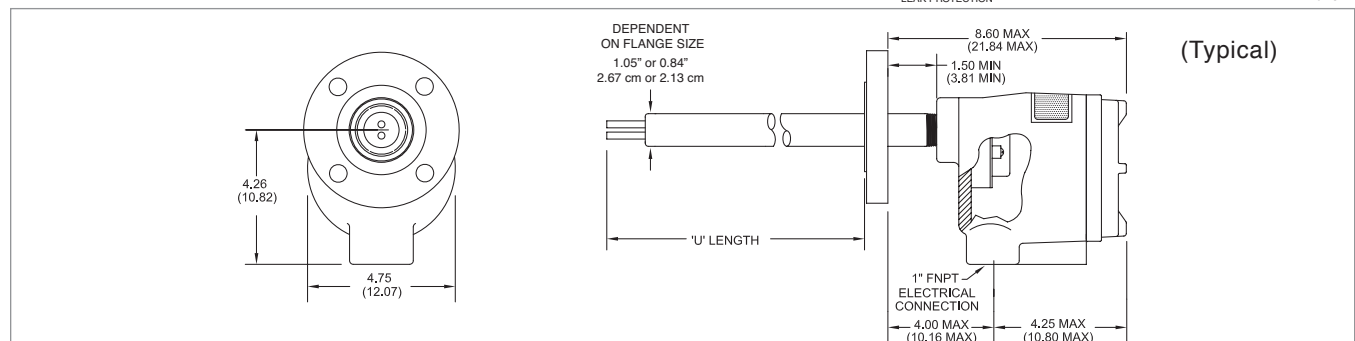
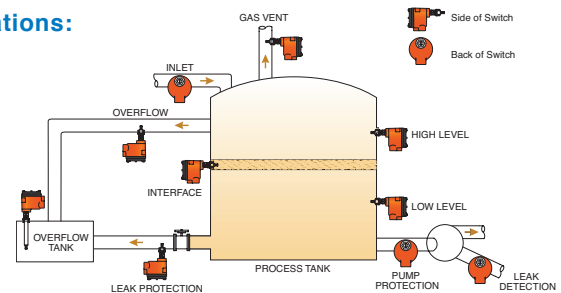
- Adjustable Sensitivity
- Zero & Span Adjustment
- Modbus Addressable

Electronics Modules Feature:

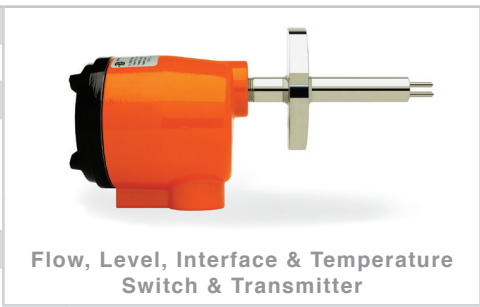
- Easy setup; no jumpers or trim pots
- Continuous Self-test Diagnostics with Fault Indicator

- 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:



812	CODE	Sensor Type																	
	R	-45°C to +200°C (-50°F to +392°F) Continuous Service																	
	CODE	Sensor Material																	
	A	316/316L Stainless Steel																	
	X	Titanium Gr. 2																	
	T	Hastelloy C-276																	
	CODE	Process Connection - Flange Type																	
	A	Raised Face																	
	B	RTJ - Ring Type Joint																	
	CODE	ANSI	CODE	ANSI	CODE	ANSI	CODE	ANSI	CODE	ANSI	CODE	ANSI	CODE	ANSI	CODE	ANSI			
		1"		1-1/2"		2"		3"		4"		5"		6"		8"		10"	
	121	150	131	150	141	150	151	150	161	150	171	150	181	150	191	150	201	150	
	122	300	132	300	142	300	152	300	162	300	172	300	182	300	192	300	202	300	
	123	600	133	600	143	600	153	600	163	600	173	600	183	600	193	600	203	600	
	124	900	134	900	144	900	154	900	164	900	174	900	184	900	194	900	204	900	
	CODE	Flange Material																	
	A	316/316L SST X Titanium Gr. 2																	
	T	Hastelloy C-276																	
	CODE	Insertion 'U' Lengths 2.5" - 120" (6.4 cm - 305 cm) in 1/2" (1.0 cm) increments.																	
	IXXXX	Custom 'U' Lengths: Use 4 digits preceded by an 'I' (i.e. 3.5" 'U' = I0035) ('M' = cm)																	
	CODE	Input Power																	
	C	12-24 VDC and 115-230 VAC, 50 to 60 Hz																	
	CODE	Electronics																	
		Microprocessor Controlled with User Interface. Two SPDT sealed relay contacts. Modbus via RS-485. 4-20 mA current loop.																	
	CODE	Local Enclosure																	
	1	Flameproof - Aluminum																	
	CODE	Cover - For Local Enclosure																	
	B	Blind Cover - Flameproof																	
	G	Glass Lens Cover - Flameproof																	
	CODE	Remote Electronics Enclosure & Cover																	
	0A	Not Required																	
	1B	Blind Cover - Flameproof																	
	1G	Glass Lens Cover - Flameproof																	
	CODE	Agency Approvals																	
	1	UL & CSA																	
	3	UL, CRN & CSA																	
	9	FM																	
	CODE	Language																	
	E	English																	
812	R	A	A	131	A	I0035	C		1	G	0A								



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Model Number Legend
DOC#: ML-812-004

ML-812-004-[009]

This is a Controlled Document and cannot be changed without the Approval of the Quality Control Manager.

CLASSIC™ 800 Specifications

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 configuration¹
- Relay Actuation Delay Timer
 - Independently configurable for both On and Off, increasing or decreasing
 - Adjustable from 0 - 5,000 seconds
- Start-up Bypass Timer¹
 - Adjustable from 0 - 100 seconds
- Relay Mode Configuration¹
 - Energized above or below set point
- Relay Temperature Mode Configuration
- Heater Power setting¹
- Zero and Span settings¹
- Analog (4-20 mA) output configuration¹
- View and Print Graphing (Trend) function

- Configuring settings; write to device, save to file and print

- Fault Event Log

Note:¹ Also configurable from Display Panel

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 (Class I, Zone 1, Group IIB + H2,) T3; Enclosure Type 4 / IP55



- **Single Seal Approval**
Per ANSI/ISA 12.27.01-2003

- **CRN**
Canadian Registration Number



Note: CRN approvals available. Visit telematic.com for CRN information per model and jurisdiction.

- **FM Approvals**
Class I, Div. 1, Groups B, C and D; Class I, Zone 1, AEx d IIB+H2 T2D (Ta=75°C); T3 (Ta=65°C); Enclosure Type 4 / IP55



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)