

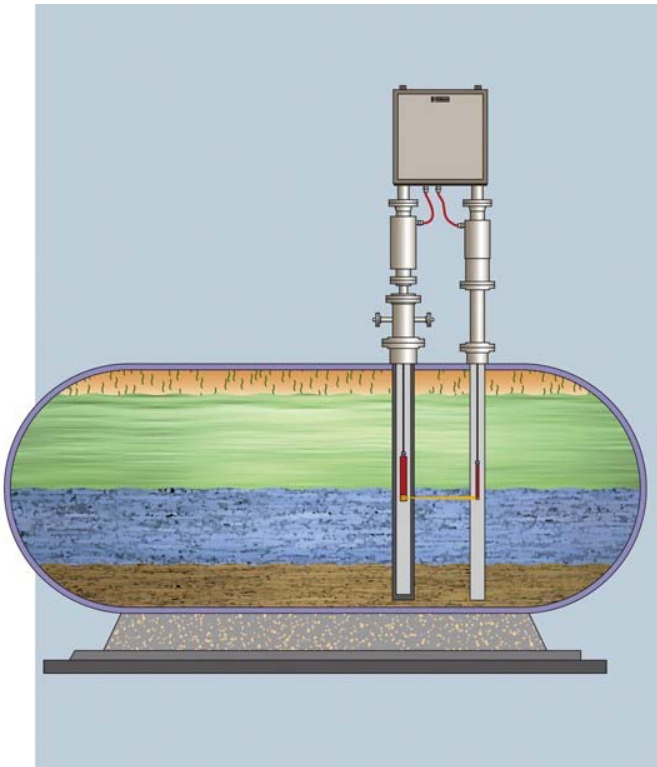


Excellence in Monitoring

Interface System

For more than 27 years Ronan has provided the process control industry with unsurpassed products in the harshest environments. With a philosophy of designing new products to be backward compatible, our customers have the confidence of an installed base of thousands of systems. A worldwide network of dealers, 24-hr factory certified Field Service Engineers and an experienced staff of Applications Engineers are ready to assist with your measurement needs.

Product Information



Applications

Ideal for Surface or Sub-Sea Applications
Motor Driven or Static System Provides
Measurements of:

- Separators
- Knockout Drums
- Slurry Processing
- Amine Absorbers
- HF Acid Settler
- Clarifier Vessels

Features and Benefits

- Water/Oil/Foam/Gas/Sand Interfaces and/or Levels
- Ability to Track Specific Interface(s) or Profile(s)
- Display of Interface Level or Source Level & Process Density
- Ability to Adjust for Density Changes of Stratified Layers
- Real-Time Measurements
- On-Line Density Measurement to ± 0.005 SGU
- Remote Control Capabilities
- Measures up to 100 Feet (30 Meters)





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The Ronan interface system solves the problems of accurately detecting and measuring interface level, process density and product profiles. By using non-contact technology, no components are wetted to the process, making it ideal for processes with harsh conditions, such as: high temperature, high pressure, corrosive, abrasive, or toxic. Typically, the measurement is repeatable to a process density of +/-0.005 SpG and ½ inch (13 mm) level. System configuration can be for Interface Level or Process Density Profile.

The system consists of a low-energy gamma emitting source, a detector, and microprocessor. Source and detector mounting is dependent upon the vessel shape and size and are either in sealed wells inside the vessel or external to the vessel. The source and detector are positioned such that the gamma energy passes from the source through the process to the detector. The amount of gamma energy reaching the detector is inversely proportional to the density, this gamma energy is converted to an electrical signal which is passed to the microprocessor where the actual densities are calculated via proprietary algorithms.



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Specifications

Interface System		
	Motor Panel	Control Panel
Environmental		
Operating Temperature	-30°C to 80°C	0 to 50°C
Storage Temperature	-40°C to 80°C	-40°C to 80°C
Humidity	0 – 100%	5 – 95% (non-condensing)
Area Classification	Barrier Used where intrinsic safety is required Class II, Div 2 with Purge Recommended for corrosion protection	Non Required
Electrical		
Supply Voltage	52 VDC, 3A Max from Control Panel 12 VDC, .15A from Control Panel	90 – 250 VAC, 50-60 Hz +/- 10%
Power required		120 Watts Continuous 300 A (0-p) 1.0 mSec
Drive		
Position Sensor	Brushless D.C. motor	
Output	Motor Resolver	
Connections		Level: 0-20mA/0-10V Density: 0-20mA/0-10V 3-lug terminal block for AC power 2-slot terminal blocks for Level/Density outputs
Cabling (between Motor Panel and Control Panel, tested to 1000 feet)		
1-500 feet distance:	16 Ga, 4 Cond w/.shield (motor pwr) 18 Ga, 6 Cond w/shield (detector) 22 Ga, 12 Cond w/shielded pairs (resolver feedback) 22 Ga, 19 Cond w/shield (panel status)	
501 to 1000 feet distance:	16 Ga, 4 Cond w/shield (motor pwr) 18 Ga, 6 Cond w/shield (detector) 18 Ga, 12 Cond w/shielded pairs (resolver feedback) 18 Ga, 19 Cond w/shield (panel status)	
Mechanical		
Housing	Motor Cabinet: NEMA-4 / IP65 (24x24x10)	Control Cabinet: NEMA-4 / IP65 (18x24x10)
Weight	100 – 150 lbs.	(18x24x10)
Loading	Source – 42 lbs. max Detector – 42 lbs. max	less than 50 lbs.



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	Motor Panel	Control Panel
Performance		
Measuring Range	50 feet max	
Measuring Speed	.02 to 3 ft/min.	
Traversing Speed	.02 to 32 ft/min.	
Resolution	Selectable: ¼", ½", 1", 2", 3", 5", 8", 12"	
Repeatability	.060" @ 3ft/min .012" @ 1 ft/min.	
Sourceholder		
Model	SA-15 (SA-4 optional)	
Construction	Steel Weldment, Lead-Filled	
Weight	Approx 75 lbs.	
Safety	Lockable in the OFF position	
Stray Field	<5mR/hr @ 12"	
Radiation Detector		
Model	DET-14662 Style	
Active Length	1.5"	
Type	Scintillator	
Material	304 SS	
Weight	8 lbs.	
Supply Voltage	+24 VDC from Computer	
Power Required	1 Watt	
Connection	CGB/Terminal Block	
Area Rating	General Purpose	
Computer		
Model		Motorized Density
Supply Voltage		85 to 250 VAC +/- 10%
Power Required		15 Watts
Ambient Temperature		-40°C to 75°C
Humidity		0 to 95% non-condensing
Controls		Handheld Programmer HART (limited)
Outputs		HART/Level: 0-20mA/0-10V Density: 0-20mA/0-10V RIT High Level/RIT Low Level
Local Control Panel		
	Motor Panel	Control Panel
Functions	Local/Remote Switch Speed Pot Up Down Switch LED indicators	



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Alarm Outputs	
User-Defined Alarms (3)	3 Form 'C' Relays
Detector Fault	1 Form 'C' Relay
Motor/Drive Error	1 Form 'C' Relay
Motor Panel Error	1 Form 'C' Relay
Computer I/O Comm. Error	1 Form 'C' Relay
Computer Power Fail	1 Form 'C' Relay
Source/Detector @ Home Position	1 Form 'C' Relay
User Inputs	
	Dry contact for emergency extraction
Remote Panel (Optional)	
Functions	Modes: Continuous Scan Density Seek Rag Interface Tracking Manual Up Manual Down
Distance Interface	100 feet from Control Panel Max. 6 user-supplied dry contacts for modes and ranges, 4-20mA/0-10V input for Density Set-Point
Head Temperature (Optional)	
	Selectable units (°C/°F) (For local display only or user-defined alarm)



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