

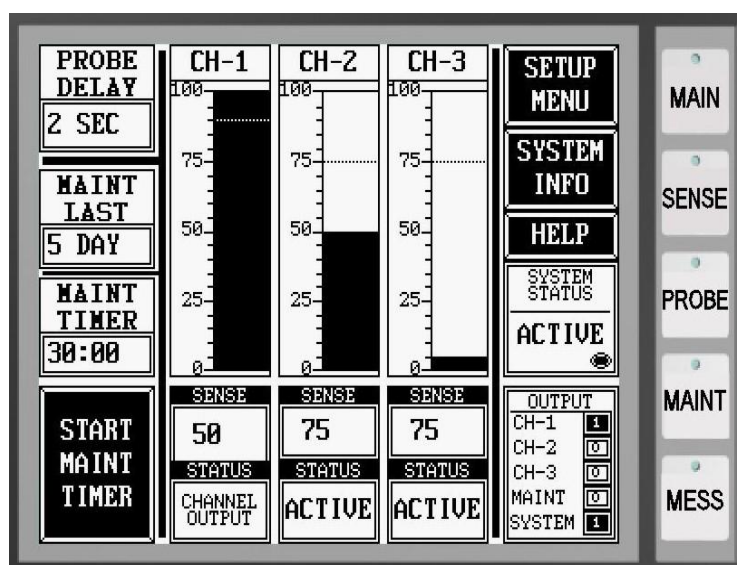
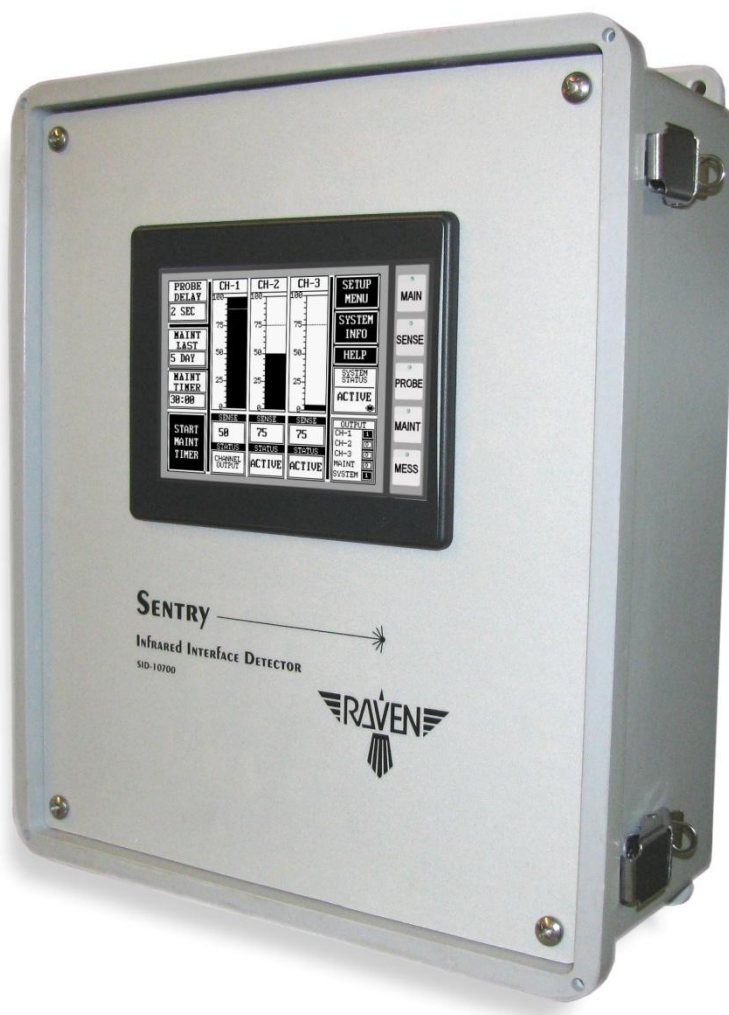
## Point Level Sludge Blanket Monitoring

- Infrared optical sensor probes
- Touch-screen display
- Sensitivity adjustment per channel
- Relay time delays for probes
- NEMA 4X – IP67 weatherproof
- Up to 4 channels

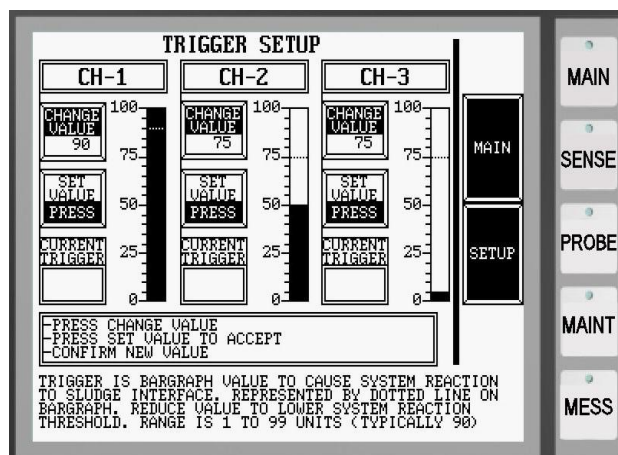
The model SID-10700-4CH from Raven Environmental Products is a permanently mounted instrument that reliably monitors sludge levels in primary tanks, clarifiers, sedimentation basins, lagoons and a wide variety of tanks with settled sludge and solids.



Infrared sensor probe with polycarbonate lenses and cable grip strain relief.

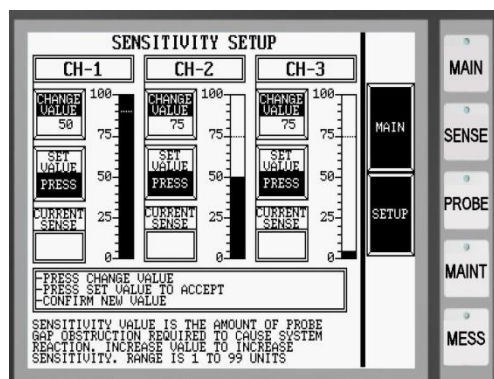


**3 Channels selected – 4 available**

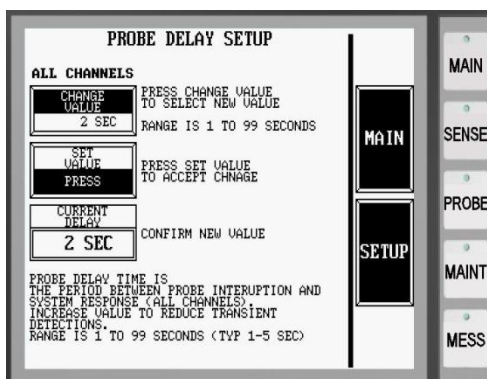


Corrosion resistant IP67 (NEMA-4x) weatherproof enclosure with aluminum panel and touch screen display. No calibration necessary. It's ready to go right out of the box.

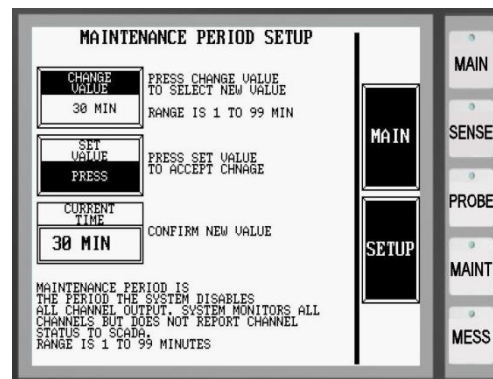
Trigger is the "tolerant" parameter. This is the upper threshold of the event qualifier and is represented by a horizontal dotted line on the bargraph (90, 75, 75 above). Trigger value is a measure of when "enough is enough" and the sensor probe gap blockage requires system response.



Value determines sludge density for channel detection. Set up menu allows sensitivity value change for each channel. Position probe in known sludge sample to be detected and adjust sensitivity to just cause system detection and channel output. Increase value to increase sensitivity. Repeat for each channel.



Value determines period between detection and channel output. Delay prevents transient detection and relay chatter. Setup menu allows value change for system. Range is 1 to 99 seconds.



Maintenance mode disables all channels for probe cleaning. Press "MAINT" button to start timer and again to restart normal operation. Normal operation will resume automatically when timer clocks out. Range is 1 to 99 minutes.

## BASE UNIT DETECTOR

|               |                                    |
|---------------|------------------------------------|
| enclosure     | corrosion resistant                |
| power         | 120-240vac single phase            |
| environment   | IP67 NEMA-4X                       |
| temperature   | -13°F to +131°F (-25°C to +55°C)   |
| sensitivity   | variable low to high               |
| maint. mode   | timed service outage               |
| display       | LCD text                           |
| density meter | sunlight visible LED bargraph      |
| horn          | 70 db max                          |
| output        | SCADA relay dry contact            |
| calibration   | factory sealed (no recal required) |
| channels      | up to four                         |

## SENSOR PROBES

|                |                           |
|----------------|---------------------------|
| material       | epoxy encapsulated        |
| technology     | IREM emitter/detector     |
| sensor gap     | 0.780"                    |
| (20mm)         |                           |
| lenses         | polycarbonate             |
| range min      | 100-2,000 mg/l (varies)   |
|                | 100-100,000 mg/l (varies) |
| range max      |                           |
| height         | 4.125" (105mm)            |
| width          | 3.0" (77mm)               |
| depth          | 1.0" (25.4mm)             |
| circular envel | 3.25" (82.5mm)            |
| weight         | 12.3 oz (350g)            |

## CABLE ASSEMBLY

|             |                                  |
|-------------|----------------------------------|
| moisture    | IP68                             |
| temperature | -13°F to +131°F (-25°C to +55°C) |
| length      | 20 to 100 ft. (6.1 to 30.5m)     |
| markings    | increment depth markers          |

## REPLACEMENT PARTS

|                                  |  |
|----------------------------------|--|
| Cable Assembly with probe        |  |
| 20 ft (6.1m) P/N SID-10703-20    |  |
| 30 ft (9.1m) P/N SID-10703-30    |  |
| 40 ft (12.1m) P/N SID-10703-40   |  |
| 50 ft (15.2m) P/N SID-10703-50   |  |
| 100 ft (30.5m) P/N SID-10703-100 |  |

RAVEN ENVIRONMENTAL PRODUCTS, INC.  
St. Louis, MO 63122 USA

| BASE UNIT         |  |                                      |
|-------------------|--|--------------------------------------|
| enclosure         |  | corrosion resistant material         |
| mount             |  | flange                               |
| power             |  | 1/8" aluminum plate                  |
| 120-240vac        |  | single phase                         |
| environment       |  |                                      |
| moisture          |  | IP67 (NEMA-4x) weatherproof          |
| temperature       |  | -13°F to +131°F      (-25°C to 55°C) |
| operator controls |  |                                      |
| sensitivity       |  | variable low to high                 |
| maintenance mode  |  | timed service outage                 |
| indicators        |  |                                      |
| display           |  | LCD text                             |
| density meter     |  | sunlight visible LED bargraph        |
| horn              |  | 70db max                             |
| annunciator       |  | LED lamps                            |
| output            |  |                                      |
| SCADA relay       |  | dry contact                          |
| channel           |  | 1                                    |
| channel           |  | 2                                    |
| system            |  | status OK                            |
| mode              |  | normal / maintenance                 |
| calibration       |  | factory sealed (no recal required)   |
| PROBE             |  |                                      |
| model             |  | SID-10703                            |
| construction      |  |                                      |
| material          |  | epoxy encapsulation                  |
| technology        |  | IRED emitter/detector                |
| sensor gap        |  | 0.780"      (20mm)                   |
| lenses            |  | polycarbonate                        |
| range min         |  | 100-2,000 mg/l (varies)              |
| range max         |  | 100-10,000 mg/l (varies)             |
| height            |  | 4.125"      (105mm)                  |
| width             |  | 3.0"      (77mm)                     |
| depth             |  | 1.0"      (25.4mm)                   |
| circular envelope |  | 3.25"      (82.5mm)                  |
| weight            |  | 12.3 oz      (350g)                  |
| color             |  | black                                |
| CABLE ASSEMBLY    |  |                                      |
| environmental     |  |                                      |
| moisture          |  | IP68                                 |
| temperature       |  | 15°F to +140°F      (-20°C to +60°C) |
| length            |  | 20 to 100 ft.(6.1M to 30.48M)        |
| markings          |  | 1-ft increment depth markers         |

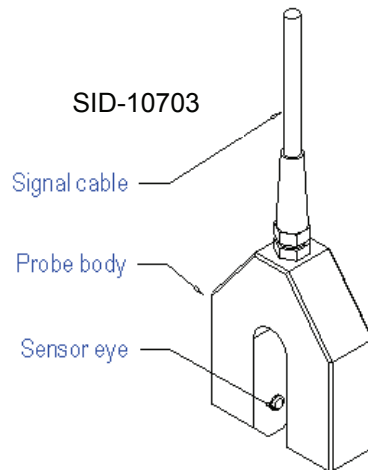
## FIXED BASE SLUDGE INTERFACE DETECTOR SID-10700-2CH

| REPLACEMENT PARTS         |                          |
|---------------------------|--------------------------|
| cable assembly with probe | 20-ft P/N SID-10703-20   |
|                           | 30-ft P/N SID-10703-30   |
|                           | 40-ft P/N SID-10703-40   |
|                           | 50-ft P/N SID-10703-50   |
|                           | 100-ft P/N SID-10703-100 |

### **Description - Probe**

The Raven IRED sensor probe electronics are encapsulated in durable watertight epoxy resin and instrumented with a polyethylene signal cable built to withstand wet environments and rough handling. Replacement Probe assembly are suitable for field replacement and available in multiple cable lengths up to 100-feet (probe, cable, strain relief and connector included).

SID-10703 probe detects bottom and floating sludge blankets in primary, clarifiers and basins.



Raven Environmental Products, Inc.  
333 Leffingwell Ave., Suite 117  
St. Louis, MO 63122 USA

800-545-6953  
Fax 314-822-9968  
RavenEP.com