

# Ultrasonic Suspended Solid Monitoring System



WESS ENV-200 is an ultrasonic instrument measuring the density of suspended solid in liquid. It includes 4 probes, a controller, and a junction box. ENV-200 also provides clamp-on type probes which enables the field operator to install the probes without changing pipe sections. This indeed saves installation and maintenance costs.

ENV-200 is adopting patented EEAM (Envelope Energy Average Method) that saves the envelope of reception signal and then calculates its energy, rather than uses the amplitude change of reception signals. It also adopts STMRT(Single Transmission Multi Reception Technology) to maximize measurement stability.

## **Product Features**

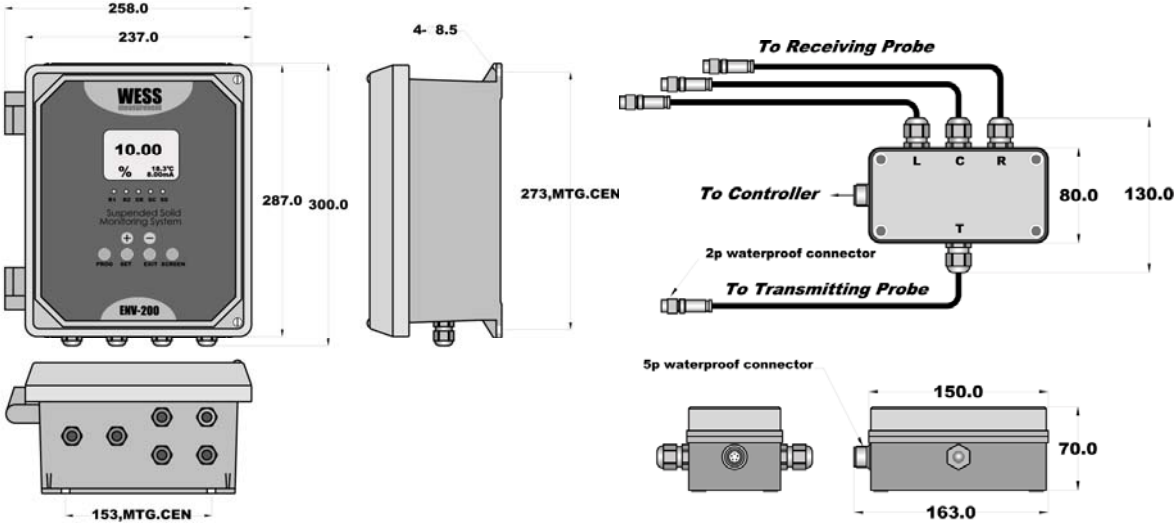
- Continuous measurement
- Multiple reception transducers
- 10,000 points Data Logging & Trend Mode
- EEAM(Envelope Energy Average Method)
- Spool-piece and tank-mount probe types
- In-situ measurement and calibration
- Selectable display units(ppm, mg/l, %)

## **Application Industry**

- Water, wastewater treatment
- Pulp and paper
- Food and beverage
- Chemical
- Mining

**Product Dimensions**

**Electronic Device and Junction box**



**Spool-piece and Tank-mount type probes**

Probe's size is determined after consultation with us. The drawings below are probe types in general applications

**Spool-piece Type**



**Tank-mount Type**



**Clamp-on Type**



## **Product Specifications**

### **Electronic**

|                                |  |
|--------------------------------|--|
| <b>Measuring Ranges</b>        | 2,000 ~ 200,000mg/l ( 0.2 ~ 20% ), 400,000mg/l(option) |
| <b>Resolution</b>              | 100mg/l (0.01%)  |
| <b>Accuracy</b>                | ± 5% of reading or ±5000mg/l, whichever is greater     |
| <b>Repeatability</b>           | ± 1% of reading  |
| <b>Operational Temperature</b> | - 20 ~ 60°C(14~140°F)                                  |

### **Outputs**

Current Output : 4~20mA, nom. Load 250Ω (load range : 100 ~ 750Ω)

Relay Output : 3 SPDT(5A, 250VAC) – “ER” “R1” “R2”

Digital Output : RS232C(Standard), RS485 or Profibus-DP(option)

### **Power Supply**

Standard : 86 ~ 260V AC, 50~60Hz, ≤15W

Option : 24V DC ± 10%

|                           |  |
|---------------------------|--|
| <b>Enclosure Material</b> | Body/Cover : FRP<br>Window : Polycarbonate |
|---------------------------|--|

|                  |                         |
|------------------|-------------------------|
| <b>Dimension</b> | W 237 x H 291 x D 138mm |
|------------------|-------------------------|

|                 |   |
|-----------------|---|
| <b>Mounting</b> | Hole center W 153 x H 273 mm(Ø 8.2 x 4ea) |
|-----------------|---|

|               |      |
|---------------|------|
| <b>Weight</b> | 3 kg |
|---------------|------|

|                  |      |
|------------------|------|
| <b>IP Rating</b> | IP67 |
|------------------|------|

|                    |                   |
|--------------------|-------------------|
| <b>Certificate</b> | CE, NRTL(Pending) |
|--------------------|-------------------|

### **Probe**

|                 |          |
|-----------------|----------|
| <b>Material</b> | S.S. 316 |
|-----------------|----------|

|                     |          |
|---------------------|----------|
| <b>No. of probe</b> | 4 pieces |
|---------------------|----------|

|                     |           |
|---------------------|-----------|
| <b>Cable Length</b> | 10m(33ft) |
|---------------------|-----------|

|                                     |                      |
|-------------------------------------|----------------------|
| <b>(Junction box to controller)</b> | Max. 100m extensible |
|-------------------------------------|----------------------|

|                                |                          |
|--------------------------------|--------------------------|
| <b>Operational Temperature</b> | -50 ~ 100°C(-58 ~ 212°F) |
|--------------------------------|--------------------------|

|               |   |
|---------------|---|
| <b>Weight</b> | Depends on pipe diameter(spool-piece, clamp-on)<br>3.5kg(tank-mount, Junction box included) |
|---------------|---|

|                  |      |
|------------------|------|
| <b>IP Rating</b> | IP68 |
|------------------|------|

|                 |        |
|-----------------|--------|
| <b>Cleaning</b> | Option |
|-----------------|--------|

### Junction Box

|                         |  |
|-------------------------|--|
| Material                | BASF-GF22(ABS)   |
| Operational Temperature | -10 ~ 80°C(-58~212°F)  |
| Dimension               | W 80 X H 150 X D 70mm  |
| Weight                  | 800g   |
| IP Rating               | IP65, IP68(option)   |
| Mounting                | Hole center W 60 X H 130mm (M6 X 4 pcs)                          |
| Electric Connection     |  |
| Probe                   | 2-pin waterproof connector [20m(65ft) waterproof] (IP68 option)  |
| Controller              | 5-pin waterproof connector [30m(100ft) waterproof] (IP68 option) |

### Ordering Code

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**Control Device C2 -** ● ●

|             |   |                          |  |
|-------------|---|--------------------------|--|
|             |   | <b>Power Requirement</b> |  |
|             | A | AC86~260V                |  |
|             | D | DC24V                    |  |
|             |   | <b>Communication</b>     |  |
|             | 2 | RS232 Standard           |  |
|             | 4 | RS485                    |  |
|             | P | PROFIBUS                 |  |
| <b>C2 -</b> |   |                          |  |

**Probe & Option S2-** ● ● ● ● ●

|             |     |  |  |
|-------------|-----|--|--|
|             |     | <b>Probe Type</b>                                |  |
|             | S   | Stainless Steel 316                              |  |
|             | P   | PVC  |  |
|             | C   | Clamp-on   |  |
|             |     | <b>Junction Box Protection</b>                   |  |
|             | 5   | IP65   |  |
|             | 8   | IP68   |  |
|             |     | <b>Cable Length(from Junction to Controller)</b> |  |
|             | S   | Standard 10m(33ft)                               |  |
|             | *** | Type total length required                       |  |
|             |     | <b>Cable Length Unit</b>                         |  |
|             | F   | Feet   |  |
|             | M   | Meters   |  |
|             |     | <b>Pipe Standard ( spool-piece type)</b>         |  |
|             | A   | ANSI   |  |
|             | D   | DIN  |  |
|             | J   | JIS  |  |
|             |     | <b>Spool-piece Information</b>                   |  |
|             |     | ID, OD, Material Etc.                            |  |
| <b>S1 -</b> |     |  |  |