

Suspended Solids Measurement

Orbit

Isco Orbit™ Suspended Solids/Turbidity Analyzer

The Isco Orbit TSS/Turbidity analyzer measures a wide range of solids concentrations, allowing the use of a single sensor for a full range of wastewater treatment plant applications, from sludge to final effluent.

The Isco Orbit transmitter line uses identical, but parameter-specific electronics and a large number of interchangeable components. In wastewater treatment applications, this means simplified installation and operator training, quick and easy software upgrades, and straightforward troubleshooting and service.

Isco has configured standard analyzer packages and installation kits to make specification and ordering simple for common applications, in which the sensor is typically mounted in an open channel or basin with the transmitter close by. A full range of options is available on request, including panel-mount transmitters, kits for mounting sensors in closed pipes, additional relay outputs, and other application-specific needs.

Standard features

- User selectable isolated 0-20 mA or 4-20 mA output and one alarm contact.
- Patented dual-aperture sensor eliminates measurement ambiguity.
- Measuring range from 0.01 FNU to 300 g/l - from completely clear to completely black
- Compact shock-proof sensor design
- Sensor installation in open channels, basins, or closed pipes
- Inclined flat sensor surface uses medium flow to increase self-cleaning effect
- 3-point calibration and 1-point adjustment
- Stores up to 7 user-specifiable calibration data records

Applications

- Primary Sludge
- Activated Sludge
- Sludge Return
- Final Effluent

Options and Accessories

Two or four relay outputs that can be programmed for

- High and Low Set points including temperature.
- P(ID) Control
- Timer for sensor cleaning
- 2nd current output for temperature

The Plus package adds the following features.

- Programmable input in user defined engineering units (e.g. density)
- Automatic cleaning on alarm
- Live Check to monitor sensor response
- Programmable current output



OUM 253 transmitter



OUS 41 TSS/Turbidity sensor

Isco Orbit TSS analyzer Specifications

TSS Transmitter OUM253	
Accuracy	0.001 FNU, 0.01 ppm, 0.1 g/l, 0.1%
Isolated Output	0-20 mA or 4-20 mA, 500 Ohms Load (Max.)
Alarms	Up to 4 dry Contacts, SPDT, NO or NC
Control Functions	P, PI, PD, PID for solenoid valves or frequency pumps
Power Supply	115 /230 Vac, 50/60 Hz or 24 Vac/dc
Automatic or Manual TC	Pt 100
Post/wall mount enclosure, H x W, x D:	9.7 x 6.7 x 4.5 inches (247 x 170 x 115 mm) ()
Enclosure rating	NEMA 4X (IP65)
Alternate enclosure	¼ DIN panel mount available
Sensor OUS41	
Measures	Suspended Solids
Technology	90° NIR Scattered Light
Measuring Range	0.00 to 9999 FNU 0.00 to 9999 ppm 0.0 to 300 g/l 0.0 to 200%
Factory Calibration	Formazine Standard and SiO ₂
Wavelength	880nm
Max Pressure	87 psi @ 77°F, 14.5 psi @ 122°F (6.0 bar @ 25°C, 1.0 bar @ 50°C)
Enclosure Rating	NEMA 6 (IP68)
Operating Temperature	-5° to 50°C (23° to 122°F)
Storage Temperature	-20° to 60°C (-4° to 140°F)
Cable, standard lengths available	7.0m or 15.0m (23 ft. or 49 ft.)

Ordering Information

Contact Isco for complete ordering details, including additional options and accessories.

Description	Part Number
Isco Orbit TSS Analyzer. Includes Post/wall mount Transmitter and TSS sensor. Order installation hardware separately.	68-0040-005
Outdoor Mounting Kit - DO and TSS. Complete package to mount 253 transmitter on horizontal or vertical post and immerse DO or TSS sensor in a basin, tank, or open channel. Includes Post Mounting Kit, Weather Protection Cover, Immersion Assembly, and Spray Cleaning Set.	68-0047-002



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