

HK Instrument Systems

HK-1 Sludge Density Meter

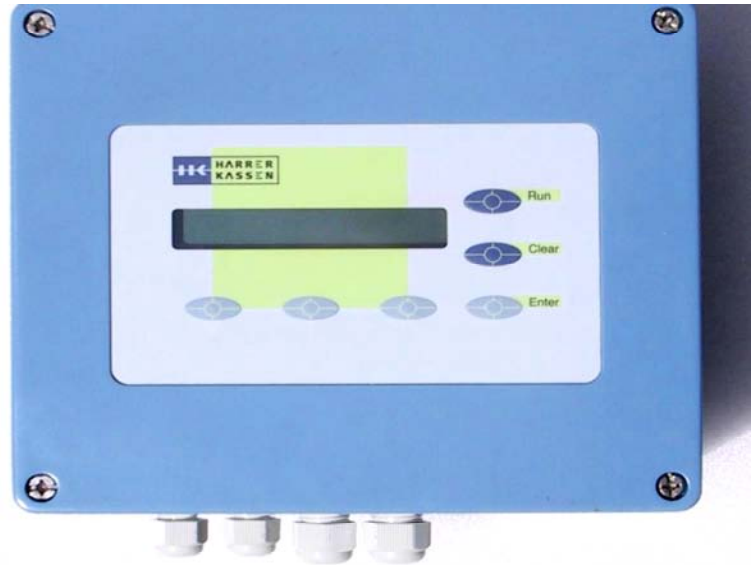
The HK -1 Sludge Density Meter is an excellent tool for measuring the Percent Total Solids of Wastewater Sludge. The HK-1 uses a Microwave Signal to measure the Percent Total Solids, both dissolved and suspended of Raw, Primary, Excess and Dewatered Sludge.

HK-1 Sludge Density Features

- Color & Flow-rate of Wastewater do not effect the HK-1 measurement
- No moving parts
- Requires little or no maintenance
- Extremely stable signal
- Excellent long-term stability
- High degree of repeatability & accuracy



Spool Piece Installed in Plant



HK-1 Microwave Density Transmitter

The HK -1 can be initially calibrated with a single point calibration. With as few as three or four additional points, the system can be fine tuned to operate over the entire measuring range with a high degree of accuracy.

The HK-1 Sludge Density Meter can be used for Primary Sludge, Excess Sludge, Mixed Sludge, Digested Sludge, and Dehydrated Sludge.

AND, one of the best features of the HK -1 Sludge Density Meter is that it is Priced for Value making it the most reasonably priced system in the marketplace.

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Overall Specifications:

Measurement Method:	Microwave Phase Shift method
Measurement Range:	0 to 100% Total Solids
Repeatability:	+/- 0.001% Total Solids
System Size:	2" to 10" pipe (for larger pipe sizes consult factory)
Signal output 1: Total Solids	0/4 – 20 mA; isolated; self powered; max. load 500 ohms. Product %
Signal output 2: Temperature	0/4 – 20 mA: isolated; self powered; max. load 500 ohms. % TS or
Signal input:	PT100 RTD (2-wire connection. Max cable length 150 ft.)
Current input: conductivity	0/4 – mA; non isolated. Max. load 125 ohms. Temperature or
RS 232 out:	4800, 9600 Baud

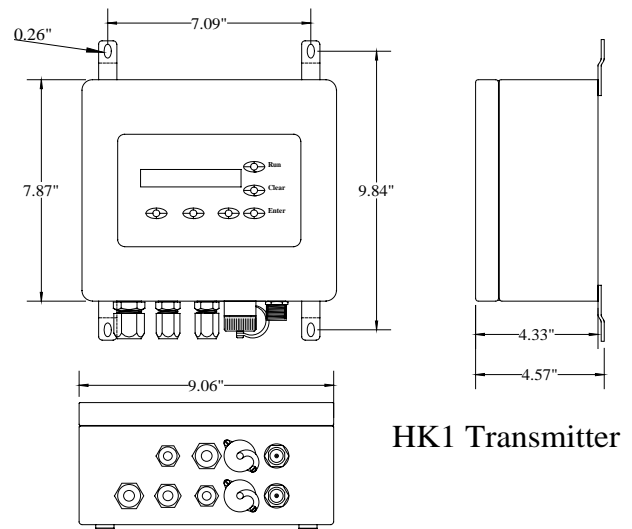
System Components:

- Microwave Transmitter
- Remote Keypad (Optional)
- Coaxial Cables (19 to 39 inches max.)
- Microwave Spiral Horn Antenna (Pair)
- Spool Piece with Half Couplings
- 2-Wire RTD

Transmitter Specifications:

Voltage:	115 / 230 VAC
Power:	approx. 50VA
System:	Microprocessor with non-volatile memory
Display:	2 X 24 alphanumeric LCD
Housing:	Epoxy coated Aluminum NEMA 4, IP 65
Weight:	10 lbs.

Operating temperature:	0 °C to 50 °C
Storage temperature:	-40 °C to 85 °C
Microwave frequency:	ISM – Band; Multi or 2.45 Ghz
Maximum Power:	0 dBm, 1 mW
Sensitivity:	-80 dBm, 10 nW
Noise immunity:	IEC 801, part 1-5
Radiation:	VDE 0871 Class B
Instrument Safety:	IEC 1010-1

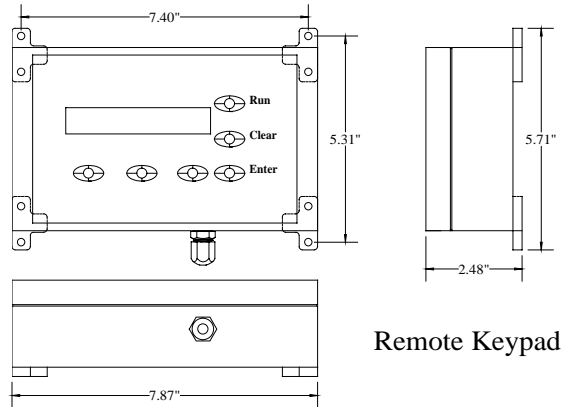


HK1 Transmitter

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Remote Read-out Unit Specifications:

Housing: FRP Plastic NEMA 4, IP65
 Weight: 2 lbs.
 Cable length: max. 200 ft.

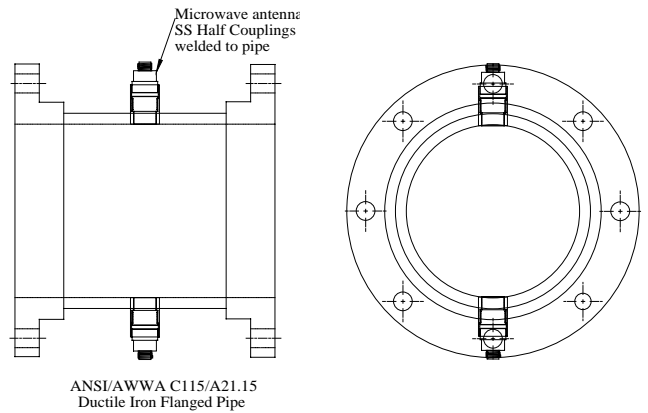


Remote Keypad

Spool Piece Specifications:

Ductile Iron:

Size: 4" to 10"
 Material: ANSI/AWWA C115/A21.15
 Length: 12" standard
 Weight: 4" - 40 lbs.
 6" - 56 lbs.
 8" - 84 lbs.
 10" - 115 lbs.
 Half Coupling: X2 SS, Welded to Pipe
 Microwave X2 Spiral, SS and Epoxy Exterior Antenna:
 RTD: 100 ohm Pt, strapped surface mount



Stainless Steel:

Size: 2" to 10"
 Material: 304 ss
 Length: 12" standard
 Weight: 4" - 35 lbs.
 6" - 56 lbs.
 8" - 78 lbs.
 10" - 110 lbs.
 Half Coupling: X2 SS, Welded to pipe
 Microwave X2 Spiral, SS and Epoxy Exterior Antenna:
 RTD: 100 ohm Pt, strapped surface mount

