CROSS SMART SENSOR

RV7: Radar Velocity Sensor

Digital technology for optimized measures

RV7 is a non-contact 24.125/24.200 GHz RADAR based velocity sensor that uses Doppler Effect to produce velocity data of a moving surface. The measurement can be widely used for hydrological monitoring, flood control, and environmental pollution monitoring. Non-contact surface flow measurement is simple, free from water corrosion, silt or slurry. It also protects the safety of personnel.

The velocity present on a surface is typically within 10% of the average velocity. There is an empirical algorithm that yields to an accurate determination of the average velocity from the measurement of the surface velocity at a known flume.

RV7 works not only for the usual environmental monitoring; it is particularly suited to undertake urgent and difficult observation tasks. Incorporating with Delta-Phase's GDC controller and various types of level gauges, RV7 can be used as a cross-sectional area/velocity based flow meter for measuring flow rate of non-standard open channel and non-full pipe.

FEATURES & BENEFITS

- Non-contact measurement, no silt, slurry or polluted water impact, reduced maintenance costs;
- Extra-large measuring angle: 12° Azimuth, 24° Elevation;
- IP68 protection, especially for waste water treatment; measurement and monitoring of sewerage pipelines or other environments;
- Variety modes of measurement: fixed on tripod on bridge or shore, fixed installation under bridge, and cableway flow measurement;
- Smart echo algorithm and software filtering to get accurate velocity value without environmental interference;
- The averaged velocity is calculated by the surface velocity based on different mathematic models;
- When combined with composite GDC level sensor, RV7 can be used to measure flow rate of non-standard open channel and non-full pipes without primary device

DELTA-PHASE ELECTRONICS, INC.
1502 E. Warner Ave., Suite B, Santa Ana, CA 92705 U.S.A. TEL: (714) 866-8070 www.delta-phase.us

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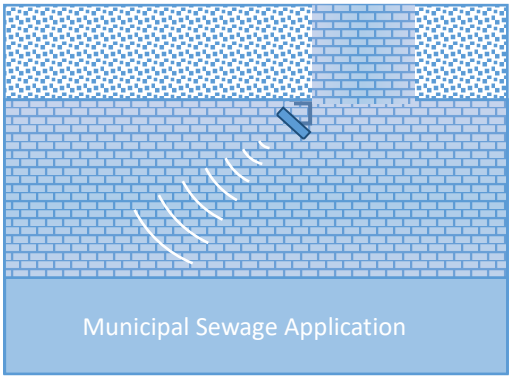
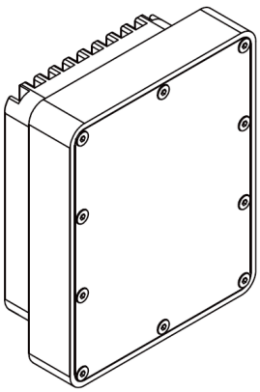
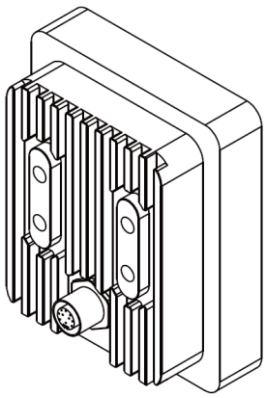
SPECIFICATIONS	
Measurement Principle	Non-contact K-band 24.125/24.200 GHz Doppler Radar, 27 dBm EIRP
Detection Distance	164 ft (50m)
Range	0.066 to 50 ft/s (0.02 to 15 m/s)
Accuracy	± 0.066 ft/s (± 0.02 m/s)
Departure Angle	12° Azimuth, 24° Elevation
Operating Temp.	-40 °F to 185 °F (-40 °C to 85 °C) (without heating or coolers)
Angle Compensated	vertical angle (automatic), horizontal angle (manual input)
Data Interface	RS485 Modbus RTU
Baud Rate	1200 to 115200bps
Power	9 to 27 VDC, Powered by GDC; <1.35W (Typical 1.0W)
Protection Rate	IP68
Weight	2.2 lbs. (1 kg)
Dimension	4.33” × 3.54” × 1.97” (110 mm × 90 mm × 50 mm)



ORDER CODE

RV7 Radar Velocity Sensor	
	-C20 20’ (6 m) cable
	-C30 30’ (9 m) cable
	Please contact factory for other length cable
RV7	**-C30**





TERMINALS		
GDC-01/02 Terminal Single or dual-channels	**GDC-04/06/08 Controller** Multi-channels up to eight	**GDC-Ex Terminal** Ex-proof
		

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