

FTS SDI RM Young Alpine Wind Monitor



The Digital Advantage.

The FTS SDI RMYoung Alpine Wind Monitor is the RM Young 05103-45 wind monitor with the addition of an SDI-12 interface. It's the only mechanical dual wind sensor available that offers SDI output. The SDI-12 interface avoids the complexity of measuring the AC wind speed signal or the potentiometer output. Wind speed and wind direction are returned in engineering units when requested by SDI command.

SDI output offers several advantages over analog wind sensors:

- allows longer cable runs (up to 305 m / 1,000')
- permits multiple sensors per datalogger
- allows datalogger to acquire sensor serial number automatically
- intuitive diagnostics, less training required, simpler operation

Additional measurements are provided by the SDI-12 interface including peaks, averages, and wind direction capture at peak. Units can be user selected to be km/h, mph, knots or m/s. Vector or scalar averaging algorithms are supported with integration intervals adjustable from .25 to 6000 seconds. Because the sensor uses the SDI-12 protocol, multiple wind sensors can be connected to the same data logger. This can be useful if sensors at various elevations on a tower are required. SDI-12 is a universal standard, so the sensor is fully compatible with all SDI-enabled dataloggers.

Extremely Rugged.

The wind speed sensor is a four blade helicoid propeller. The wind direction sensor is a rugged yet lightweight vane. Vane angle is sensed by a precision potentiometer. Propeller diameter is slightly reduced from the non-alpine version to minimize vibration at high speeds. External housing surfaces are coated with a specially formulated, ice-resistant coating to improve performance in harsh alpine conditions, and the all-black color scheme further enhances ice-shedding performance of the sensor. Constructed of UV stabilized plastic with stainless steel and anodized aluminum fittings, the sensor mounts on standard 1 inch pipe.

Options

Available in three standard cable configurations:

- 10.67 m (35') armored cable with waterproof, positive-locking Bayonet connector
- 15.24 m (50') standard cable with waterproof, positive-locking Bayonet connector
- 15.24 m (50') standard cable with bare leads

Technical Specifications	
Wind Speed	
Range	0-100 m/s (224 mph)
Accuracy	±0.3 m/s (0.6 mph) or 1% of reading
Threshold	1.0 m/s (2.2 mph)
Wind Direction	
Range	0-359 degrees
Accuracy	±3 degrees
Threshold	1.1 m/s (2.4 mph)
Communications Protocol	SDI-12, version 1.3
Operating temperature	-50°C to +50°C
Power requirements	8 VDC to 24 VDC (5mA @ 12 VDC)
Cable length	50 ft. (maximum 250 ft.) PVC or stainless steel armored (35 ft.)
Dimensions	37 cm (14.6") H x 55 cm (21.7") L Propeller: 14 cm (5.5") dia. Mounting: 34 mm (1.34") dia. (standard 1" pipe)
Weight	1.0 kg (2.2 lbs)
Manufacturer	R.M. Young Company