

# WINDCRANE™ Q20

## Wind Speed Sensor



Anemometer for WINDCRANE wind monitoring system

### Technical Specification

The Q20 anemometer is a rugged, high-accuracy wind speed sensor for use with the WINDCRANE wind monitoring system. It is easy to install and provides reliable, accurate wind readings.

The sensor is supplied with mounting hardware (mount tube and clamp) for easy installation on a tubular pole or stub mast.

Connection to the WINDCRANE logger unit is via tough, abrasion-resistant shielded cable with rugged weatherproof M12 industrial connectors.



#### Mechanical

Materials	Lexan/polycarbonate rotor and ABS body, PVC weather boot, black colour. Low-friction self-lubricating bearings.
Dimensions	Sensor height 130 mm, rotor diameter 190 mm Mount tube + sensor height 300 mm approx
Mounting	Integral mounting tube, 250 mm length, 12.7 mm dia. Clamp bracket to suit mounting onto 25-50 mm (1-2 inch) diameter tubular pole.
Working temperature	-40 °C to +60 °C (non-icing)
Weight	0.6 kg incl. fixings and cable



#### Electrical / Measurement

Sensor	Reed switch sensor and rotating magnet.
Measurement range	0.75 - 50 m/s (3-180 km/h, 2-112 mph) (survival 90 m/s, 320 km/h, 200 mph)
Accuracy	1% nominal, $\pm 0.1$ m/s (5-25 m/s) or 1 km/h (3-15 km/h), consensus standard (Calibrated version also available)
Power	Passive, powered by logger (max 24 V / 10 mA)
Connection	M12 4-pole male connector on pre-wired 1.5 m pigtail. Logger connection via M12 cable supplied separately. Pin 1 = Output signal (volt-free contact to GND) Pin 2 = GND Knurl/Thread = Cable screen
Output Signal	Pulse frequency output proportional to wind speed. Speed m/s = $0.382 \times \text{Hz}$ (conversion from frequency signal to wind speed units is handled by WINDCRANE system)