

# Kestrel 3500-IS Intrinsically Safe Pocket Weather Meter



The Kestrel 3500-IS Intrinsically Safe Pocket Weather Meter is a critical instrument for use in underground mine ventilation operations.

Split second decisions in the field leave no time for guesswork. Get every environmental condition in seconds with the reliable Kestrel 3500-IS.

A rugged, multi-function wind and weather meter that measures all the environmental variables, including air velocity (wind speed), wet / dry bulb temperature, relative humidity, heat stress index, barometric pressure, dew point and more.

Every unit is fully tested for measurement accuracy and waterproof integrity and is calibrated to NIST traceable standards.

### Measures

- » Current/Average Wind Speed
- » Maximum Wind Gust
- » Wet / Dry Bulb Temperature
- » Relative Humidity
- » Heat Stress Index
- » Wind Chill
- » Dew Point
- » Barometric Pressure
- » Pressure Trend
- » Altitude

### Features

- » 3-Button Control
- » Real-time clock
- » Drop-Tested, MIL-STD-810G
- » Waterproof and floats
- » Easy-to-read display with backlight
- » Data hold function
- » CR2032 Coin Cell Battery (Average Life 300 Hours)
- » Neck Lanyard
- » Forecast weather with pressure trend indicator
- » Patented Impeller and Sensor Technology
- » Reliable, portable and easy to use
- » Slip-On Protective Cover

### Intrinsic Safety

The Kestrel Model 3500-IS Intrinsically Safe Pocket Weather Meter holds Certificate of Conformity for Explosion-protected Electrical Equipment (to Ex ia I IP55) issued by SIMTARS.

### Patented Impeller and Sensor Technology

Features a large, impeller mounted on a sapphire jewel bearing, which means it starts rotating with the slightest puff of air, and this unique impeller is user-replaceable, too, which means it can easily be replaced if it is damaged or worn.

If your application demands regular calibration, simply pop in a new impeller and the instrument is restored to like-new factory calibration standards.

The humidity sensor can be recalibrated in the field using the optional Relative Humidity Calibration Kit.

### Kestrel 3500-IS Specifications

| Sensors                |                                                               |                                                                |                                                                                                                  |
|------------------------|---------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| SENSOR                 | ACCURACY                                                      | RESOLUTION                                                     | SPEC. RANGE                                                                                                      |
| Wind Speed / Air Speed | Larger of 3% of reading, least significant digit or 20 ft/min | 0.1 m/s<br>1 ft/min<br>0.1 km/h<br>0.1 mph<br>0.1 knots<br>1 B | 0.6 to 40.0 m/s<br>118 to 7,874 ft/min<br>2.2 to 144.0 km/h<br>1.3 to 89.5 mph<br>1.2 to 77.8 knots<br>0 to 12 B |
| Ambient Temperature    | 0.5 °C                                                        | 0.1 °C                                                         | -29.0 to 70.0 °C                                                                                                 |
| Relative Humidity      | 3%RH                                                          | 0.1 %RH                                                        | 5 to 95% 25°C non-condensing                                                                                     |
| Pressure               | 1.5 hPa   mbar<br>0.044 inHg<br>0.022 PSI                     | 0.1 hPa   mbar<br>0.01 inHg<br>0.01 PSI                        | 25°C<br>750-1100 hPa   mbar<br>22.15-32.48 inHg<br>10.88-15.95 PSI                                               |

| Calculated Measurements        |                                                                                               |                                         |                                           |
|--------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------|
| MEASUREMENT                    | ACCURACY                                                                                      | RESOLUTION                              | SENSORS EMPLOYED                          |
| Altitude                       | typical: 23.6ft/7.2 m<br>from 750 to 1100 mBar<br>max: 48.2 ft/14.7 m<br>from 300 to 750 mBar | 1 ft<br>1 m                             | Pressure, User Input (Reference Pressure) |
| Barometric Pressure            | 0.07 inHg<br>2.4 hPa   mbar<br>0.03 PSI                                                       | 0.01 inHg<br>0.1 hPa   mbar<br>0.01 PSI | Pressure, User Input (Reference Altitude) |
| Delta-T                        | 3.2 °F<br>1.8 °C                                                                              | 0.1 °C                                  | Temp, RH, Pressure                        |
| Dew Point                      | 3.4 °F<br>1.9 °C<br>15-95% RH.<br>Refer to Range for Temperature Sensor                       | 0.1 °C                                  | Temp, RH                                  |
| Heat Index                     | 4.0°C                                                                                         | 0.1 °C                                  | Temp, RH                                  |
| Wet Bulb Temp. - Psychrometric | 1.8 °C                                                                                        | 0.1 °C                                  | Temp, RH, Pressure                        |
| Wind Chill                     | 0.9 °C                                                                                        | 0.1 °C                                  | Wind Speed, Temperature                   |

