

## Specifications for probes and modules for classes 210 and 310 portables

### PRESSURE / TEMPERATURE MODULE

- PRESSURE**



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
<b>MPR 500</b>	Pa, mmH <sub>2</sub> O, In WG, mbar, hPa, mmHg, daPa, kPa	From 0 to ±500 Pa From 2 to 28 m/s**	From -100 to +100 Pa : ±0.2% of reading ±0.8 Pa Beyond : ±0.2% of reading ±1.5 Pa	From -100 to +100 Pa: 0.1 Pa Beyond: 1 Pa	MP 210 AMI 310
<b>MPR 2500</b>	Pa, mmH <sub>2</sub> O, In WG, mbar, hPa, mmHg, daPa, kPa	From 0 to ±2500 Pa From 2 to 60 m/s**	±0.2% of reading ±2 Pa	1 Pa	MP 210 AMI 310
<b>MPR 10000</b>	Pa, mmH <sub>2</sub> O, In WG, mbar, hPa, mmHg, daPa, kPa	From 0 to ±10000 Pa From 4 to 100 m/s**	±0.2% of reading ±10 Pa	1 Pa	MP 210 AMI 310
<b>MPR 500 M</b>	mmH <sub>2</sub> O, In WG, mbar, hPa, mmHg, daPa, kPa, PSI	From 0 to ±500 mbar From 9 to 100 m/s**	±0.2% of reading ±0.5 mbar	0.1 mbar	MP 210 AMI 310
<b>MPR 2000 M</b>	bar, In WG, mbar, hPa, mmHg, kPa, PSI	From 0 to ±2000 mbar From 18 to 100 m/s**	±0.2% of reading ±2 mbar	1 mbar	MP 210 AMI 310

Response time in pressure  $t_{93}$ : 0.5 s

- THERMOCOUPLE TEMPERATURE**

Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
°C, °F	K : From -200 to +1300°C J : From -100 to +750°C T : From -200 to +400°C S : From 0 to 1760°C N : From -200 to 1300°C	K, J, T, N: From -200 to 0°C: ±0.4°C ±0.3% of reading From 0 to 1300°C: ±0.4°C S: ±0.6°C	0.1°C	MP 210 AMI 310

### PITOT TUBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
See associated data sheet	Air velocity: m/s, fpm, km/h, mph	From 2 à 5 m/s From 5.1 à 100 m/s	±0.3 m/s ±0.5% of reading ±0.2 m/s	0.1 m/s	MP 210 AMI 310
	Airflow: m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	From 0 to 99999 m <sup>3</sup> /h	±0.2% of reading ±1% FS	1 m <sup>3</sup> /h	

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

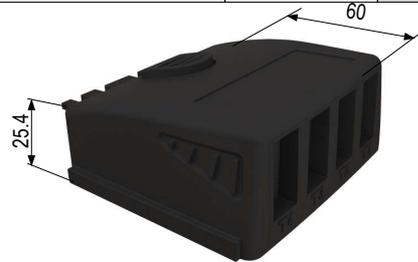
\*\*According to the airflow device coefficient connected to the device.

## DEBIMO MEASUREMENT WINGS



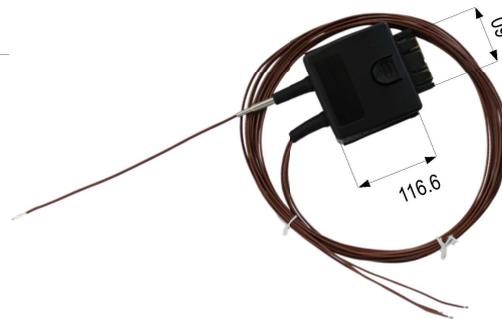
Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
See associated data sheet	Air velocity: m/s, fpm, km/h, mph	From 3 to 20 m/s From 21 to 100 m/s	$\pm 0.3$ m/s $\pm 1\%$ of reading $\pm 0.1$ m/s	0.1 m/s	MP 210 AMI 310
	Airflow: m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	From 0 to 99999 m <sup>3</sup> /h	$\pm 0.2\%$ of reading $\pm 1\%$ FS	1 m <sup>3</sup> /h	

## THERMOCOUPLE MODULE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
M4TC	$^{\circ}\text{C}$ , $^{\circ}\text{F}$	K: From -200 to +1300 $^{\circ}\text{C}$ J: From -100 to +750 $^{\circ}\text{C}$ T: From -200 to +400 $^{\circ}\text{C}$ S: From 0 to +1760 $^{\circ}\text{C}$ N: From -200 to +1300 $^{\circ}\text{C}$	K, J, T, N: From -200 to 0 $^{\circ}\text{C}$ : $\pm 0.4^{\circ}\text{C} \pm 0.3\%$ of reading From 0 to 1300 $^{\circ}\text{C}$ : $\pm 0.4^{\circ}\text{C}$ S: $\pm 0.6^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$	HQ 210 MP 210 VT 210 TM 210 AMI 310

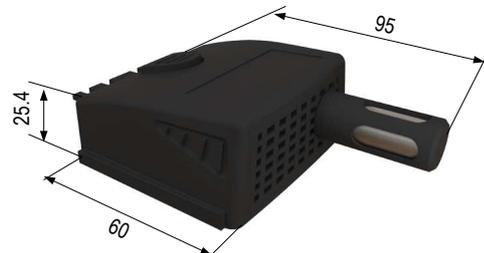
## U COEFFICIENT MODULE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
MCU	$^{\circ}\text{C}$ , $^{\circ}\text{F}$ W/m <sup>2</sup>	T Thermocouple: From -20 to +80 $^{\circ}\text{C}$	$\pm 0.3^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$	TM 210 AMI 310

Please refer to "U coefficient module explanatory note" for more details about the U coefficient module (document available upon request)

## CLIMATIC CONDITIONS MODULE

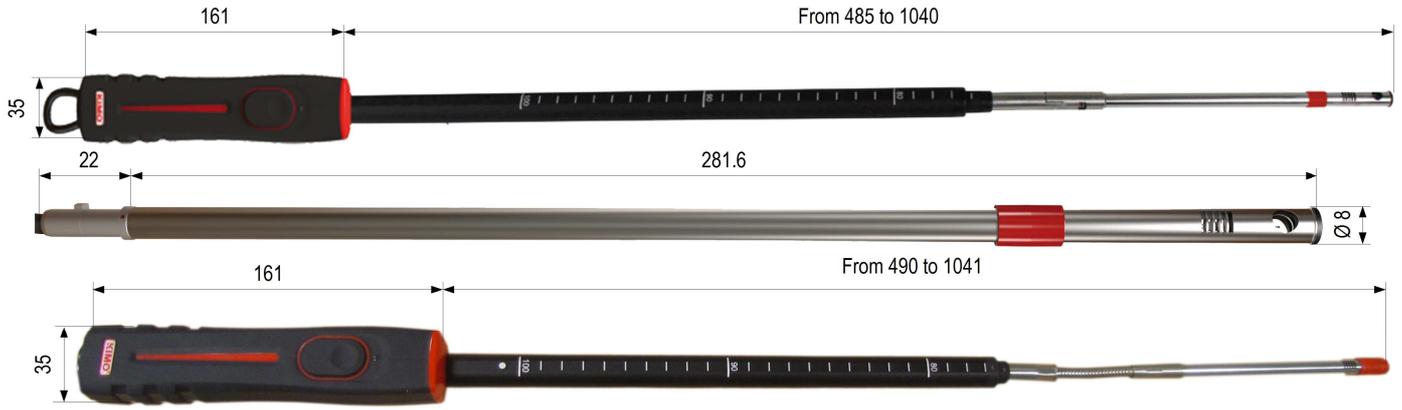


Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
MCC	Temp.: $^{\circ}\text{C}$ , $^{\circ}\text{F}$	From 0 to +50 $^{\circ}\text{C}$	$\pm 0.4\%$ of reading $\pm 0.3^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$	HQ 210 VT 210 AMI 310
	Atmospheric pressure: hPa	From 800 to 1100 hPa	$\pm 3$ hPa	1 hPa	
	Hygro.: %RH	From 0 to 100%RH	<b>Accuracy (Repeatability, linearity, Hysteresis):</b> $\pm 1.8\%$ RH (from 15 $^{\circ}\text{C}$ to 25 $^{\circ}\text{C}$ and from 5 to 95%RH) <b>Factory calibration uncertainty:</b> $\pm 0.88\%$ RH <b>Temperature dependence:</b> $\pm 0.04 \times (T-20)$ %RH (if T<15 $^{\circ}\text{C}$ or T>25 $^{\circ}\text{C}$ )	0.1%RH	

Response time  $t_{63}$ : hygrometry 50 s / temperature 25 s / atmospheric pressure 0,5 s.

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.  
\*\*Specific adjustment and calibration in option

## HOT-WIRE PROBE / TELESCOPIC HOT-WIRE PROBE / TELESCOPIC HOT-WIRE GOOSENECK PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SFC 300 / SFC 900 / SFC 900 GN	Air velocity: m/s, fpm, km/h, mph	From 0.15 to 1 m/s	±2% of reading ±0.03 m/s Specific adjustment and calibration in option	0.01 m/s	MP 210 VT 210 AMI 310
		From 0.15 to 3 m/s From 3.1 to 30 m/s	±3% of reading ±0.03 m/s ±3% of reading ±0.1 m/s	0.01 m/s 0.1 m/s	
	Airflow: m³/h, cfm, l/s, m³/s	From 0 to 99999 m³/h	±3% of reading or ±0.03*sheath surface (cm²)	1 m³/h	
	Temperature: °C, °F	From -20 to +80°C	±0.3% of reading ±0.25°C	0.1°C	

Response time  $t_{93}$  : air velocity and airflow 0.6 s / temperature 5 s

## HOT WIRE AIR VELOCITY MEASUREMENT PROBE FOR LABORATORY HOOD

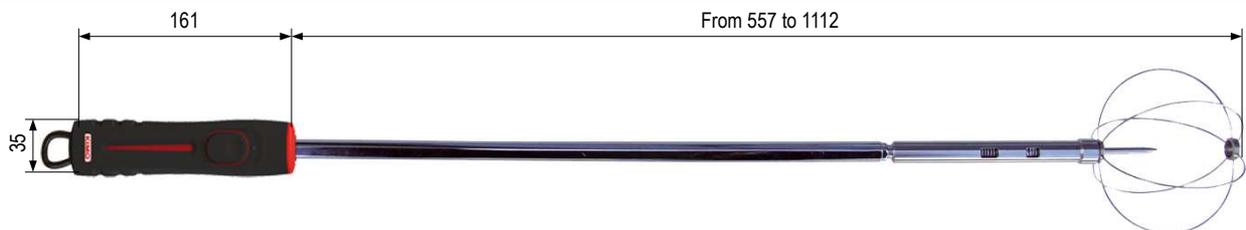


Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SFC 300 S**	Air velocity: m/s, fpm, km/h, mph	From 0.15 to 3 m/s	±5% of reading ±0.02 m/s	0.01 m/s	MP 210 VT 210 AMI 310
		From 3.1 to 5 m/s		0.1 m/s	
	Airflow: m³/h, cfm, l/s, m³/s	From 0 to 99999 m³/h	±5% of reading or ±0.02*sheath surface (cm²)	1 m³/h	
	Temperature: °C, °F	From 0 to +50°C	±0.3% of reading ±0.25°C	0.1°C	

Response time  $t_{93}$  : air velocity and airflow 0.6 s / temperature 5 s

\*\* Meets the EN 14175-3 standard.

## HOT WIRE OMNIDIRECTIONAL TELESCOPIC PROBE

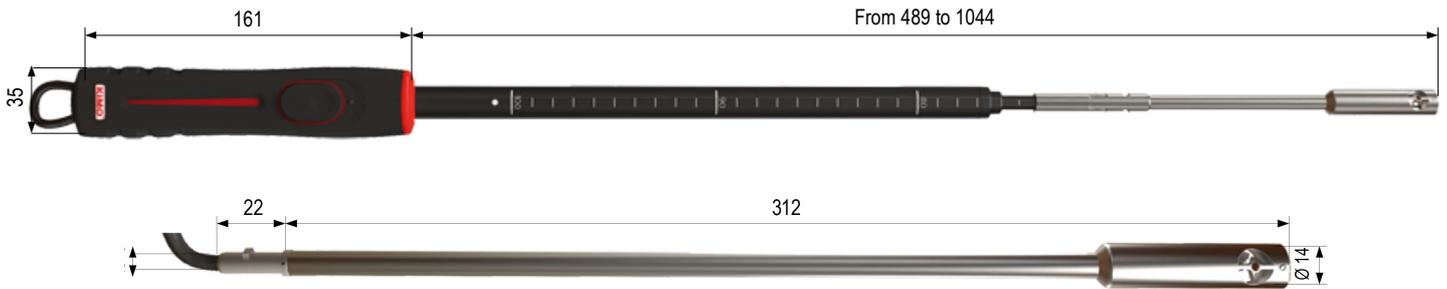


Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SOM 900	Air velocity: m/s, fpm, km/h	From 0.00 to 5.00 m/s	±3% of reading ±0.05 m/s	0.01 m/s	HQ 210 AMI 310
	Relative humidity: %RH	From 0 to 100%RH	<b>Accuracy (Repeatability, linearity, Hysteresis):</b> ±1.8%RH (from 15°C to 25°C and from 5 to 95%RH) <b>Factory calibration uncertainty:</b> ±0.88 %RH <b>Temperature dependence:</b> ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	
	Temperature: °C, °F	From -20 to +80°C	±0.3% of reading ±0.25°C	0.1°C	

Response time  $t_{93}$  : air velocity and airflow 0.6 s / temperature 5 s

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

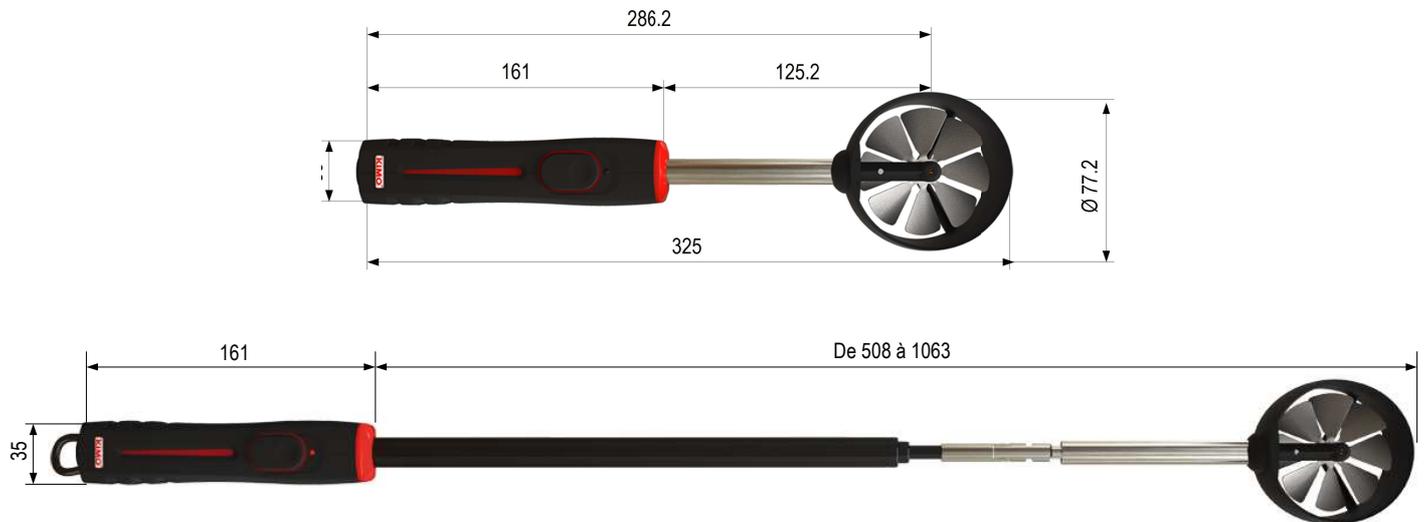
## Ø14 MM VANE PROBE / Ø14 MM TELESCOPIC VANE PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SH 14 / SHT 14	Air velocity: m/s, fpm, km/h, mph	From 0 to 3 m/s From 3.1 to 25 m/s	From 0.8 to 3 m/s: $\pm 3\%$ of reading $\pm 0.1$ m/s From 3.1 to 25 m/s: $\pm 1\%$ of reading $\pm 0.3$ m/s	0.1 m/s	MP 210 VT 210 AMI 310
	Airflow: m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	From 0 to 99999 m <sup>3</sup> /h	$\pm 3\%$ of reading or $\pm 0.03$ * sheath surface (cm <sup>2</sup> )	1 m <sup>3</sup> /h	
	Temperature: °C, °F	From -20 to +80 °C	$\pm 0.4\%$ of reading $\pm 0.3$ °C	0.1 °C	

Response time  $t_{63}$ : air velocity and airflow 0.6 s / temperature 5 s.

## Ø70 MM VANE PROBE / Ø70 MM TELESCOPIC VANE PROBE



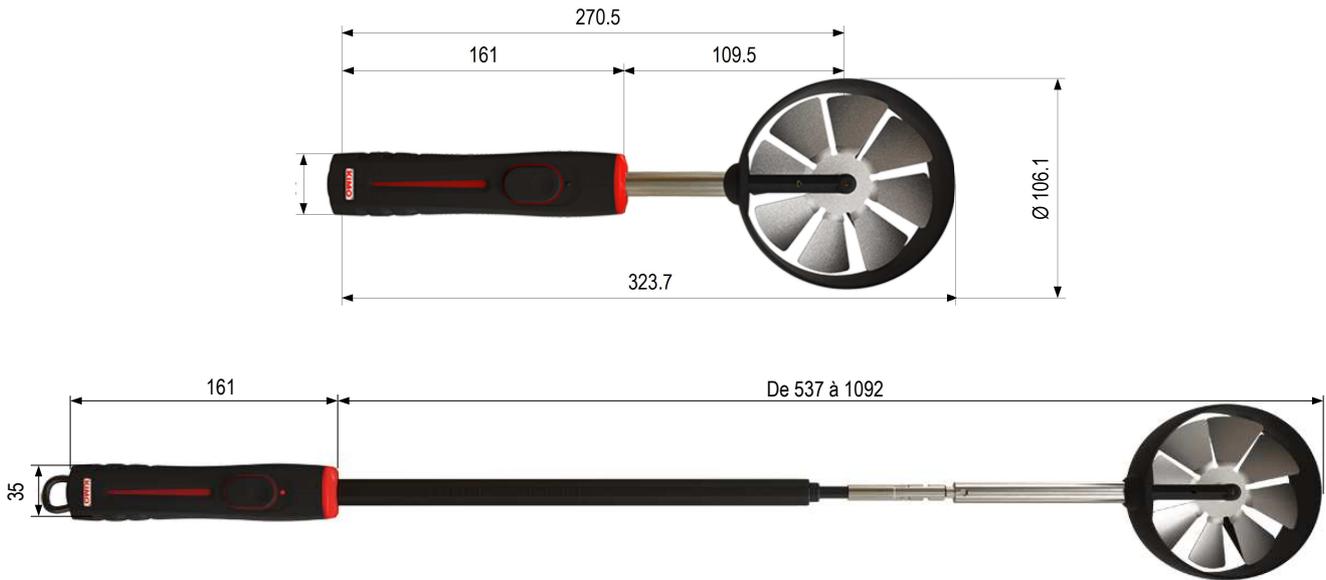
Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SH 70 / SHT 70 SHF 70 <sup>1</sup>	Air velocity: m/s, fpm, km/h, mph	From -5 to 3 m/s From 3.1 to 35 m/s	From 0.4 to 3 m/s: $\pm 3\%$ of reading $\pm 0.1$ m/s From 3.1 to 35 m/s: $\pm 1\%$ of reading $\pm 0.3$ m/s	0.1 m/s	MP 210 VT 210 AMI 310
	Airflow: m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	From 0 to 99999 m <sup>3</sup> /h	$\pm 3\%$ of reading or $\pm 0.03$ * sheath surface (cm <sup>2</sup> )	1 m <sup>3</sup> /h	
	Temperature: °C, °F	From -20 to +80 °C	$\pm 0.4\%$ of reading $\pm 0.3$ °C	0.1 °C	

Response time  $t_{63}$ : air velocity, airflow and temperature 0.8 s.

<sup>1</sup> Radiofrequency model: maximum range between the probe and the device of 10m in free field without obstruction.

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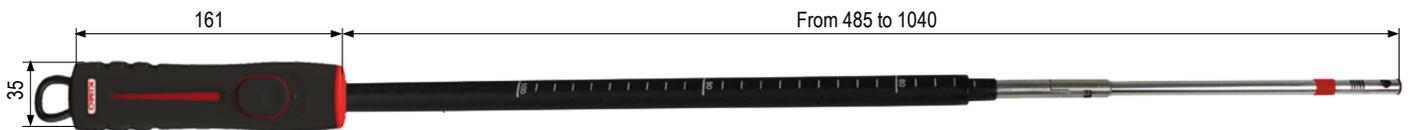
## Ø100 MM VANE PROBE / Ø100 MM TELESCOPIC VANE PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SH 100 / SHT 100 SHF 100 <sup>1</sup>	Air velocity: m/s, fpm, km/h, mph	From -5 to 3 m/s From 3.1 to 35 m/s	From 0.3 to 3 m/s: $\pm 3\%$ of reading $\pm 0.1$ m/s From 3.1 to 35 m/s: $\pm 1\%$ of reading $\pm 0.3$ m/s	0.01 m/s 0.1 m/s	MP 210 VT 210 AMI 310
	Airflow: m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	From 0 to 99999 m <sup>3</sup> /h	$\pm 3\%$ of reading or $\pm 0.03$ *sheath surface (cm <sup>2</sup> )	1 m <sup>3</sup> /h	
	Temperature: °C, °F	From -20 to +80 °C	$\pm 0.4\%$ of reading $\pm 0.3$ °C	0.1 °C	

Response time  $t_{63}$  : air velocity, airflow and temperature 1 s.

## HOT WIRE MULTIFUNCTION PROBE



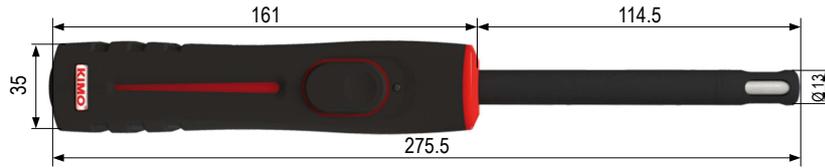
Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SMT 900	Air velocity: m/s, fpm, km/h, mph	From 0.15 to 3 m/s From 3.1 to 30 m/s	$\pm 3\%$ of reading $\pm 0.03$ m/s $\pm 3\%$ of reading $\pm 0.1$ m/s	0.01 m/s 0.1 m/s	VT 210 AMI 310
	Airflow: m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	From 0 to 99999 m <sup>3</sup> /h	$\pm 3\%$ of reading or $\pm 0.03$ *sheath surface (cm <sup>2</sup> )	1 m <sup>3</sup> /h	
	Relative humidity: %RH	From 0 to 100 %RH	<b>Accuracy (Repeatability, linearity, Hysteresis) :</b> $\pm 1.8\%$ RH (from 15 °C to 25 °C and from 5 to 95 %RH) <b>Factory calibration uncertainty :</b> $\pm 0.88$ %RH <b>Temperature dependence :</b> $\pm 0.04 \times (T-20)$ %RH (if $T < 15$ °C or $T > 25$ °C)	0.1 %RH	
	Temperature: °C, °F	From -20 to +80 °C	$\pm 0.3\%$ of reading $\pm 0.25$ °C	0.1 °C	

Response time  $t_{63}$  : air velocity and airflow 0.6 s / temperature 5 s

<sup>1</sup> Radiofrequency model : maximum range between the probe and the device of 10m in free field without obstruction.

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

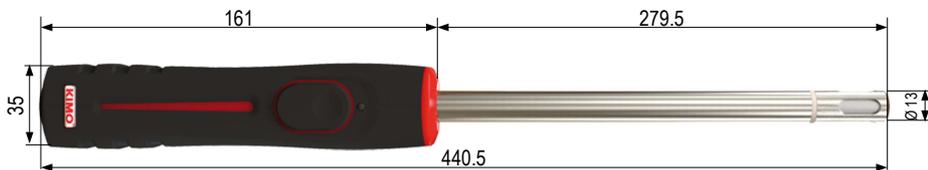
# HYGROMETRY PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SHR 110 SHRF 110 <sup>1</sup>	Relative humidity: %RH	From 0 to 100%RH	<b>Accuracy (Repeatability, linearity, Hysteresis):</b> ±1.5%RH (from 15°C to 25°C and from 3 to 98%RH) <b>Factory calibration uncertainty:</b> ±0.88 %RH <b>Temperature dependence:</b> ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	HQ 210 VT 210 AMI 310
	Absolute humidity: g/m <sup>3</sup>	From 0 to 600 g/m <sup>3</sup>	-	0.1 g/m <sup>3</sup>	
	Enthalpy: kJ/kg	From 0 to 10000 kJ/kg	-	0.1 kJ/kg	
	Combination ratio: g/kg	From 0 to 10000 g/kg	-	0.1 g/kg	
	Wet temperature: °C, °F	From -50 to +100°C	-	0.1°C	
	Dew-point: °C <sub>td</sub> , °F <sub>td</sub>	From -50 to +100°C <sub>td</sub>	±0.6% of reading ±0.5°C <sub>td</sub>	0.1°C <sub>td</sub>	
	Temperature: °C, °F	From -20 to +80°C	±0.3% of reading ±0.25°C	0.1°C	

Response time T<sub>63</sub> : relative humidity <10 s / temperature 7 s.

# HYGROMETRY HIGH TEMPERATURE PROBE



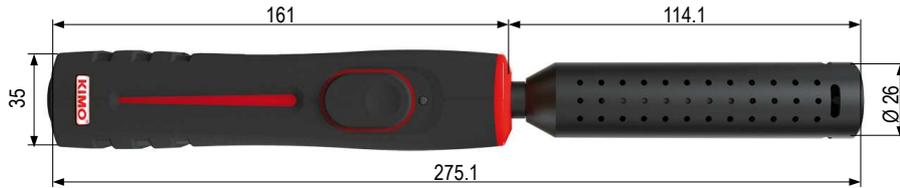
Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SHR 300 SHRF 300 <sup>1</sup>	Relative humidity: %RH	From 0 to 100%RH	<b>Accuracy (Repeatability, linearity, Hysteresis):</b> ±1.5%RH (from 15°C to 25°C and from 3 to 98%RH) <b>Factory calibration uncertainty:</b> ±0.88 %RH <b>Temperature dependence:</b> ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	HQ 210 VT 210 AMI 310
	Absolute humidity: g/m <sup>3</sup>	From 0 to 600 g/m <sup>3</sup>	-	0.1 g/m <sup>3</sup>	
	Enthalpy: kJ/kg	From 0 to 10000 kJ/kg	-	0.1 kJ/kg	
	Combination ratio: g/kg	From 0 to 10000 g/kg	-	0.1 g/kg	
	Wet temperature: °C, °F	From -50 to +100°C	-	0.1°C	
	Dew-point: °C <sub>td</sub> , °F <sub>td</sub>	From -50 to +100°C <sub>td</sub>	±0.6% of reading ±0.5°C <sub>td</sub>	0.1°C <sub>td</sub>	
	Temperature: °C, °F	From -40 to +180°C	±0.3% of reading ±0.25°C	0.1°C	

Response time T<sub>63</sub> : relative humidity <10 s / temperature 7 s.

<sup>1</sup> Radiofrequency model : maximum range between the probe and the device of 10m in free field without obstruction.

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

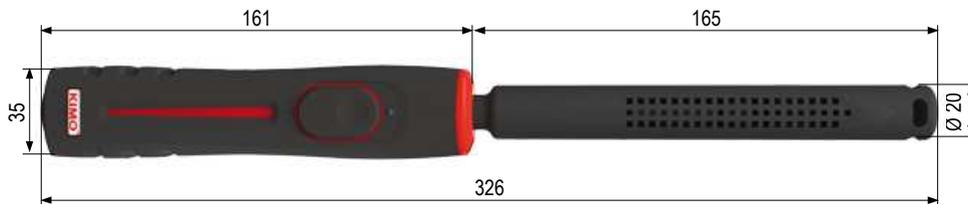
## CO / TEMPERATURE PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SCO 110	Temperature: °C, °F CO : ppm	From -20 to +80°C From 0 to 500 ppm	±0.3% of reading ±0.25°C From 0 to 50 ppm: ±2 ppm From 51 to 200 ppm: ±3 ppm From 201 to 500 ppm: ±1.5% of reading	0.1°C 0.1 ppm	HQ 210 MP 210 AMI 310

Response time  $t_{93}$  : 10 s

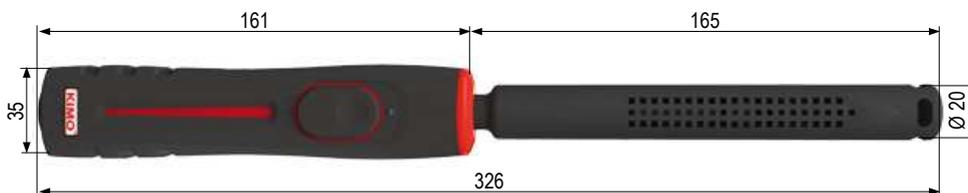
## CO<sub>2</sub> / TEMPERATURE PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SCO 112	Temperature: °C, °F CO <sub>2</sub> : ppm	From -20 to +80°C From 0 to 5000 ppm	±0.3% of reading ± 0.25°C ±3% of reading ± 50 ppm	0.1°C 1 ppm	HQ 210 AMI 310

Response time  $t_{93}$  : 30 s

## CO<sub>2</sub> / TEMPERATURE / HYGROMETRY PROBE



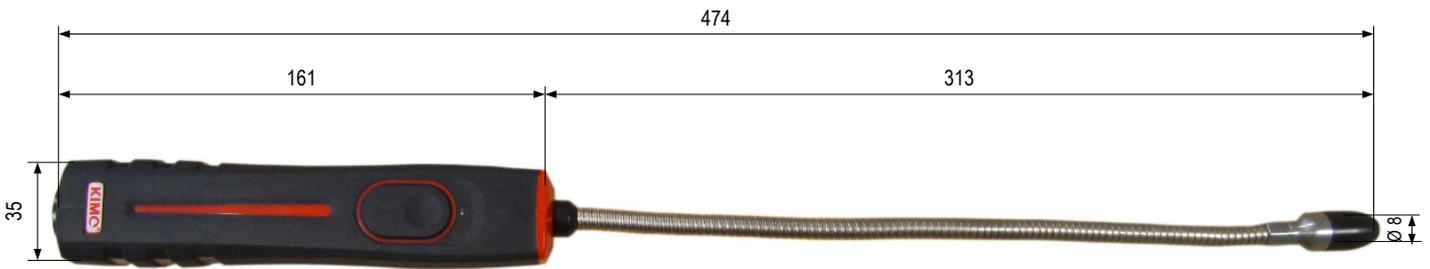
Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SCOH 112	Temperature: °C, °F CO <sub>2</sub> : ppm Hygrometry: %RH	From -20 to +80°C From 0 to 5000 ppm From 0 to 100%RH	±0.3% of reading ± 0.25°C ±3% of reading ±50ppm <b>Accuracy (Repeatability, linearity, Hysteresis):</b> ±1.8%RH (from 15°C to 25°C and from 5 to 95%RH) <b>Factory calibration uncertainty: ±0.88 %RH</b> <b>Temperature dependence:</b> ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1°C 1 ppm 0.1%RH	HQ 210 AMI 310

Response time  $t_{93}$  : 30 s

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

<sup>†</sup> Radiofrequency model : maximum range between the probe and the device of 10m in free field without obstruction.

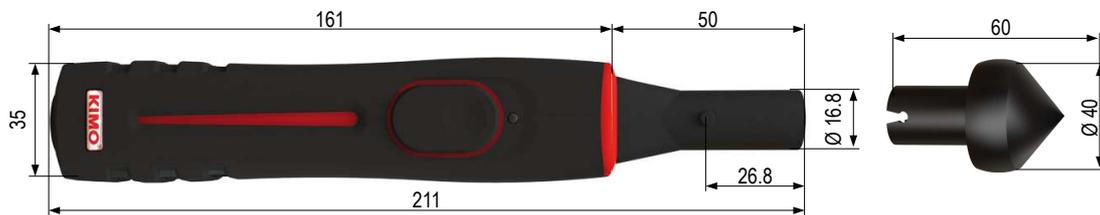
## GAS LEAK PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SFG 300	ppm %LEL %VOL	From 0 to 10 000 ppm (GPL: 0-1800) From 0 to 20%LEL From 0 to 1%VOL	±20% of full scale	1 ppm 0.01%LEL 0.001%VOL	MP 210 AMI 310

Response time  $t_{63}$  : 10 s.

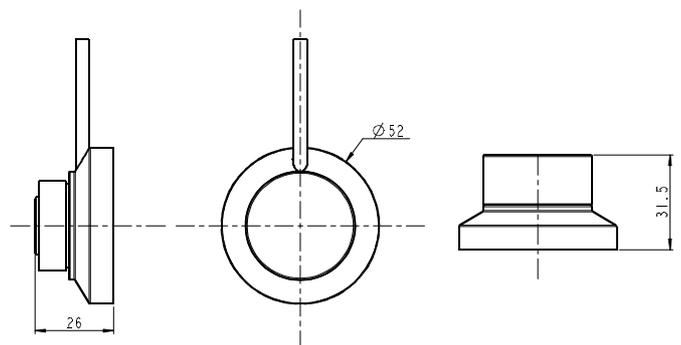
## OPTICAL TACHOMETRY PROBE / TACHOMETRY CONTACT PROBE



Part No.	Probe	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
STA	Optical	tr/min, rpm	From 60 to 10 000 tr/min From 10 001 to 60 000 tr/min	±0.3% of reading ±1 tr/min ±30 tr/min	1 tr/min	MP 210 VT 210 AMI 310
	Contact	tr/min, rpm	From 30 to 3000 tr/min	±1% of reading ±1 tr/min	1 tr/min	

Response time  $t_{63}$  : 2 s.

## LIGHT PROBE



Part No.	Measuring units	Measuring ranges	Accuracy*	Resolution	Spectral range (f1) <sup>1</sup>	Directional sensitivity (f2) <sup>1</sup>	Linearity (f3) <sup>1</sup>	Compatible devices
SLU	lux, klux, fc	From 0 to 150 000 lux From 0 to 13935 fc	±1% of reading or ±2 lux	From 0 to 999.9 lux: 0.1 lux From 1000 to 9999 lux: 1 lux From 10.00 to 99.99 klux: 0.01 klux From 100.0 to 150.0 klux: 0.1 klux	Compliant with the standard photopic curve V(λ) NF C 42-710 C class	<2%	<1%	HQ 210 AMI 310

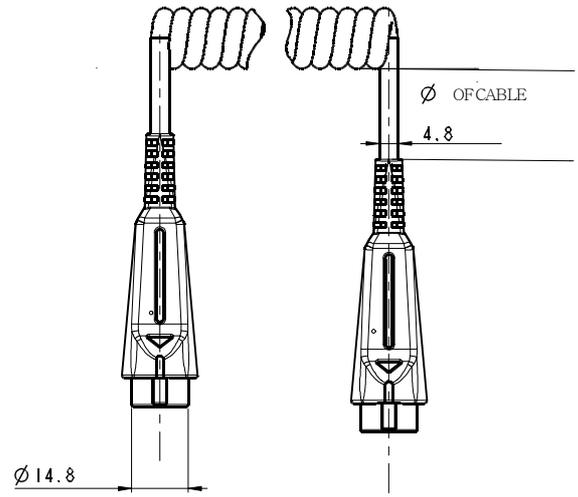
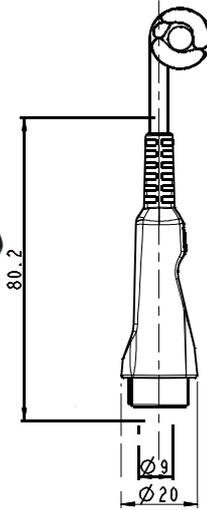
Response time  $t_{63}$  : <1 s.

\* All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation  
<sup>1</sup> The f2 and f3 coefficients are defined according to the French NF C 42-710 standard.

# CABLE



45 cm coil length  
2 m useful length



Part No.	Description
CSM	Min-DIN cable / min-DIN for probe



All dimensions specified on this document are indicated in millimetres.  
All handles are made in ABS with a -40 to +85°C operating temperature.

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