

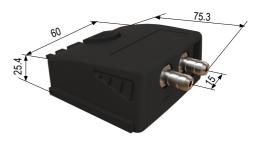
# **Technical Data Sheet**

Pressure / Temperature / Humidity / Air Velocity / Airflow / Sound level

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

## PRESSURE / TEMPERATURE MODULE

### **PRESSURE**



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
MPR 500	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
MPR 2500	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
MPR 10000	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
MPR 500 M	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
MPR 2000 M	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

### 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

Response time in pressure  $t_{\rm g3}$ : 0.5 s

#### PITOT TUBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
See associated	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
data sheet	Airflow: m³/h, cfm, l/s, m³/s	From 0 to 99999m³/h	±0.2% of reading ±1% FS	1 m³/h	AMI 310

<sup>\*</sup>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



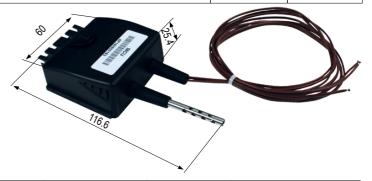
Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
See associated	Air velocity : m/s, fpm, km/h, mph	From 3 to 20 m/s From 21 to 100 m/s	±0.3 m/s ±1% of reading ±0.1 m/s	0.1 m/s	MP 210 AMI 310
data sheet	Airflow: m³/h, cfm, l/s, m³/s	From 0 to 99999m3/h	±0.2% of reading ±1% FS	1 m³/h	AIVII 3 TO

## THERMOCOUPLE MODULE



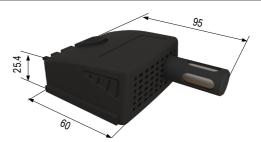
Re	eference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	M4TC	°C, °F	K: From -200 to +1300°C J: From -100 to +750°C T: From -200 to +400°C S: From 0 to 1760°C N: From -200 to 1300°C	K, J, T,N : From -200 to 0 °C : ±0.4°C ±0.3 % of reading From 0 to 1300 °C : ±0.4°C S : ±0.6 °C	0.1 °C	HQ 210 MP 210 VT 210 TM 210 AMI 310

# U COEFFICIENT MODULE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
WCU	°C, °F	T Thermocouple : From -20 to +80°C	±0.3°C	0.1 °C	TM 210 AMI 310

### CLIMATIC CONDITIONS MODULE

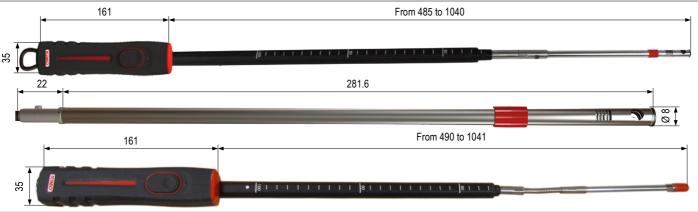


Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Temp.: °C, °F	From 0 to +50°C	±0.4%of reading ±0.3°C	0.1 °C	
	Atmospheric pressure : hPa	From 800 to 1100 hPa	±3 hPa	1 hPa	HQ 210
MCC	Hygro : %RH	From 5 to 95%RH	Accuracy (Repeatablility, linearity, Hysteresis):  ±1.8%RH (from 15°C to 25°C)  Factory calibration uncertainty: ±0.88 %RH  Temperature dependence:  ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	VT 210 AMI 310

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

<sup>\*</sup>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

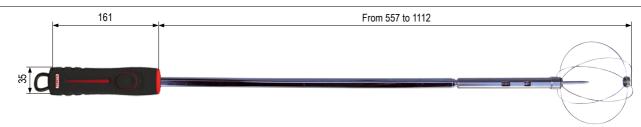
### HOT-WIRE PROBE / TELESCOPIC HOT-WIRE PROBE / TELESCOPIC HOT-WIRE GOOSENECK PROBE



Reference	Measureing units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	All challenges for the first	From 0.15 to 1 m/s	± 2% of reading ± 0.03 m/s Specific adjustment and calibration in option	0.01 m/s	
SFC 300 / SFC	Air velocity : m/s, fpm, km/h	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	MP 210 VT 210
900 / SFC 900 GN	Airflow: m³/h, cfm, l/s, m³/s	From 0 to 99999 m <sup>3</sup> /h	±3% of reading or ±0.03*sheath surface (cm²)	1 m³/h	AMI 310
	Temperature : °C, °F	From -20 to +80°C	±0.3% of reading ±0.25°C	0.1 °C	

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

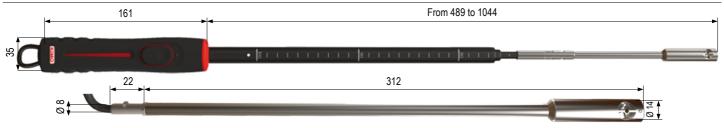
# OMNIDIRECTIONAL TELESCOPIC PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	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	
SOM 900	Relative humidity :%RH	From 5 to 95%RH	Accuracy (Repeatability, linearity, Hysteresis): ±1.8%RH (from 15°C to 25°C) Factory calibration uncertainty: ±0.88 %RH Temperature dependence: ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	HQ 210 AMI 310
	Temperature : °C, °F	From -20 to +80°C	±0.3% of reading ±0.25°C	0.1 °C	

Response time t<sub>63</sub>: air velocity and airflow 0.6 s / temperature 5 s

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

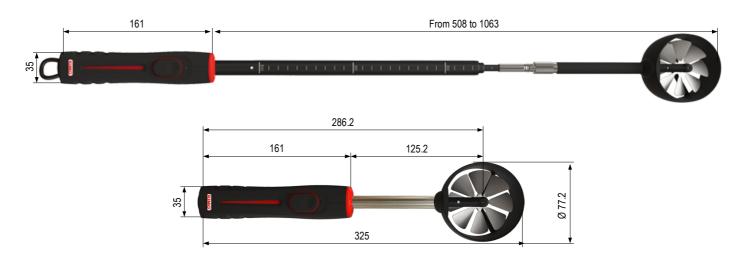


Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Air velocity : m/s, fpm, km/h	From 0 to 3 m/s From 3.1 to 25 m/s	From 0.8 to 3 m/s : $\pm 3\%$ of reading $\pm 0.1$ m/s From 3.1 to 25 m/s : $\pm 1\%$ of reading $\pm 0.3$ m/s	0.1 m/s	MP 210
SH 14 / SHT 14	Airflow: m³/h, cfm, l/s, m³/s	From 0 yo 99999 m <sup>3</sup> /h	±3% of reading or ±0.03*sheath surface (cm²)	1 m³/h	VT 210 AMI 310
	Temperature : °C, °F	From -20 to +80°C	$\pm 0.4\%$ of reading $\pm 0.3$ °C	0.1 °C	

Response time  $t_{\rm s3}$ : air velocity and airflow 0.6 s / temperature 5 s.

<sup>\*</sup>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.

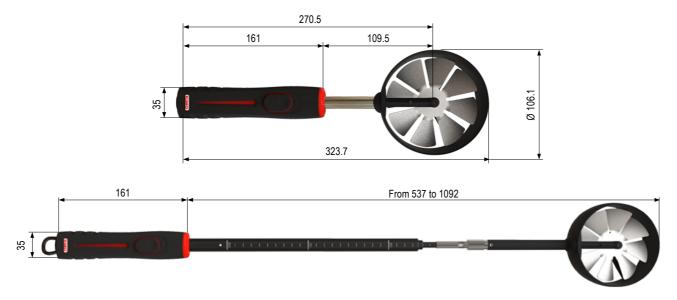
## Ø70 MM VANE PROBE / Ø70 MM TELESCOPIC VANE PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Air velocity : m/s, fpm, km/h	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	
SH 70 / SHT 70 SHF 70 <sup>1</sup>	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	MP 210 VT 210 AMI 310
	Temperature : °C, °F	From -20 to +80°C	±0.4% of reading ±0.3°C	0.1 °C	

Response time  $t_{\rm e3}$ : air velocity, airflow and temperature 0.8 s.

# Ø100 MM VANE PROBE / Ø100 MM TELESCOPIC VANE PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Air velocity : m/s, fpm, km/h	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	0.1 m/s	MP 210
SH 100 / SHT 100 SHF 100 <sup>1</sup>	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	VT 210 AMI 310
	Temperature : °C, °F	From -20 to +80°C	±0.4% of reading ±0.3°C	0.1 °C	

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

<sup>&</sup>lt;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.

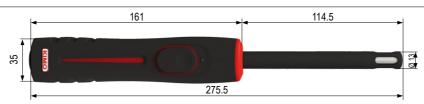
### MULTIFUNCTION PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Air velocity : m/s, fpm, km/h	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	
SMT 900	Relative humidity :%RH	From 5 to 95%RH	Accuracy (Repeatability, linearity, Hysteresis):  ±1,8%RH (from 15°C to 25°C)  Factory calibration uncertainty: ±0,88 %RH  Temperature dependence:  ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	VT 210 AMI 310
	Temperature : °C, °F	From -20 to +80°C	±0.3% of reading ±0.25°C	0.1 °C	

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

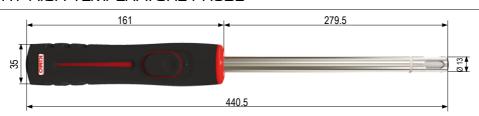
### HYGROMETRY PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Relative humidity :%RH	From 3 to 98%RH	Accuracy (Repeatability, linearity, Hysteresis): ±1.5%RH (from 15°C to 25°C) Factory calibration uncertainty: ±0.88 %RH Temperature dependence: ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	HQ 210
SHR 110 SHRF 110 <sup>1</sup>	Absolute humidity : g/Kg, Kj/Kg	Depending on the r	neasuring ranges in hygrometry and temperature	0.1 g/Kg	VT 210 AMI 310
	Dew-point : °C <sub>td</sub> , °F <sub>td</sub>	From -50 to +80°C <sub>td</sub>	$\pm 0.6\%$ of reading $\pm 0.5^{\circ}\mathrm{C}_{\mathrm{td}}$	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 : relative humidity <10 s / temperature 7 s.

# HYGROMETRY HIGH TEMPERATURE PROBE

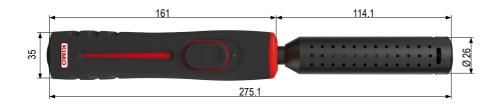


Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
	Relative humidity :%RH	From 3 to 98%RH	Accuracy (Repeatability, linearity, Hysteresis): ±1.5%RH (from 15°C to 25°C)  Factory calibration uncertainty: ±0.88 %RH Temperature dependence: ±0.04 x (T-20) %RH (if T<15°C or T>25°C)	0.1%RH	HQ 210
SHR 300 SHRF 300 <sup>1</sup>	Absolute temperature : g/Kg, Kj/Kg	Depending on the m	easuring ranges in hygrometry and temperature	0.1 g/Kg	VT 210 AMI 310
	Dew-point : °C <sub>td</sub> , °F <sub>td</sub>	From -50 to +80°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 : relative humidity <10 s / temperature 7 s.

<sup>&</sup>lt;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.

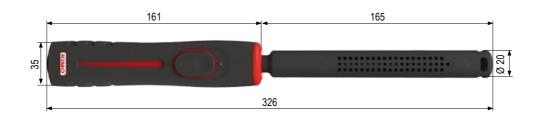
# CO / TEMPERATURE PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SCO 110	Temperature : °C, °F CO : ppm	From -20 to +80°C From 0 to 200 ppm From 200 to 500 ppm	±0.3% of reading ±0.25°C ±3 ppm ±1.5% of reading	0.1 °C 0.1 ppm	HQ 210 MP 210 AMI 310

Response time t<sub>63</sub>: 10 s

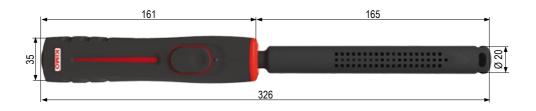
# $CO_{2}$ / TEMPERATURE PROBE



Reference	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	$\pm$ 0.3% of reading $\pm$ 0.25°C $\pm$ 3% of reading $\pm$ 50 ppm	0.1 °C 1 ppm	HQ 210 AMI 310

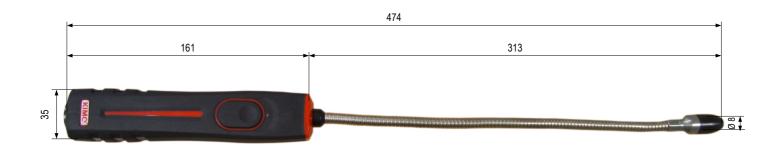
Response time  $t_{63}$ : 30 s

# ${\rm CO_{_{\rm P}}}$ / TEMPERATURE / HYGROMETRY PROBE



Reference	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 5 to 95%RH	± 0.3% of reading ± 0.25°C  ±3% of reading ±50ppm  Accuracy (Repeatability, linearity, Hysteresis):  ±1,8%RH (from 15°C to 25°C)  Factory calibration uncertainty: ±0,88 %RH  Temperature dependence:  ±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

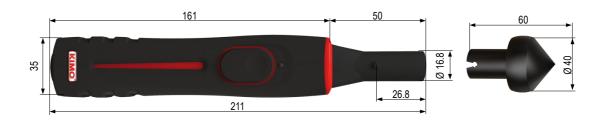
Response time t<sub>63</sub>: 30 s



Reference	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.

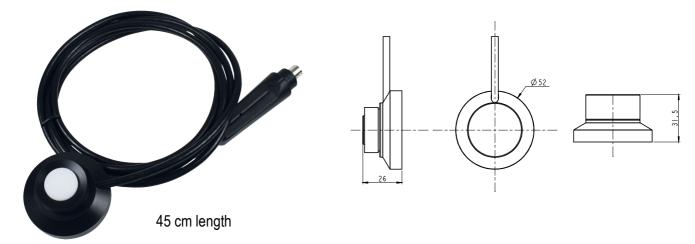
# OPTICAL TACHOMETRY PROBE / TACHOMETRY CONTACT PROBE



Reference	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		MP 210 VT 210
	Contact	tr/min, rpm	From 30 to 20000 tr/min	± 1% of reading ± 1 tr/min	1 tr/min	AMI 310

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

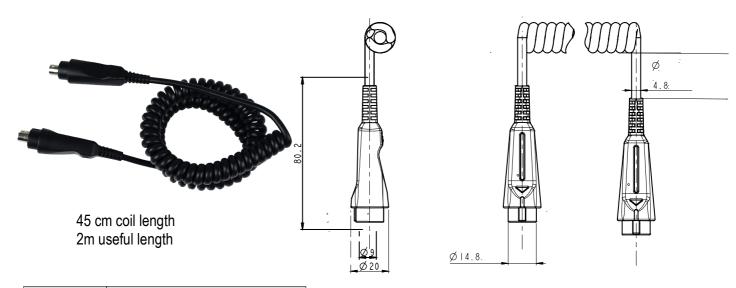
## LIGHT PROBE



Reference	Measuring units	Measuring ranges	Accuracy*	Resolution	Compatible devices
SLU	lx, klx, fc	From 0 to 150 000 lx From 0 to 13935 fc	±2 % of reading ±3 lux	From 0 to 999.9 lx : 0.1 lx From 1000 to 9999 lx : 1 lx From 10.00 to 99.99 klx : 0.01 klx From 100.0 to 150.0 klx : 0.1 klx	HQ 210 AMI 310

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

### **CABLE**



Reference	Description
СЅМ	Min-DIN cable / min-DIN for probe



All dimensions specified on this document are in millimetres.

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