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NARDA EMF MONITORS

**AMB-8059** 

# Continuous, remote monitoring and logging of electromagnetic fields



- ▲ Interchangeable probes from 10 Hz to 40 GHz for low frequency & high frequency applications
- Multi-band probes for telecommunications monitoring
- Simultaneous monitoring of electric and magnetic fields
- ▲ Fully autonomous operation:
  - Solar panel power supply
  - · Built-in 3G modem
  - Built-in Wi-Fi
  - Automatic data transfer
  - Daily reports, warnings & alarm messages via SMS
  - On-board GPS
- ▲ Easy integration into test environments and Web Based Applications
- Low weight, robust design, compact size for indoor and outdoor operations
- Drive test capability of AMB-8059/00 model according to ITU-K.113



Area Monitor AMB-8059/03 with Solar Panel

## INTRODUCTION

Narda EMF Monitors are equipped with exclusive, state-of-the-art sensors having high sensitivity, accuracy and reliability. Their robust, uncluttered construction is perfect for long-term outdoor installation. The AMB-8059 handles applications from a few Hertz through to long wave and on up to high frequency microwave radiation using a selection of interchangeable probes for electric and magnetic fields.



# Minimum outlay, maximum result

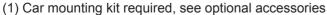
An EMF monitoring system is made up from a series of EMF monitors installed wherever the EMF presence needs to be assessed continuously or by long term observation. The EMF monitors store the data and report them using conventional mobile data communication at set time intervals to a central unit, e.g. PC or data server. The system size can range from a single location up to countrywide coverage. Narda EMF monitors combine all the features that are essential for this purpose: autonomy, outdoor usability, mobility, robustness, and low operating costs.

You can be certain to find the ideal solution for every area of application with Narda. And you can depend on its reliability, thanks to our decades of experience coupled with cutting edge technology, backed up by our own certified calibration laboratory.



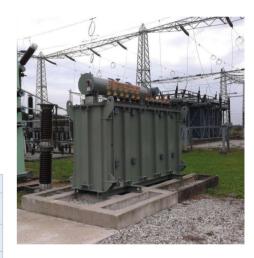
Its broadband application is the optimum solution for technical superiority from a tight budget.
Four models are available:

Unit designation	AMB-8059/03	AMB-8059/02	AMB-8059/01	AMB-8059/00
Solar panel (24/7) & back-up battery	<b>✓</b>		<b>✓</b>	
Internal 3G modem	$\checkmark$	$\checkmark$		
Wi-Fi	<b>√</b>	<b>√</b>	<b>√</b>	✓
Ethernet port	<b>√</b>		<b>√</b>	
USB	<b>√</b>	<b>√</b>	<b>√</b>	
RS232	<b>√</b>		<b>√</b>	
Optical link	<b>✓</b>		<b>✓</b>	<b>√</b>
GPS sensor	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>√</b>
Battery life 6 – 12 months (Li-Ion)		✓		<b>✓</b>
Remote capabilities	$\checkmark$	$\checkmark$	$\checkmark$	<b>✓</b>
Long-term measurement	0	•	0	•
Short-term measurement	0	0	0	0
Drive test measurement				O <sub>(1)</sub>













# Complete program for all requirements

Narda offers a wide range of different isotropic probes. These include quad-band probes for separating mobile telephone services as well as wideband measurement from 0.1 MHz to 40 GHz. Special probes are available for low frequency magnetic or electric fields from 10 Hz to 5 kHz. This means that emissions from high-voltage cables and transformer stations can be recorded. Further, it is possible to combine up to two probes, e.g. an electric and a magnetic field probe in the so-called "dual probe configuration".





Dual probe configuration (without radome)

# **The Applications - Narda Area Monitor Probes**

									(without radonie)	
Frequency range	0.1 MHz to 3 GHz	0.1 MHz to 7 GHz	10 Hz to 5 kHz	0.3 MHz to 18 GHz	0.3 MHz to 40 GHz	0.1 MHz to 8 GHz	0.1MHz to 3GHz 0.1 to 862 MHz 933 MHz to 3 GHz	0.1 MHz to 3 GHz GSM, UMTS	0.1 MHz to 7 GHz GSM, UMTS	10 Hz to 5 kHz
Field type (isotropic sensors)	Е	Е	Е	E	E	E	E	E	E	Н
Band type	Single	Single	Single	Single	Single	Single	Tri	Quad	Quad	Single
Probe designation	EP-1B-01	EP-1B-03	EP-1B-04	EP-1B-05	EP-1B-06	EP-1B-08	EP-3B-01	EP-4B-01	EP-4B-02	HP-1B-01
Mobile communi- cations	•	•		•	•	•	•	•	•	
Radio / TV broad- casting	•	•		•	•	•	•	•	•	
Directional radio		0		•	•	0	0	0	0	
Satellite communications				•	•					
Radar				•	•					
Industry	•	•	•			•	•	•	•	•
Railroads			•							•
Power lines			•							•
Transformers			•							•

● more important
 ○ variable importance

# Simultaneous monitoring of electric and magnetic fields

Possible dual probe configuration:

Probe combination		HP-1B-01 +	HP-1B-01 +	HP-1B-01 +	HP-1B-01 +	HP-1B-01 +	HP-1B-01 +
		EP-1B-01	EP-1B-03	EP-1B-04	EP-1B-05	EP-1B-06	EP-1B-08
Frequency range	Н	10 Hz to 5 kHz	10 Hz to 5 kHz	10 Hz to 5 kHz	10 Hz to 5 kHz	10 Hz to 5 kHz	10 Hz to 5 kHz
Field type	Е	0.1 MHz to 3 GHz	0.1 MHz to 7 GHz	10 Hz to 5 kHz	0.3 MHz to 18 GHz	0.3 MHz to 40 GHz	0.1 MHz to 8 GHz



# **SPECIFICATIONS**

EP-1B-01 Electric Field Probe*				
Field Probe* Frequency range	0.1 MHz to 3 GHz			
Measurement range	0.2 to 200 V/m (dynamic range > 60 dB)			
Measurement resolution	0.01 V/m			
Overload	600 V/m			
Flatness @ 20 V/m	1 to 200 MHz ± 0.8 dB 0.15 MHz to 3 GHz ± 1.5 dB			
Linearity	± 0.5 dB (0.5 to 100 V/m)			
Anisotropy @ 6 V/m	± 0.8 dB @ 50 MHz (typical 0.6 dB)			
H-Field rejection	> 20 dB			
Size and weight	450 mm length, 55 mm Ø, 180 g			

EP-1B-03 Electric Field Probe*	EP-1B-03 Electric Field Probe*				
Field Probe* Frequency range	0.1 MHz to 7 GHz				
Measurement range	0.2 V/m to 200 V/m (dynamic range > 60 dB)				
Measurement resolution	0.01 V/m				
Overload	600 V/m				
Flatness @ 20 V/m	3 MHz to 200 MHz: ±0.8 dB 0.15 MHz to 3 GHz: ±1.5 dB 0.1 MHz to 6 GHz: ±2 dB				
Linearity	± 0.5 dB (0.5 to 100 V/m)				
Anisotropy @ 6 V/m	± 0.8 dB @ 50 MHz (typical 0.6 dB)				
H-Field rejection	> 20 dB				
Size and weight	450 mm x 55 mm Ø, 180 g				

EP-1B-04 Electric Field Probe*					
Frequency range	10 Hz to 5 kHz				
Measurement range	5 V/m to 20 kV/m (dynamic range > 72 dB)				
Measurement resolution	0.1 V/m				
Overload	> 30 kV/m				
Flatness @ 100 V/m (40 Hz - 1 kHz)	1 dB (typical 0.5 dB)				
Anisotropy @ 100 V/m	0.5 dB @ 50 Hz				
H-Field rejection	> 20 dB				
Size and weight	77 mm x 53 mm Ø, 110 g				

EP-1B-05 Electric Field Probe*				
Frequency range	0.3 MHz to 18 GHz			
Measurement range	0.5 V/m to 800 V/m (dynamic range > 64 dB)			
Measurement resolution	0.01 V/m			
Overload	1200 V/m			
Flatness @ 6 V/m	1 MHz to 1 GHz ± 1.5 dB 1 GHz to 12 GHz ± 3.0 dB 12 GHz to 18 GHz ± 4.0 dB			
Linearity	± 0.5 dB (± 0.3 typical) (1.2 V/m to 200 V/m) @ 200 MHz			
Anisotropy @ 200 MHz	±0.8 dB (typical 0.5 dB @ 930 and 1800 MHz)			
H field rejection	> 20 dB			
Size and weight	450 mm x 55 mm Ø, 180 g			



EP-1B-06 Electric Field Probe*	EP-1B-06 Electric Field Probe*					
Frequency range	0.3 MHz to 40 GHz					
Measurement range	0.5 V/m to 800 V/m (dynamic range > 64 dB)					
Measurement resolution	0.01 V/m					
Overload	1200 V/m					
Flatness @ 6 V/m	1 MHz to 1 GHz ±1.5 dB 1 GHz to 12 GHz ±3.0 dB 12 GHz to 23 GHz ±4.0 dB 23 GHz to 40 GHz ±5.0 dB					
Linearity	± 0.5 dB (± 0.3 typical) (1.2 V/m to 200 V/m) @ 200 MHz					
Anisotropy @ 200 MHz	± 0.8 dB (typical 0.5 dB @ 930 and 1800 MHz)					
H field rejection	> 20 dB					
Size and weight	450 mm x 55 mm Ø, 180 g					

EP-1B-08 Electric Field Probe*	EP-1B-08 Electric Field Probe*					
Field Probe* Frequency range	0.1 MHz to 8 GHz					
Measurement range	0.2 V/m to 200 V/m (dynamic range > 60 dB)					
Measurement resolution	0.01 V/m					
Overload	600 V/m					
Flatness @ 20 V/m	3 MHz to 200 MHz: ±0.8 dB 0.15 MHz to 6 GHz: ±2 dB 0.1 MHz to 8 GHz: ±3 dB					
Linearity	± 0.5 dB (0.5 to 100 V/m) @ 50 MHz					
Anisotropy @ 6 V/m	± 0.8 dB @ 50 MHz (typical 0.6 dB)					
H-Field rejection	> 20 dB					
Size and weight	450 mm x 55 mm Ø, 180 g					

EP-3B-01 Tri-Band Electric Field Probe*							
Frequency range	Wideband: 0.1 MHz to 3 GHz	Low pass: 0.1 to 862 MHz	High pass: 933 MHz to 3 GHz				
Measurement resolution	0.01 V/m						
Measurement range	0.2	2 to 200 V/m (dynamic range > 60 d	dB)				
Overload	600 V/m						
Flatness @ 20 V/m	1 to 200 MHz ± 0.8 dB 0.15 MHz to 3 GHz ±1.5 dB	1 to 200 MHz ± 0.8 dB 0.15 MHz to 862 MHz ± 1.5 dB	933 to 3 GHz ± 1.5dB				
Linearity		± 0.5 dB (0.5 to 100 V/m)					
Anisotropy @ 6 V/m	± 0.8 dB @ 50 Mł	Hz (typical 0.6 dB)	± 0.8dB @1 GHz(typical 0.6 dB)				
Out of band attenuation	Not applicable 933 MHz to 3 GHz > 23 (ref. to 50 MHz)		0,1 to 862 MHz > 23 dB (ref. to 1 GHz)				
H field rejection	> 20 dB						
Size and weight	450 mm x 55 mm Ø, 180 g						

<sup>(\*)</sup> All probes include on board A/D conversion, calibration factors on E2PROM, and temperature sensor



EP-4B-01 Quad-Band El	EP-4B-01 Quad-Band Electric Field Probe*						
Frequency range	Wideband 0.1MHz to 3 GHz	EGSM 900 925 to 960 MHz	EGSM 1800 1805 to 1880 MHz	UMTS 2110 to 2170 MHz			
Meas. range	0.2 to 200 V/m	0.03 to 30 V/m	0.03 to 30 V/m	0.03 to 30 V/m			
Meas. resolution		0.01	V/m				
CW damage level		300	V/m				
Flatness @ 6 V/m	1 to 200 MHz ± 0.8 dB 0.15 MHz to 3 GHz ± 1.5 dB	925 to 960 MHz +0.5/-2.5 dB	1805 to 1880 MHz +0.5/-2.5 dB	2110 to 2170 MHz +0.5/-2.5 dB			
Linearity	± 0.5 dB (0.5 to 100 V/m)	± 0.5 dB (0.06 to 20 V/m)	± 0.5 dB (0.06 to 20 V/m)	± 0.5 dB (0.06 to 20 V/m)			
Anisotropy	± 0.8 dB @ 50 MHz, 3 V/m (typical 0.6 dB)	± 0.8 dB@ 942.5 MHz, 3 V/m (typical 0.6 dB)	± 0.8 dB@ 1842.5 MHz, 3 V/m (typical 0.6 dB)	± 0.8 dB@ 2140 MHz, 3 V/m (typical 0.6 dB)			
Out of band attenuation	Not applicable	Rejection to 1842 MHz(GSM): 25 dB to 2140 MHz(UMTS): 25 dB	Rejection to 942 MHz(GSM): 15 dB to 2140 MHz(UMTS): 13 dB	Rejection to 942 MHz(GSM): 17dB to 1842 MHz(GSM): 10 dB			
Centre frequency drift	Not applicable	40 °C – 50 °C = ± 100kHz -20 °C – 40 °C = ± 100 kHz/°C					
H field rejection	> 20 dB						
Size and weight	450 mm x 55 mm Ø, 210 g						

EP-4B-02 Quad-Band Electric Field Probe*						
Frequency range	Wideband 0.1 MHz to 7 GHz	EGSM 900 925 to 960 MHz	EGSM 1800 1805 to 1880 MHz	UMTS 2110 to 2170 MHz		
Meas. range	0.2 to 200 V/m	0.03 to 30 V/m	0.03 to 30 V/m	0.03 to 30 V/m		
Meas. resolution		0.01	V/m			
Dynamic range		>60	) dB			
Flatness @ 6 V/m	3 to 200 MHz ± 1.5 dB 0.15 MHz to 3 GHz ± 2 dB 0.1 MHz to 7 GHz ± 3 dB	925 to 960 MHz +0.5 / -2.5 dB	1805 to 1880 MHz +0.5 / -2.5 dB	2110 to 2170 MHz +0.5 / -2.5 dB		
Linearity	± 0.5 dB (0.5 to 100 V/m)	± 0.5 dB (0.1 to 20 V/m)	± 0.5 dB (0.1 to 20 V/m)	± 0.5 dB (0.1 to 20 V/m)		
Anisotropy	± 0.8 dB@ 50 MHz, 3 V/m (typical 0.6 dB)	± 0.8 dB@ 942.5 MHz, 3 V/m (typical 0.6 dB)	± 0.8 dB@ 1842.5 MHz, 3 V/m (typical 0.6 dB)	± 0.8 dB@ 2140 MHz, 3 V/m (typical 0.6 dB)		
Out of band attenuation	Not applicable	Rejection to 1842 MHz(GSM): 25 dB to 2140 MHz(UMTS): 25 dB	Rejection to 942 MHz(GSM): 15 dB to 2140 MHz(UMTS): 13 dB	Rejection to 942 MHz(GSM): 17dB to 1842 MHz(GSM): 10 dB		
Centre frequency drift	Not applicable	40 °C – 60 °C = ± 100 kHz -20 °C – 40 °C = - 100 kHz / °C				
H field rejection	> 20 dB					
Size and weight	450 mm x 55 mm Ø, 210 g					

<sup>(\*)</sup> All probes include on board A/D conversion, calibration factors on E2PROM, and temperature sensor



HP-1B-01 Magnetic Field Probe*		
Frequency range	10 Hz to 5 kHz	
Measurement range and overload	50 nT to 200 μT (dynamic range >72 dB); overload: > 1 mT	
Measurement resolution	1 nT	
Flatness	40 Hz to 1 kHz, 1 dB (typical 0.6 dB)	
Linearity	± 0.5 dB (200 nT to 100 μT)	
Anisotropy	0.3 dB @ 50 Hz, 3 μT	
E field rejection	> 20 dB	
Size and weight	83 mm x 53 mm Ø, 110 g	

AMB-8059 Multi-band EMF Area Monitor		
Technical Specifications		
Frequency range	Depending on probe (see probe specifications)	
Dynamic range	Depending on probe (see probe specifications)	
Resolution	Depending on probe (see probe specifications)	
Sensitivity	Depending on probe (see probe specifications)	
Linearity	Depending on probe (see probe specifications)	
Accuracy	Depending on probe (see probe specifications)	
Measurement Units	V/m, kV/m, nT, μT, mT. The unit shown depends on the probe connected	
Field measured	Total field, average and Peak (MAX)	
Sampling	1 measurement every 1 s	

<sup>(\*)</sup> All probes include on board A/D conversion, calibration factors on E²PROM, and temperature sensor



Data download  Annual Automatic managed by the unit at predefined timings (**L**)  Automatic managed by the unit at predefined timings (**L**)  Automatic managed by the unit at predefined timings (**L**)  Automatic reation of a .TXT and .BMP file after download  AvG, RMS, maximum peak; daily report via SMS***)  Display and marking of data acquired during modem transmission (**)  Field strength alarm  Two programmable field strength thresholds (warning and alarm) with automatic notice both of exceeding the limit and returning within the limits (**)  Clock  Real time internal clock  SMS which can be sent to up to 10 mobile phones simultaneously (**)  Sensor  Display of model and calibration date  Battery management  Every record includes Battery Voltage and Charge Current value  Every record includes Internal Temperature value  Humidity management  Every record includes Internal Humidity value  GPS coordinates  Programmable record  General Specifications  GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G**  Wi-Fi  Wi-Fi 802,11 b/g  Field probes  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (**), 3G modem (**)  Protection  Sensor to notify case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059103 and), probe maffunction, field over limit.  AMB-8059101 and AMB-8059103 only, probe maffunction, field over limit.  1 mm. Auth 303 and Wi-Fi module off(**)  120 mm. Ama when 3G module is transmitting and 3G off(**)  6 mm. optical limit data query every 1 second; Wi-Fi and 3G off  500 mm. Amax when 3G module is transmitting and SGM module transmission per day and single probe operating limited (alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical	Measurement / acquisition functions	
Mar data storage capacity (before oid data are replaced by new ones)  Manual Automatic managed by the unit at predefined timings (10, 10) Automatic or section of a TXT and JBMP file after download Automatic or section or section of a TXT and JBMP file after download and Automatic or section or secti	Memorization interval	Programmable from 30 seconds to 15 minutes
Data download  Annual Automatic managed by the unit at predefined timings (**L**)  Automatic managed by the unit at predefined timings (**L**)  Automatic managed by the unit at predefined timings (**L**)  Automatic reation of a .TXT and .BMP file after download  AvG, RMS, maximum peak; daily report via SMS***)  Display and marking of data acquired during modem transmission (**)  Field strength alarm  Two programmable field strength thresholds (warning and alarm) with automatic notice both of exceeding the limit and returning within the limits (**)  Clock  Real time internal clock  SMS which can be sent to up to 10 mobile phones simultaneously (**)  Sensor  Display of model and calibration date  Battery management  Every record includes Battery Voltage and Charge Current value  Every record includes Internal Temperature value  Humidity management  Every record includes Internal Humidity value  GPS coordinates  Programmable record  General Specifications  GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G**  Wi-Fi  Wi-Fi 802,11 b/g  Field probes  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (**), 3G modem (**)  Protection  Sensor to notify case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059103 and), probe maffunction, field over limit.  AMB-8059101 and AMB-8059103 only, probe maffunction, field over limit.  1 mm. Auth 303 and Wi-Fi module off(**)  120 mm. Ama when 3G module is transmitting and 3G off(**)  6 mm. optical limit data query every 1 second; Wi-Fi and 3G off  500 mm. Amax when 3G module is transmitting and SGM module transmission per day and single probe operating limited (alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical limited alary every 1 second; Wi-Fi and 3G off  6 mm. optical	Memory	Over 128 MB
Automatic managed by the unit at predefined timings (% 0) Automatic by PC(% 1) Automatic creation of a .TXT and .BMP file after download AVGs, RMS, maximum peak; daily report via SMS (% 1) Display and marking of data acquired during modem transmission (% 1) Display and marking of data acquired during modem transmission (% 1) Display and marking of data acquired during modem transmission (% 1) Two programmable field strength thresholds (warming and alarm) with automatic notice both of exceeding the limit and returning within the limits (% 1)  Clock Real time internal clock Messages SMS which can be sent to up to 10 mobile phones simultaneously (% 1) Sensor Display of model and calibration date Battery management Every record includes Battery Voltage and Charge Current value Every record includes Internal Temperature value Humidity management Every record includes Internal Temperature value Every record includes Internal Humidity value GPS coordinates Programmable record General Specifications  SSM module Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G (% 1) Wi-Fi Wi-Fi 802.11 brg Field probes Interchangeable, several models available, single and dual probe operation Interfaces RS232, USB, Ethemet, Micro SD Card, Wi-Fi, Optical (%), 3G modem (%) Protection Sensor to notifty case opening Protection Sensor to notifty case opening Protection AMB-8059101 and AMB-805903 only), probe malfunction, field over limit.  Internal battery Jn AmB-8059101 and AMB-805903 only), probe malfunction, field over limit.  AMB-8059101 and AMB-805903 only), probe malfunction, field over limit.  AMB-8059101 and AMB-805903 only), probe malfunction, field over limit.  AMB-8059101 and AMB-805903 only), probe malfunction, field over limit.  AMB-8059101 and AMB-805903 only), probe malfunction, field over limit.  AMB-8059101 and AMB-805903 only) and AMB-805903 only)  AMB-8059101 and AMB-805903 only)  AMB-8059101 and AMB-805903 on probe and setting) (% (%) For best performance install solar parents in direct sumplish.  External power  DC, 5 V	Max data storage capacity (before old data are replaced by new ones)	Over 364 days with 1 acquisition every minute
Display and marking of data acquired during modern transmission (a)	Data download	Automatic managed by the unit at predefined timings (1), (3) Automatic by PC (2), (3)
exceeding the limit and returning within the limits ® Clock Real time internal clock Resages SMS which can be sent to up to 10 mobile phones simultaneously ® Display of model and calibration date Battery management Every record includes Battery Voltage and Charge Current value Temperature management Every record includes Internal Temperature value Humidity management Every record includes Internal Temperature value  GPS coordinates Programmable record General Specifications  GSM module Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G ® WHFI WHFI WHFI 802.11 b/g Field probes Interchangeable, several models available, single and dual probe operation Interfaces RS232, USB, Ethernet, Micro SD Card, WHFI, Optical ®, 3G modern ® Protection Sensor to notify case opening Other alarms Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059010 - AMB-805903 only), probe malfunction, field over limit.  Internal battery AMB-8059010 - AMB-8059010 - AMB-805903 in probe malfunction, field over limit.  AMB-8059010 - AMB-8059010 - AMB-805903 only), probe malfunction, field over limit.  AMB-8059010 - AMB-8059001 - AMB-805903 only), probe malfunction, field over limit.  AMB-8059010 - AMB-8059002 - Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-805901 - AMB-805903 in the stransmitting and WHFI module off © 100 mA max when 3G module is transmitting and 3G off © 100 mA max when WHFI module off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100 mA max when WHFI module is transmitting and SG off © 100	Functions	
SMS which can be sent to up to 10 mobile phones simultaneously (3)  Sensor  Display of model and calibration date  Every record includes Battery Voltage and Charge Current value  Every record includes Internal Temperature value  Every record includes Internal Temperature value  Every record includes Internal Humidity value  GPS coordinates  Programmable record  General Specifications  GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G (3)  Wi-Fi Wi-Fi 802.11 b/g  Field probes  Interchangeable, several models available, single and dual probe operation  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (8), 3G modem (9)  Protection  Sensor to notify case opening  Protective case opening  Protective case opening  AMB-8059/01 and AMB-8059/03 inly, probe malfunction, field over limit.  Internal battery  AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off (500 mAms when 3G module is transmitting and 3G off (9)  6 mA optical link data query every 1 second; Wi-Fi and 3G off (9)  6 mA optical link data query every 1 second; Wi-Fi and 3G off (9)  6 mA optical link data query every 1 second; Wi-Fi and 3G off (9)  6 mA optical link data query every 1 second; Wi-Fi and 3G off (9)  AMB-8059/02 about 8 months (2) timin GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (4), (6)  AMB-8059/02 about 8 months (2) timin GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (4), (6)  AMB-8059/03 and AMB-8059/01 and AMB-8059/03 an	Field strength alarm	
Sensor Display of model and calibration date Battery management Every record includes Battery Voltage and Charge Current value Temperature management Every record includes Internal Temperature value Humidity management Every record includes Internal Temperature value Humidity management Every record includes Internal Humidity value GPS coordinates Programmable record  General Specifications  GSM module Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G <sup>(1)</sup> Wi-Fi Wi-Fi 802,11 b/g Field probes Interchangeable, several models available, single and dual probe operation Interfaces RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical <sup>(1)</sup> , 3G modem <sup>(2)</sup> Protection Sensor to notify case opening Other alarms Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit. Internal battery AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off <sup>(2)</sup> S0 mA max when Wi-Fi module is transmitting and Wi-Fi module off <sup>(3)</sup> 120 mA max when Wi-Fi module is transmitting and 3G off <sup>(3)</sup> 6 mA optical link data query every 1 second; Wi-Fi and 3G off <sup>(3)</sup> External power DC, 5 V, 1 A max <sup>(3)</sup> AMB-8059/02: about 8 months @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) <sup>(4), (5)</sup> For best performance installs solar panels in direct sunlight. Recharging time 4 hours with external power unit (AMB-8059/01 and AMB-8059/03 only) Auto test Automatic Compliance 2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> AMB-8059/03 and AMB-8059/01 and AMB-8059/03	Clock	Real time internal clock
Every record includes Battery Voltage and Charge Current value	Messages	SMS which can be sent to up to 10 mobile phones simultaneously (3)
Every record includes Internal Temperature value	Sensor	Display of model and calibration date
Humidity management  Every record includes Internal Humidity value  GPS coordinates  Programmable record  General Specifications  GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G <sup>(n)</sup> Wi-Fi Wi-Fi 802.11 b/g  Field probes  Interchangeable, several models available, single and dual probe operation  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical <sup>(n)</sup> , 3G modem <sup>(n)</sup> Protection  Sensor to notify case opening  Other alarms  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/01) and how probe malfunction, field over limit.  Internal battery  AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off 500 mA max when 3G module is transmitting and Wi-Fi module off <sup>(n)</sup> 120 mA max when 3G module is transmitting and 3G off <sup>(n)</sup> 6 mA optical link data query every 1 second; Wi-Fi and 3G off <sup>(n)</sup> External power  DC, 5 V, 1 A max <sup>(n)</sup> AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autnonmy depends on probe and setting) <sup>(n)</sup> <sup>(n)</sup> <sup>(n)</sup> AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and single probe operating mode (autnonmy depends on probe and setting) <sup>(n)</sup> <sup>(n)</sup> <sup>(n)</sup> AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and single probe operating mode (autnonmy depends on probe and setting) <sup>(n)</sup> <sup>(</sup>	Battery management	Every record includes Battery Voltage and Charge Current value
General Specifications  General Specifications  GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G (3)  Wi-Fi  Wi-Fi 802.11 b/g  Field probes Interchangeable, several models available, single and dual probe operation Interfaces RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (30, 3G modem (3))  Protection Sensor to notify case opening  Other alarms  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/02 shoty), probe malfunction, field over limit.  Internal battery  AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off 500 mA max when 3G module is transmitting and Wi-Fi module off (3) 120 mA max when Ni-Fi module off 500 mA max when Ni-Fi module is transmitting and 3G off (3) 6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  DC. 5 V, 1 A max**  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (4), (6) AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and single probe operating mode (autonomy depends on probe and setting) (4), (6) For best performance install solar panels in direct sunlight.  Recharging time  24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only) Auto test Automatic  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113**  AMB-8059/00 and AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)	Temperature management	Every record includes Internal Temperature value
General Specifications  GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G (3)  Wi-Fi  Wi-Fi 802.11 b/g  Field probes  Interchangeable, several models available, single and dual probe operation  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (4), 3G modem (3)  Protection  Sensor to notify case opening  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.  Internal battery  AMB-8059/00 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off 500 mA max when 3G module is transmitting and Wi-Fi module off (5) 120 mA max when 3G module is transmitting and 3G off (5) 6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  DC, 5 V, 1 A max*  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (4), (6) For best performance install solar panels in direct sunlight.  Recharging time  Athors with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Automatic  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> Ambient temperature  -20 °C / +55 °C  Dimensions  (WXDXH) 112 x 112 x 730 mm  AMB-8059/02 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit on	Humidity management	Every record includes Internal Humidity value
GSM module  Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G (3)  Wi-Fi  Wi-Fi 802.11 b/g  Field probes  Interchangeable, several models available, single and dual probe operation  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (6), 3G modem (3)  Protection  Sensor to notify case opening  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.  Internal battery  AMB-8059/00 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off (50) 120 mA max when 3G module is transmitting and Wi-Fi module off (60) 120 mA max when Wi-Fi module is transmitting and 3G off (60) 6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  DC, 5 V, 1 A max*®  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (40, (60) For best performance install solar panels in direct sunlight.  Recharging time Athors with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Automatic  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> Ambient temperature  -20 "C / +55 "C  Dimensions  (WXDXH) 112 x 112 x 730 mm  AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (	GPS coordinates	Programmable record
Wi-Fi Wi-Fi 802.11 b/g  Field probes  Interchangeable, several models available, single and dual probe operation  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (**), 3G modem (**)  Protection  Sensor to notify case opening  Other alarms  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.  AMB-8059/01 and AMB-8059/02 Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/n AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/n AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  I mA with 3G and Wi-Fi module off  500 mA max when 3G module is transmitting and Wi-Fi module off (**)  120 mA max when 3G module is transmitting and 3G off (**)  6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  DC, 5 V, 1 A max**  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (**0.60)  AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (**0.60)  AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (**0.60)  For best performance install solar panels in direct sunlight.  Recharging time  24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Automatic  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113(**)  Ambient temperature  20° C / +55° C  Dimensions  (WXDXH) 112 x 112 x 730 mm  Weight  AMB-8059/00 and AMB-8059/03: 2.4 kg (unit only); 6.5 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe redome extention and Car Mount Kit optic	General Specifications	
Interchangeable, several models available, single and dual probe operation  Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical <sup>(6)</sup> , 3G modem <sup>(3)</sup> Protection  Sensor to notify case opening  Other alarms  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/02) and AMB-8059/02 not probable primary battery, lithium SAFT LSH20 3.6 V, 13 A/n AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/n AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/n, rechargeable  Consumption  Internal battery  AMB-8059/00 - AMB-8059/02: About 8 module is transmitting and Wi-Fi module off <sup>(6)</sup> 500 mA max when Wi-Fi module is transmitting and 3G off <sup>(6)</sup> 6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) <sup>(6), (6)</sup> AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) <sup>(6), (6)</sup> For best performance install solar panels in direct sunlight.  Recharging time  24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Automatic  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> Ambient temperature  -20 °C / +55 °C  Dimensions  Weight  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optic	GSM module	Penta-band (800, 850, 900, 1900, 2100 MHz) UMTS/3G (3)
Interfaces  RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical (%), 3G modem (%)  Protection  Sensor to notify case opening  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.  AMB-8059/01 and AMB-8059/03: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  T mA with 3G and Wi-Fi module off (%) 120 mA max when Wi-Fi module is transmitting and Wi-Fi module off (%) 120 mA max when Wi-Fi module is transmitting and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 second; Wi-Fi and 3G off (%) 6 mA optical link data query every 1 s	Wi-Fi	Wi-Fi 802.11 b/g
Protection  Sensor to notify case opening  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/02 only), probe malfunction, field over limit.  AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  Consumption  1 mA with 3G and Wi-Fi module off 500 mA max when 3G module is transmitting and Wi-Fi module off 120 mA max when 3G module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and Wi-Fi module off 120 mA max when Wi-Fi module is transmitting and Wi-Fi module off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and 3G off 120 mA max when Wi-Fi module is transmitting and Wi-Fi module off 120 mA max when W	Field probes	Interchangeable, several models available, single and dual probe operation
Other alarms  Protective case opening, internal overheat, internal humidity, low battery, battery overload (mod AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.  AMB-8059/01 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off 500 mA max when 3G module is transmitting and Wi-Fi module off 500 mA max when 3G module is transmitting and 3G off 3 6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  DC, 5 V, 1 A max(6)  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (4), (6)  AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and single probe operating mode (autonomy depends on probe and setting) (4), (6)  For best performance install solar panels in direct sunlight.  Recharging time  24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Automatic  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113(7)  Ambient temperature  -20 °C / +55 °C  Dimensions  (WXDXH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059	Interfaces	RS232, USB, Ethernet, Micro SD Card, Wi-Fi, Optical <sup>(6)</sup> , 3G modem <sup>(3)</sup>
AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.  AMB-8059/00 - AMB-8059/02: Non rechargeable primary battery, lithium SAFT LSH20 3.6 V, 13 A/h AMB-8059/01 - AMB-8059/03: Lead, 4 V, 2.5 A/h, rechargeable  1 mA with 3G and Wi-Fi module off 500 mA max when 3G module is transmitting and Wi-Fi module off 60 120 mA max when Wi-Fi module is transmitting and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every 1 second; Wi-Fi and 3G off 60 6 mA optical link data query every	Protection	Sensor to notify case opening
The Hara Date of the Ha	Other alarms	Protective case opening, internal overheat, internal humidity, low battery, battery overload (model AMB-8059/01 and AMB-8059/03 only), probe malfunction, field over limit.
Consumption  500 mA max when 3G module is transmitting and Wi-Fi module off (3) 120 mA max when Wi-Fi module is transmitting and 3G off (3) 6 mA optical link data query every 1 second; Wi-Fi and 3G off  External power  DC, 5 V, 1 A max(8)  AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (4), (5) AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (4), (5) For best performance install solar panels in direct sunlight.  Recharging time  24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113(7)  Ambient temperature  -20 °C / +55 °C  Dimensions  (WXDXH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optic	Internal battery	
AMB-8059/02: about 8 months @ 1min GSM module transmission per day and single probe op ing mode (autonomy depends on probe and setting) (4).(5)  AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (4).(5)  For best performance install solar panels in direct sunlight.  Recharging time  24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only)  Auto test  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> Ambient temperature  -20 ° C / +55 ° C  Dimensions  (WxDxH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optic	Consumption	500 mA max when 3G module is transmitting and Wi-Fi module off (3) 120 mA max when Wi-Fi module is transmitting and 3G off (3)
ing mode (autonomy depends on probe and setting) (4), (5)  AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and sing probe operating mode (autonomy depends on probe and setting) (4), (5) For best performance install solar panels in direct sunlight.  Recharging time	External power	DC, 5 V, 1 A max <sup>(8)</sup>
Auto test  Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> Ambient temperature  -20 °C / +55 °C  Dimensions  (WxDxH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optional accessory)	Operating time @ 1 sec. rate	AMB-8059/03: > 80 days in total darkness @ 1min GSM module transmission per day and single probe operating mode (autonomy depends on probe and setting) (4), (5)
Compliance  2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup> Ambient temperature  -20 °C / +55 °C  Dimensions  (WxDxH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optional accessory)	Recharging time	24 hours with external power unit (AMB-8059/01 and AMB-8059/03 only)
Ambient temperature  -20 °C / +55 °C  Dimensions  (WxDxH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit option	Auto test	Automatic
Dimensions  (WxDxH) 112 x 112 x 730 mm  AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optional accessory)	Compliance	2014/30, 2014/35, CEI 211-6, CEI 211-7, ITU-T K.83, ITU-T K.113 <sup>(7)</sup>
AMB-8059/00 and AMB-8059/02: 1.2 kg (unit only); 6.5 kg (total weight including supports and base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection  IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optional accessory)	Ambient temperature	-20 °C / +55 °C
Weight base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports and base)  Environmental protection IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit optional accessory).	Dimensions	(WxDxH) 112 x 112 x 730 mm
	Weight	base) AMB-8059/01 and AMB-8059/03: 2.4 kg (unit only); 7.7 kg (total weight including supports
Country of origin Italy	Environmental protection	IP55, IP66 with IP66K optional accessory (Not suitable with dual probe radome extention and Car Mount Kit option)
	Country of origin	Italy

- Notes:
  (1): To the controller PC or to the user's FTP server depending on the preferred communication mode.
  (2): Directly from the station or from the user's FTP server depending on the preferred communication mode.
  (3): AMB-8059/02 and AMB-8059/03 only are equipped with 3G modem.
  (4): AMB-8059/00 and AMB-8059/01 power autonomy is longer as they are not equipped with 3G modem module.
  (5): Specifications depending on battery age, ambient temperature and GSM field coverage.
  (6): Optical link only for the model AMB-8059/03, AMB-8059/01, AMB-8059/00
  (7): Only AMB-8059/00 with option car mounting kit for drive test solution
  (8): AMB-8059/01 and AMB-8059/03 only; as service in maintenance or backup of solar panel in field from S/N prefix 170WY

  AMB8059\_BEN\_01004

  8/9

  Subject to chemical service of the control of the user's FTP server depending on the preferred communication mode.
  (2): Directly from the station of the user's FTP server depending on the preferred communication mode.
  (3): AMB-8059/02 and AMB-8059/03 only are equipped with 3G modem.
  (4): AMB-8059/00 and AMB-8059/01 power autonomy is longer as they are not equipped with 3G modem module.
  (5): Specifications depending on battery age, ambient temperature and GSM field coverage.
  (6): Optical link only for the model AMB-8059/03, AMB-8059/01, AMB-8059/00
  (7): Only AMB-8059/00 with option car mounting kit for drive test solution
  (8): AMB-8059/01 and AMB-8059/03 only; as service in maintenance or backup of solar panel in field from S/N prefix 170WY

  AMB8059\_BEN\_01004



## ORDERING INFORMATION

Remote stations	
Area Monitor station powered by internal primary Li-lon battery	AMB-8059/00
Area Monitor station powered by solar panel and back-up battery	AMB-8059/01
Area Monitor remote station with 3G internal modem, powered by internal primary Li-lon battery	AMB-8059/02
Area Monitor remote station with 3G internal modem, powered by solar panel and back up battery	AMB-8059/03
Field probes	
Electric field probe 0.1 MHz to 3 GHz; 0.2 to 200 V/m	EP-1B-01
Electric field probe 0.1 MHz to 7 GHz; 0.2 to 200 V/m	EP-1B-03
Electric field probe 10 Hz to 5 kHz; 5 V/m to 20 kV/m	EP-1B-04
Electric field probe 0.3 MHz to 18 GHz; 0.5 V/m to 800 V/m	EP-1B-05
Electric field probe 0.3 MHz to 40 GHz; 0.5 V/m to 800 V/m	EP-1B-06
Electric field probe 0.1 MHz to 8 GHz; 0.2 to 200 V/m	EP-1B-08
Tri-band electric field probe 0.1 MHz to 3 GHz / 0.1 MHz to 862 MHz / 933 MHz to 3 GHz; 0.2 to 200 V/m	EP-3B-01
Quad-band electric field probe 0.1 to 3 GHz; 0.2 to 200 V/m / 925 to 960 MHz / 1805 to 1880 MHz / 2110 to 2170 MHz, 0.03 to 30 V/m	EP-4B-01
Quad-band electric field probe 0.1 MHz to 7 GHz; 0.2 to 200 V/m / 925 to 960 MHz / 1805 to 1880 MHz / 2110 to 2170 MHz, 0.03 to 30 V/m	EP-4B-02
Magnetic field probe 10 Hz to 5 kHz; 50 nT to 200 μT	HP-1B-01
Optional accessories	
8059/mast - Metallic T-shaped base and Fiberglass mast (includes kit of screws, ties and 3 ballast bags)	650.800.085
8059/CMK - Car Mounting Kit for drive test solution (AMB-8059/00 only)	650.800.300
Radome for AMB-8059 dual probe configuration	231.800.168
O/E optical converter USB	650.000.176
Cable, FO Duplex RP-02 with cable clamp, 10 m (only models AMB-8059/03 and AMB-8059/01 with optical link)	650.000.289
Cable, FO Duplex RP-02 with cable clamp, 20 m (only models AMB-8059/03 and AMB-8059/01 with optical link)	650.000.290
Cable, FO Duplex RP-02 with cable clamp, 40 m (only models AMB-8059/03 and AMB-8059/01 with optical link)	650.000.291
Cable, FO Duplex RP-02, 10 m (only models AMB-8059/00 with optical link)	650.000.196
Cable, FO Duplex RP-02, 20 m (only models AMB-8059/00 with optical link)	650.000.257
Cable, FO Duplex RP-02, 40 m (only models AMB-8059/00 with optical link)	650.000.275
New IP66 Kit adapter (only models AMB-8059/01 and AMB-8059/03)	650.000.310
Two-wire USB cable, 1.5 m, USB(A)/USB(B), IP67 on station side (AMB-8059/01 and AMB-8059/03 only) from serial number 170WY	210.500.046
Includes in delivery	

# Includes in delivery

- Primary Li-ion battery (AMB-8059/00 and AMB-8059/02 only)
- Power supply / Battery Charger (AMB-8059/01 and AMB-8059/03 only)
- Assembled Solar Unit (AMB-8059/01 and AMB-8059/03 only)
- Ethernet cable, IP67 on station side (AMB-8059/01 and AMB-8059/03 only)
- 10 m optical cable and O/E converter USB (AMB-8059/00 only)
- Four-wire USB cable, 1.8 m, USB(A)/USB(B)
- Swivel joint for installation on AMB-8059-MAST
- · Operating Manual, Test & Calibration Certificates
- PC Software 8059-NSTS
- PC Software EMF GPS logger (used only by model AMB-8059/00 Car Mounting Kit option)
- PC software Area monitor Configurator

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