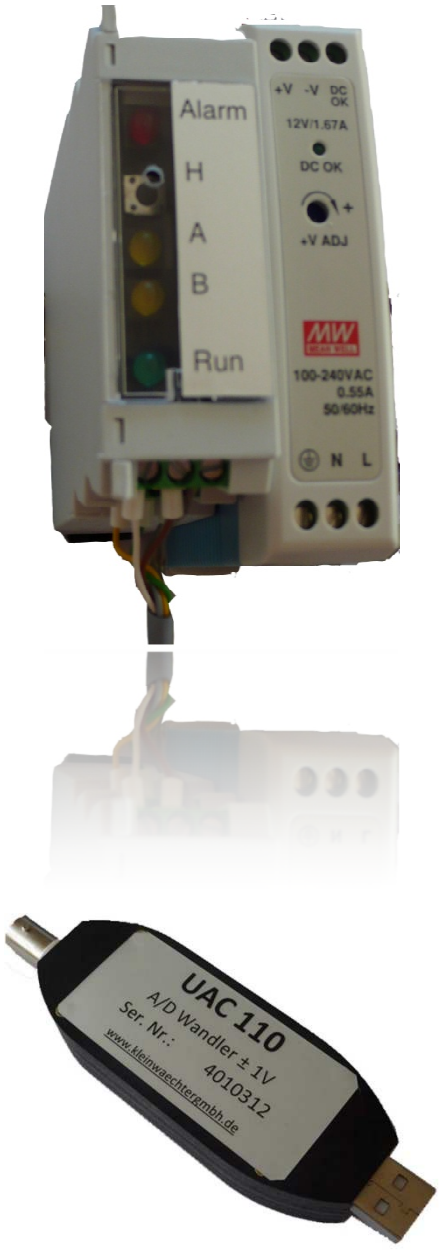
MANUAL



Adaptor Set PC ASP 113

with ***UAC 110*** to connect the stationary Electro-Field - Meters

EFM 113

to a Personal Computer

Contents

General information on electrostatics

Nowadays ESD[1] is a problem at many workstations, because modern microelectronics[2] is easily destroyed by the sequels of ESD. Other branches of industry like e.g. telecommunications-, plastics-, and explosive material industry are also heavily affected by ESD.

ESD causes losses of time as well as high financial losses and can endanger the human health. Charges of over 10000 Volts can emerge on people, clothes, materials and equipment. Devices that are sensitive to electrostatics can be damaged by electrostatic discharges of less than 100 Volts. Charges of 3000 Volts and more can cause sparks. In endangered areas that can cause explosions.

Origin of electrostatic charge

Triboelectricity[3] is caused by attrition of different materials. Electrons are transferred from one material to the other. As electrons are charged negative the material that releases electrons is charged positive. The material admitting electrons is charged negative. There are different ways to avoid or to discharge electrostatic charges. But to find an effective and reasonable solution first of all the emergence, amount and polarity of the charge have to be found. Our devices are suitable for that purpose and for the supervision of favored charge.

[1] electrostatic discharge
[2] integrated circuits
[3] Greek: tribeia = friction

Product description

The adaptor set ASP 113 is to connect an E – Field meter EFM 113B to a PC.
Together with the power supply unit and the Analogue – Digital Converter UAC 110 you get a stationary monitoring system for electrostatic charge with an USB - Interface.

The ASP 113 supervises the current consumption of the EFM 113 and switches a relay if the current is out of range. This may be by cutting the lead or by pollution of the modulator system.
With the UAC 110 you can read out the values of the EFM113 to a PC.
The units are mounted on a top-hat rail.

Specifications

Connection Box

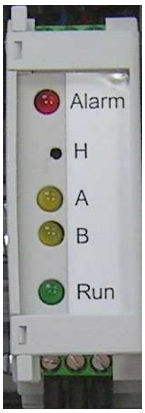
Dimensions (L x W x H):	75mm x 26mm x 112mm
Weight :	Ca. 100g
Power supply:	By a top-hat rail power unit 12V
Indicator:	4 LEDs 5mm

Red LED „Alarm“ = “ON” if the current consumption of the EFM 113 is out of limits.
Green LED „Run“ = “Flashes” when the system is running.
Yellow LED´s = shows the selected range.

Power unit

Dimensions (L x W x H):	90mm x 23mm x 100mm
Weight:	Ca. 100g
Input voltage:	100-240 VAC / 0,55A
Output voltage:	12V (13,5V) 1,5A
Mounted:	top-hat rail
Indicator:	1 LED DC ok

Select range *:*



By pressing the hidden switch „H“ the measuring range of the EFM 113 can be changed.

Please have a look, that the selected range is the same as in the KL_ReadOut software !!

The measuring ranges are; :

LED A and LED B on = ±5 kV/m
LED A off, LED B on = ±20 kV/m
LED A on, LED B off = ±50 kV/m
LED A and LED B off = ±200kV/m

Pin configuration :

Unit ground
Output ± 1V
Power + 12V

Cl 2

Cl 1

Cl 3

Cl 4

Clip 2 (Cl 2) :
Power supply +12 V and
Measuring Output to UAC
100 ± 1V

Clip 1 (Cl 1) :
Contact Alarm Relay

Clip 3/4 (Cl 3/4) :
Connectors EFM 113B

Scope of Delivery

The basic equipment of the ASP 113 includes the following components:

- Connection box
- Top-hat rail power supply 12V
- UAC 110 with software KL_ReadOut
- Compete wired on a top-hat rail
- USB cable
- Manual

Optional :

Electro – Field Meter EFM 113

Picture with Adaptor and Stativ

Voltmeter Mode

By using as „Voltmeter" you have to calculate the best range !
Hereby you have to known the distance between measuring object and E – Field meter.
Example: Range ± 50kV/m, Distance to object : 2,5cm

Field Strength (Range) x Distance (in Meter) = Charge (V)

⇨ ***50kV/m x 0,025m = 1250 V = 1,25kV***