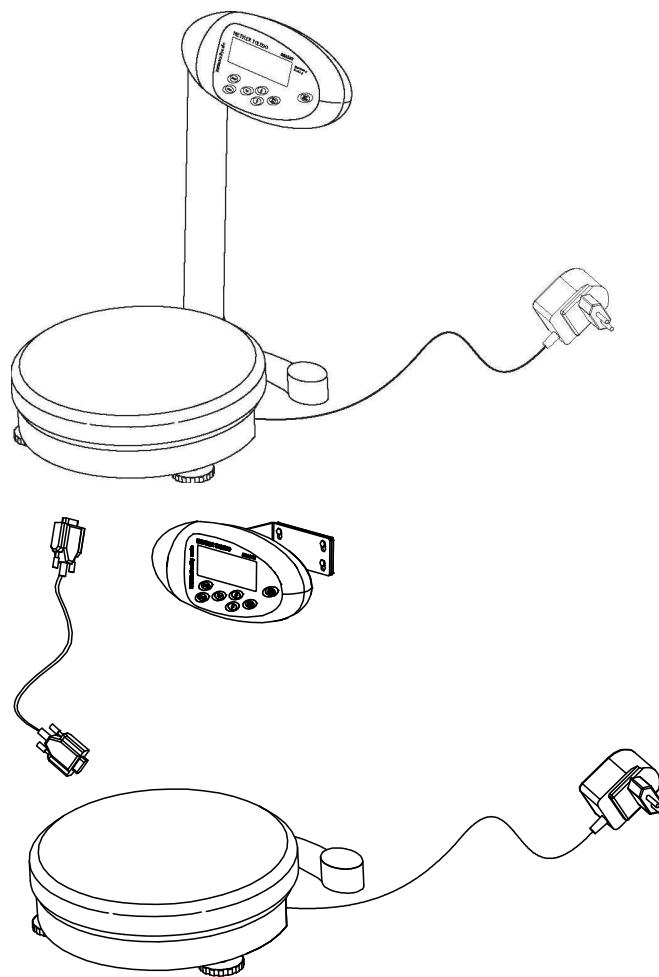




METTLER TOLEDO

Installation and Maintenance Instructions

METTLER TOLEDO
BBA242xx Paint Mixing Scales with AULT AC Adapter



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1 Documentation for the BBA242xx Paint Mixing Scale with AULT AC Adapter

The BBA242xx Paint Mixing Scale with the AULT AC Adapter is accompanied by the following documentation:

- 1.1 Installation and maintenance instructions
- 1.2 Operating instructions

These installation and maintenance instructions apply to all scales with a type designation containing the letters BBA242xx. The individual model designations may also include numbers detailing the weighing range and additional letters which indicate special versions.

These instructions contain information for the installation and start-up of the scale and the AC adapter, as well as all requirements necessary for safe operation of the system. You will find all information on the weighing applications and the interface operation in the operating instructions.

2 Application range

The BBA242xx Paint Mixing Scales are approved for use in a hazardous area classified as zone 2, type of protection nL, gas group IIC and temperature class T4.

The AULT AC adapter must be installed in the safe area.

The RS232 interface built in the scale is intrinsically safe. The only peripherals which may be attached are those fitted with an interface having the same limiting values and approved as intrinsically safe, see section "Technical data".

3 Cautionary notes regarding installation

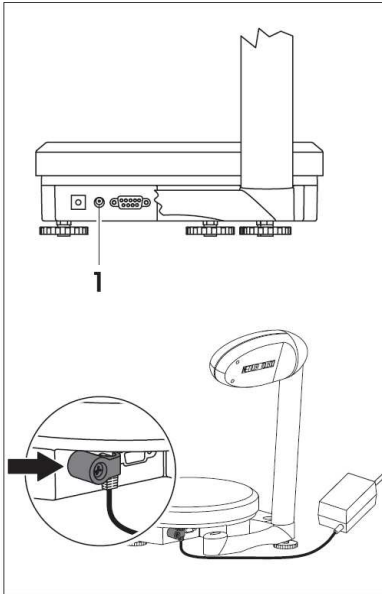


- ▲ Perform the installation only as described in these instructions and in the appropriate control drawing.
 - ▲ It is essential to comply with national regulations regarding grounding and connection to the power supply.
-
- ▲ Before connecting the AULT AC adapter to the mains make sure the cable from the AC adapter is connected to the scale and the socket is secured with the locking device as described by EN 60079-15.
 - ▲ No changes whatsoever may be made to the scale or the AULT AC adapter.
 - ▲ Service work and repairs must be carried out only by personnel authorized by METTLER TOLEDO.
 - ▲ Check that the scale and the AULT AC adapter are in perfect condition with regard to safety before putting into operation for the first time and at least after every 3 years of service.
 - ▲ The plastic surface must not be wiped clean or rubbed in hazardous area to prevent an electrostatic hazard.
 - ▲ The scale shall be installed in such a way that there is a low risk of mechanical impact danger for the plastic part of enclosure and display window.
 - ▲ **Warning - Do not separate the scale when energized.**

4 Installation on the scale

- ▲ In all installation work, refer to the following control drawing:
 - Installation drawing 72227514A according to GENELEC standard IEC 60079-15.

4.1 Attaching power cable to the scale



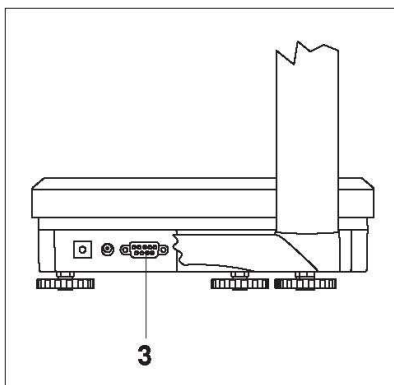
- Turn the scale on its side so that the connection socket (1) on the bottom is accessible.
- Route the blue cable from the Panda -EX1P Power Supply Unit to the scale and plug connector into the scale.
- Turn the scale back to the proper position.

4.2 Ensuring admissibility of the peripheral unit

If a peripheral unit needs to be connected, its RS232 interface must also be intrinsically safe and approved to maintain the intrinsic safety.

- Ensure that the electrical limiting values of the peripheral match the limiting values printed on the scale next to the socket. If this is not the case, install an approved barrier, e.g. MTL 761P.

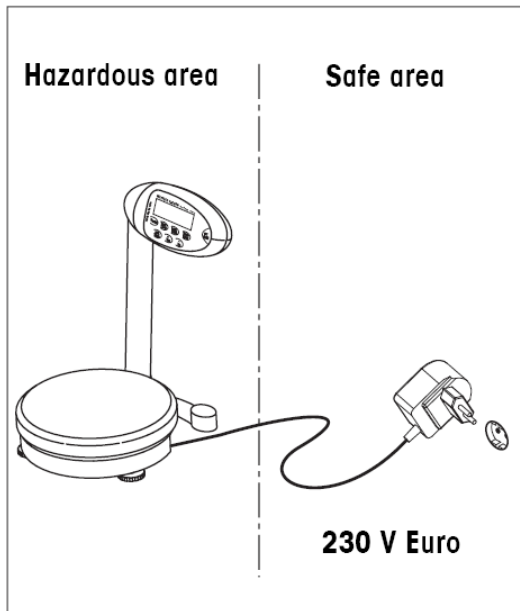
4.3 Attaching peripheral unit



- Connect the cable from the peripheral device to the 9-pin I/O socket (3) of the scale. Fix all connectors by tightening screws.

5 Installation of the AULT AC Adapter

5.1 Installation in the safe area

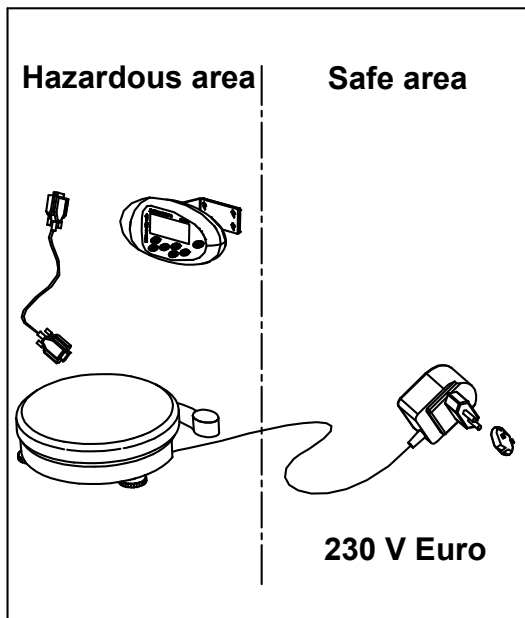


- Install the power supply in the safe area near a wall socket.
- Route the power line cable and the cable to the scale so that they are protected against damage. Cables must not be kinked or bent at sharp angles.
- Plug the power plug into the wall socket of the building electrical installation.

As neither the power supply unit nor the scale have an on/off switch, the power plug serves as a power disconnecting device.

The scale is ready for operation as soon as the power plug is plugged in.

Warning: Before separating the power supply cable from the scale make sure the AC adapter is disconnected from the mains!



6 Operation and maintenance

6.1 Safety measures during operation

- ▲ AULT AC adapter and scale may be operated only when the housing is closed.
- ▲ **Warning: Because of the danger of static discharge, a protective cover may only be used if it is statically uncritical.**
- ▲ **Warning: Protect the scale terminal against bumps.**

6.2 Control

- ▲ Inspect the cables, connectors and accessories at regular intervals. Ensure they are free from cracks and other mechanical or chemical damage. If such damage is found, inform METTLER TOLEDO service.

6.3 Cleaning

- ▲ When cleaning the scale, ensure that the terminal and particularly the membrane keypad are not damaged.
- ▲ **Warning: Avoid extensive dry rubbing on the scale parts since this may cause static discharges.**

7 Directives and test standards

Since the AULT AC adapter is always used on scale BBA242xx, the list of directives and standards is contained in the operating instructions of the scale.

8 Technical data

AULT (HK-CP07-A12) AC Adapter

Mains input	230 V, 50 Hz, 100 mA; $U_{max}= 250$ V
Maximum safety output	U_o : 12 VDC, I_o : 600 mA

BBA242xx Mixing Scale

Classification	ATEX II 3 G Ex nL IIB T4
Mains input	U_i max: 12 VDC, I_i max: 600 mA
Ambient temperature	5 to 40 °C

BBA242xx Intrinsically safe data interface

Connection socket 9-pin socket D-subminiature, female

Pin assignment	Pin	Assignment
	Pin 2	TXD (inverted)
	Pin 3	RXD (inverted)
	Pin 5	GND (0V, connected to housing ground)
	Pins 1, 4, 6, 7, 8, 9	not connected

Nominal rating Min. ± 5 V at 3 k Ω
Max. ± 7 V at 300 Ω source resistance

Values for intrinsic safety $U_o = 11.6$ V; $I_o = 56.8$ mA; $P_o = 165$ mW;
 $C_o = 2.11$ μ F; $L_o = 15$ mH
 $U_i = \pm 11$ V; $I_i = 28$ mA; $P_i = 148$ mW;
 $C_i = 1.3$ nF; $L_i = 0$

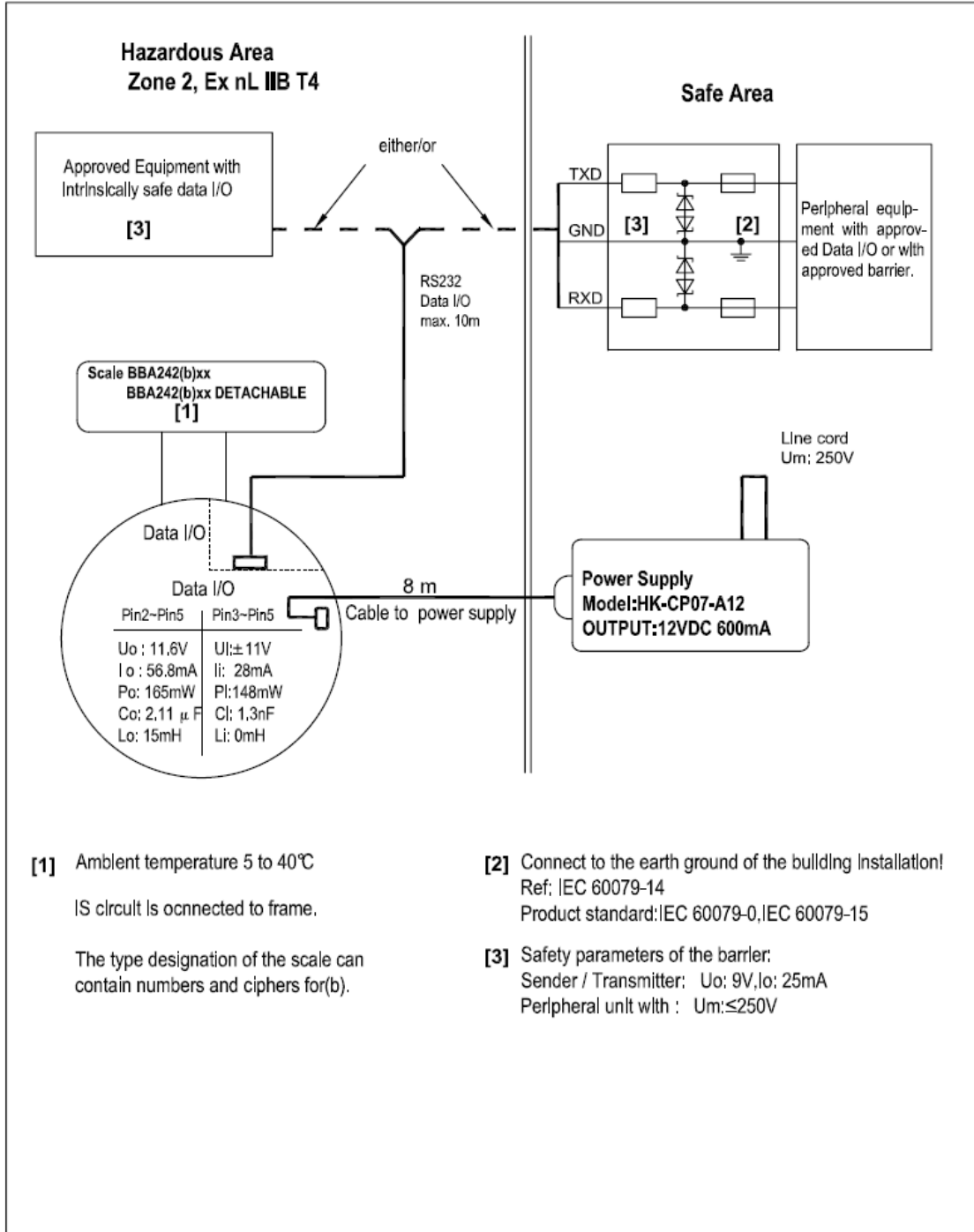
Enclosure Protection IP4X, **warning : indoor use. Don't exposed to rain.**

Recommended barriers from MTL Instruments Ltd

Type 761P Channel 1/2: $U_o = \pm 9$ V, $I_o = 25$ mA,
Working voltage = ± 7.2 V

The TXD output of an external RS232 port must be limited by a source resistance of approx. 300 Ω .

Installation Drawing 72227514A



To protect your METTLER TOLEDO product's future: METTLER TOLEDO service assures the quality, measuring accuracy and preservation of value of all METTLER TOLEDO products for years to come. Please send for full details about our attractive terms of service. Thank you.

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Subject to technical changes and to the availability of the accessories supplied with the instruments

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