



VOLTcraft®

Ⓢ OPERATING INSTRUCTIONS

VERSION 01/13

AM-60X46 ANALOGUE PANEL METER

ITEM NO.: 10 35 36	100 mA/DC	ITEM NO.: 10 35 42	5 A/DC
ITEM NO.: 10 35 37	100 µA/DC	ITEM NO.: 10 35 44	15 A/DC
ITEM NO.: 10 35 38	1 mA/DC	ITEM NO.: 10 30 78	15 V/DC
ITEM NO.: 10 35 39	1 A/DC	ITEM NO.: 10 30 79	30 V/DC
ITEM NO.: 10 35 41	3 A/DC		

INTENDED USE

The analogue panel meters are designed for installation in switch cabinets or display panels and are only suitable for DC/DC voltage measurements. The installation occurs directly without external components; appropriate pre-resistors are already integrated in the circuit. Only in integrated status they may be put into operation. The suitable regulations are to be observed. The fixed measuring instruments are available with different measurement ranges. The scale needle can be adjusted precisely with the front screw.

For safety and approval purposes, you must not rebuild and/or modify this product. If you use the product for purposes other than those described above, the product may be damaged. In addition, improper use can cause hazards such as short circuiting, fire, electric shock etc. Read the instructions carefully and keep them. Make this product available to third parties only together with its operating instructions.

This product complies with the statutory national and European requirements. All company names and product names are trademarks of their respective owners. All rights reserved.

DELIVERY CONTENT

- Meter
- Mounting material
- Operating instructions

SAFETY INSTRUCTIONS



Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.



a) Persons / Product

- The device must not be used in damp interiors or outdoors in the open air.
- The fixed measuring instrument must not be used for medical purposes.
- The fixed measuring instrument may only be used in voltage ranges <75 V/DC. Observe the technical data for this!
- Be especially cautious in dealing with voltage >35 V/DC. Already at this voltage you can get a life-threatening electric shock when touching electric lines.
- De-energise the electric system before installing the measuring instrument.
- The device is not a toy. Keep it out of the reach of children and pets.
- Do not leave packaging material lying around carelessly. These may become dangerous playing material for children.
- Protect the product from extreme temperatures, direct sunlight, strong jolts, high humidity, moisture, flammable gases, vapours and solvents.
- Do not place the product under any mechanical stress.
- If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. Safe operation can no longer be guaranteed if the product:
 - is visibly damaged,
 - is no longer working properly,
 - has been stored for extended periods in poor ambient conditions or
 - has been subjected to any serious transport-related stresses.
- Please handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.
- Also observe the safety and operating instructions of any other devices which are connected to the product.

b) Miscellaneous

- Consult an expert when in doubt about operation, safety or connection of the device.
- Maintenance, modifications and repairs are to be performed exclusively by an expert or at a qualified shop.

If you are not sure about the correct connection or use, or if questions arise which are not covered by these operating instructions, please do not hesitate to contact our technical support or another qualified specialist.

Voltcraft®, Lindenweg 15, D-92242 Hirschau, Tel. +49 180/586 582 7.

EXPLANATIONS OF SYMBOLS

At the scale's face different symbols are attached, that have the following significance:

Installation position vertical

2.5 Accuracy class related to the scale end value

Direct voltage/-current (DC)

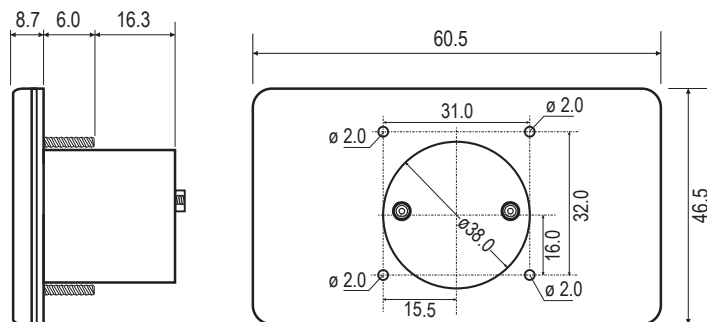
Moving coil instrument

INSTALLATION



Assembly and installation may only be carried out by a specialist, who is familiar with the relevant regulations and the ensuing risks.

Mount the measuring instrument with the assembly material included in a pre-assembled rectangular front panel opening. Carefully attach the fixed measuring instrument. You can get the corresponding dimensions (in mm) from the following sketch.



CONNECTION



In order to ensure a correct start of operation, you should read these operating instructions including the safety instructions thoroughly and attentively before using the device.

Do not connect when the wires are live.

Connection of the voltage measuring instruments is done by means of parallel connection. Connection of the current measuring instruments is done by means of series connection. Connect the fixed measuring instrument to the two screw terminals on the back.

DISPOSAL



Electronic devices are recyclable waste and must not be disposed of in the household waste.

At the end of its service life, dispose of the product according to the relevant statutory regulations.

TECHNICAL DATA

Item no.	Measurement range (full-scale deflection)	Internal resistance	Unit
10 35 36	100 mA/DC	0.1 Ω	Ampere
10 35 37	100 µA/DC	1 Ω	Ampere
10 35 38	1 mA/DC	210 Ω	Ampere
10 35 39	1 A/DC	0.1 Ω	Ampere
10 35 41	3 A/DC	0.1 Ω	Ampere
10 35 42	5 A/DC	0.1 Ω	Ampere
10 35 44	15 A/DC	0.1 Ω	Ampere
10 30 78	15 V/DC	15 kΩ	Volt
10 30 79	30 V/DC	30 kΩ	Volt

Movement..... Moving coil

Accuracy class..... 2.5

Installation-Ø 38 mm

Operating conditions..... -25 to +55 °C, 20 – 95 % RH (non-condensing)

Storage conditions..... -40 to +70 °C, 20 – 95 % RH (non-condensing)

Weight approx. 44 g

Ⓢ Legal notice

These operating instructions are a publication by Voltcraft®, Lindenweg 15, D-92242 Hirschau/Germany, Phone +49 180/586 582 7 (www.voltcraft.de).

All rights including translation reserved. Reproduction by any method, e.g. photocopy, microfilming, or the capture in electronic data processing systems require the prior written approval by the editor. Reprinting, also in part, is prohibited.

These operating instructions represent the technical status at the time of printing. Changes in technology and equipment reserved.

© Copyright 2013 by Voltcraft®