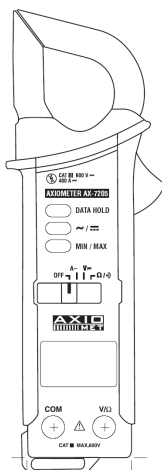




DIGITAL CLAMP METER

AX-7250



INSTRUCTION MANUAL



Symbols on the instrument and in the instruction manual:



Warning! Warns of potential danger, comply with the instruction manual.



Caution! Dangerous voltage. Danger of electrical shock.



Continuous double or reinforced insulation complies to IEC 61140, Class II



Symbol for the marking of electrical and electronic equipment (WEEE Directive 2002/96/EC). Environmental Protection. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.



Symbol of conformity, confirms conformity with relevant EU directives. The instrument complies with the EMC Directive (89/336/EEC), as well as the Low Voltage Directive (73/23/EEC)



During application and removal of the CURRENT SENSORS, please de-energise the installation on which the current is measured, or to adopt safe operating procedures when working on HAZARDOUS LIVE installations.

Introduction

The digital Current Clamp is a universal current measurement clamp. The measurement instrument has been built in compliance with the most up-to-date Directives EN 61010, IEC 61010 and ensures safe and reliable operation.

Features

- Small, handy AC Current Clamp up to 400A
- Measurements also in small compact systems with very limited space, available without interruption lines.
- 3 ¾ digit LCD, maximum 3999 digits
- Data Hold Function
- Min/Max Function
- Voltage measurement AC/DC up to 600V
- Clamp opening 28 mm



Safety measures

The instrument has left our factory in a safe and perfect condition. To maintain this condition, the user must pay attention to the safety references contained in this instruction manual.



Warning! This instruction manual contains both information and warnings that are necessary for the safe operation and maintenance of the instrument. It is recommended that you read the manual carefully and ensure that its contents are fully understood. Failure to understand these instructions and to comply with the warnings and instructions contained herein can result in serious injury or damage.



Caution! In order to avoid the danger of electrical Shock, it is important that proper safety measures are respected when working with voltages exceeding 120V (60V) DC or 50V (25V) r.m.s. AC. These voltages represent internationally the limits of max. contact voltage.



Warning! When testing any current or voltage only the hand-hold area (11) of the instrument may be touched.



Warning! The instrument operates correctly only in a temperature range specified in the technical specification section.



Warning! Prior to usage that the instrument is in perfect working order, for example at a known current source.



Caution! Before opening the instrument (for example to replace the battery), it must be disconnected from all circuits.



Caution! Do not apply around or remove from HAZARDOUS LIVE conductors.



Warning! Measurements in dangerous proximity of electrical installations are only to be executed when instructed by a responsible electrical specialist, and never alone.



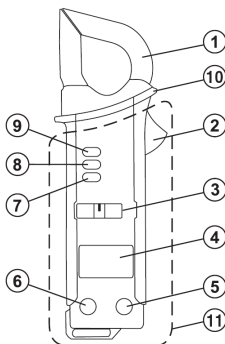
Warning! The respective accident prevention regulations established by the professional associations for electrical system and equipment must be strictly met at all times.



Appropriate Usage

The instrument must only be used under the conditions and for the purposes for which it has been constructed. Particular attention should be paid to the safety instructions, the technical specifications relating to environmental conditions and the use of the instrument in dry surroundings.

Display and Control Elements



- 1) Current converter
- 2) Movable jaw
- 3) Range selection switch
- 4) Digital Display
- 5) "VΩ" input socket
- 6) "COM" input socket
- 7) MIN/MAX key
- 8) AC/DC switch key
- 9) Data Hold
- 10) Barrier
- 11) Hand-hold area

Carrying-out current measurements



If tangible dangerous active parts are available in the plant to be measured, an individual protection equipment (e.g. suitable covers) must be used.



The device may only be held by the handle area, limited by the handle shroud, at current measurements of every type. The handle shroud limits the area for touching the device for certain



and prevents a slipping of the hand inadvertently to the front, unsecured area of the clamp-on ammeter.



Do not apply around or remove from HAZARDOUS LIVE conductors.



Prior to usage and measurement check that the instrument is In perfect working order, for example At a known current source.



Select the measuring range priori to connection of the instrument to the UUT (unit under test).



Before selecting a new function or measuring range the instrument must be disconnected from any circuit.



Use the instrument only In clean and dry surroundings. Dirt and moisture reduce the effectiveness. Dirt and moisture reduce the effectiveness of the insulation with consequent danger of electrical shock, especially when dealing with high voltages.



The respective accident prevention regulations established by the Professional associations are to be strictly enforced At all Times regarding tasks executed under voltage or In proximity of parts under voltage.

AC current measurement

- 1) Switch on the instrument
- 2) Select measurement range A~
- 3) Open the clamp and surround the conductor of the current circuit to be measured

Make sure that the current converter (1) is completely closed as this may result in measurement errors.

- 4) In case of range overflow, “OL” is displayed
- 5) Read the measured value on the display.

Key “MIN/MAX” is used to display minimum or maximum value during a measurement.

Voltage measurement



Caution! Never apply more than 600V AC/DC to the test Leads (instrument). If these threshold is exceeded the result could be serious personal injury or damage to the instrument.





Caution! Do not apply around or remove from HAZARDOUS LIVE conductors.



Warning! Only use the instrument in circuits fused with max. 16A



Warning! Before switching to a New function, the probes must always be removed from the UUT (Unit Under Test)

DC Voltage measurement

- 1) Select measurement range " $V \sim$ " with Range selection switch (3)
- 2) Select range " --- " with AC/DC switch key (8)
- 3) Connect test leads to UUT
- 4) Read the measured value on the display

AC Voltage measurement

- 1) Select measurement range "V" with Range selection switch (3)
- 2) Select range "~" with Ac/DC switch key (8)
- 3) Connect test leads to UUT
- 4) Read the measured value on the display

Resistance measurement



Caution! Ensure that the UUT is switched off and that no voltage is present.

- 1) Select measurement range " Ω / \bullet " with Range selection switch (3)
- 2) Connect test leads to UUT
- 3) Read the measured value on the display.

Continuity test



Caution! Ensure that the UUT is switched off and that no voltage is present.

- 1) Select measurement range " Ω / \bullet " with Range selection switch (3)
- 2) Connect test leads to UUT
- 3) Read the measured value on the display. A signal sound is audible at resistance values less than 40Ω .



The polarity at the red lead (socket) is “+”

Data-Hold function

If the display is not visible during measurement, press the “DH” button (9) to retain the display. The clamp can then be removed from the conductor and the stored value read.

Min/Max Functions

Facility to switch between 4 measurement modes pressing the MIN/MAX key (7), in accordance with the following table:

Display	Function
MIN	Smallest measurement value is displayed and saved
MAX	Largest measurement value is displayed and saved
MIN/MAX	The current measurement value is displayed, whereby the smallest and the highest values are saved. The measurement values are saved. The measurement values can then be read in MAX or MIN mode.
Auto-Mode	Activate the AUTO MODE again pressing the MIN/MAX key (7) for approx. 1 sec. This is the standard mode when switching on the instrument. Display of current measurement value (without saving)

Maintenance

As long as the instructions in the operating manual are adhered to, no special maintenance is required.

Cleaning

Disconnect the instrument from all circuits. Humidify cloth slightly with household cleaner and wipe the instrument surface by applying light pressure. Allow a recovery time after cleaning before operating the instrument.

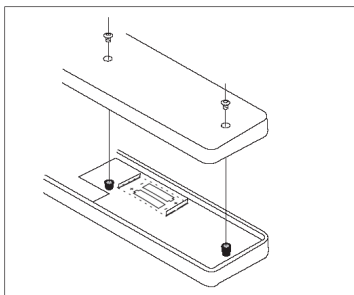
Battery Replacement

If the battery symbol appears in display (3), the battery has to be replaced. Please proceed as follows:

- 1) Disconnect the instrument from the measurement circuit.
- 2) Switch off the instrument.
- 3) Loosen both screws in the casing rear.
- 4) Carefully open the casing.



- 5) Replace the old battery with the new one by respecting the correct polarity! For the battery type, please refer to the technical data section.
- 6) Carefully close the casing.
- 7) Insert the screws and ensure they are tightened.



Warning! If the instrument is likely to remain unused for a long period of time the batteries must be removed. If a battery should leak inside the housing, return the instrument to our service department for cleaning and checking. Please think of our environment when getting rid of used batteries. They should be disposed of in a place suitable for hazardous waste.

Technical specifications

(valid for 23°C ±5°C, max. 80% rel. humidity)

Display:	3 ¾ digit LCD, 3999 digits with symbols for units and used batteries.
Overload display:	“OL” is displayed
Battery display:	Battery in the display means “replace the battery”
Power supply:	2 x1,5V, IEC LR03
Clamp opening:	28 mm
Current consumption:	<3mA
Temperature range:	0°C...+50°C at max 80% relative humidity
Storage temperature:	-10°...60°C
Protection class:	IP40
Altitude:	up to 2000m
Pollution degree:	2
Overvoltage category:	CAT III/600V against ground
Dimensions:	65x185x35 mm
Weight:	approx. 175 g incl. battery



AC Current 50/60 Hz

Range	Resolution	Tolerance	Over Voltage Pr.
40 A	0,01 A	$\pm(2\% \text{ rdg.} + 10 \text{ digit})$	600V
400A	0,1 A		

AC Current 70-400 Hz

Range	Resolution	Tolerance	Over Voltage Pr.
40 A	0,01 A	$\pm(3\% \text{ rdg.} + 10 \text{ digit})$	600 V
400 A	0,01		

DC Voltage

Range	Resolution	Tolerance	Over Voltage Pr.
400 V	0,1 V	$\pm(1\% \text{ rdg.} + 5 \text{ digit})$	600V
600 V	1 V		

AC Voltage

Range	Resolution	Tolerance	Over Voltage Pr.
400 V	0,1 V	$\pm(1,5\% \text{ rdg.} + 10 \text{ digit})$	600V
600 V	1V		

Frequency range 40-450Hz

*Input impedance 1M Ω m

Resistance

Range	Resolution	Tolerance	Open circuit voltage	Over Voltage pr.
400 Ω	0,1 Ω	$\pm(1\% \text{ rdg.} + 5 \text{ digit})$	-1,1 V...1,3V	600V

Continuity

Range	Open circuit voltage	Over Voltage Pr.
$\leq 40\Omega$	-1,1 V...1,3 V DC	600 V



12 months' guarantee

The instrument are subject to stringent quality controls. If, in the course of normal daily use a fault should occur, we provide 12 months' guarantee (only valid with invoice). Faults in manufacture and materials will be rectified by us free of charge, provided the instrument has not been tampered with, and is returned to us unopened. Damage due to dropping, abuse or misuse is not covered by the guarantee. Our Service Department will promptly repair any faults that occur outside the guarantee period. This Instruction Manual has been prepared with great care. No liability is accepted for the correctness and completeness of the data, illustrations, and drawings it contains.

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