

Elcometer 116C

Sling Hygrometer

Operating Instructions

elcometer® is a registered trademark of Elcometer Limited.
All other trademarks acknowledged.

© Copyright Elcometer Limited. 2008.

All rights reserved. No part of this Document may be reproduced, transmitted, transcribed, stored (in a retrieval system or otherwise) or translated into any language, in any form or by any means (electronic, mechanical, magnetic, optical, manual or otherwise) without the prior written permission of Elcometer Limited.

CONTENTS

Section	Page
1 About this instrument	2
2 Using the instrument	3
3 Technical specification	5
4 Spares and accessories	6
5 Maintenance	6
6 Related Elcometer equipment	6

Thank you for your purchase of this Elcometer 116C Sling Hygrometer. Welcome to Elcometer.

Elcometer are world leaders in the design, manufacture and supply of inspection equipment for coatings and concrete. Our products cover all aspects of coating inspection, from development through application to post application inspection.

This Elcometer 116C Sling Hygrometer is a world beating product. With the purchase of this product you now have access to the worldwide service and support network of Elcometer. For more information visit our website at www.elcometer.com

1 ABOUT THIS INSTRUMENT

The Elcometer 116C Sling Hygrometer is a simple but effective instrument for measuring the wet and dry bulb temperatures of air. From these two measurements, the percentage relative humidity (%RH) of the ambient air and the dewpoint temperature are obtained.

1.1 STANDARDS

This instrument can be used only as a comparator.

1.2 WHAT THE BOX CONTAINS

- Elcometer 116C Sling Hygrometer
- Operating instructions

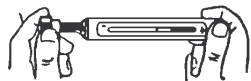
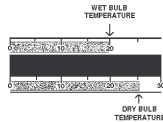
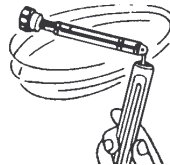
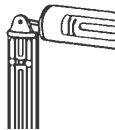
2 USING THE INSTRUMENT

1. Remove the end cap and immerse the thermometer bulbs into water until the wick is saturated.
2. Fill the reservoir with water. Replace the end cap, tightening just enough to prevent water leakage.
3. Ensure the wick is wet and completely covers the wet thermometer bulb.



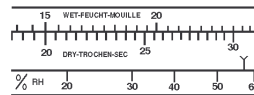
elcometer

4. Pull the body from the tube so that the body can swivel freely.
5. Using the tube as a handle, whirl the body at 2 to 3 revolutions per second. Continue whirling until the readings stabilise (approximately 1¼ minutes).
6. When the readings have stabilised, stop whirling and **immediately** read the Wet bulb temperature and then the Dry bulb temperature.
7. Slide the body back into the tube (aligning the groove with the arrow) until the wet and dry temperature readings are opposite each other on the top two scales.



8. The %RH is shown on the scale below the arrow. In this example, %RH = 58.

To find dewpoint, note the Wet bulb temperature (e.g. 20). Find this figure on the Dry bulb scale. Dewpoint is the equivalent value on the Wet bulb scale. In this example, dewpoint = 15.



3 TECHNICAL SPECIFICATION

Table 1:

	Accuracy	Operating temperature
Thermometers		-5 °C to +50 °C (+30 °F to +110 °F)
%RH (in range 10% to 100%)	±5%	0 °C to +38 °C (+32 °F to +100 °F)
Dewpoint Temperature	±3 °C (±5.5 °F)	0 °C to +30 °C (+32 °F to +86 °F)

(Factors such as barometric pressure may affect these values slightly)

Your Elcometer 116C Sling Hygrometer is packed in a cardboard and foam package. Please ensure that this packaging is disposed of in an environmentally sensitive manner. Consult your local Environmental Authority for further guidance.

4 SPARES AND ACCESSORIES

Thermometer (°C)	T1164478-
Thermometer (°F)	T1164479-
Wick Replacement Kit (4 wicks)	T1164480-
Dewpoint Calculator	G114----2

5 MAINTENANCE

The Elcometer 116C Sling Hygrometer is designed to give many years reliable service under normal operating and storage conditions.

To replace a thermometer - remove the thermometer from the holding clip. Slot the new thermometer into place and retighten the holding screws.

Always keep the wick clean and saturated with clean (distilled) water. To remove dirty wick material - cut off the dirty piece of wick and pull clean wick material from the end cap and over the bulb. Extra wicks may be stored, loosely packed, in the end cap.

6 RELATED ELCOMETER EQUIPMENT

Users of this Elcometer 116C Sling Hygrometer may also benefit from the following Elcometer products:

- Elcometer Surface Cleanliness Test Kits
- Elcometer 114 Dewpoint Calculator
- Elcometer 319 Dewpoint Meter (Electronic)
- Elcometer Surface Temperature Gauges
- Elcometer Moisture Meters

For further information contact Elcometer, your local supplier or visit www.elcometer.com