

---

---

**Liquid hydrocarbons — Dynamic  
measurement — Proving systems for  
volumetric meters —**

**Part 3:**  
**Pulse interpolation techniques**

*Hydrocarbures liquides — Mesurage dynamique — Systèmes d'étalonnage  
pour compteurs volumétriques —*

*Partie 3: Techniques d'interpolation des impulsions*



## Contents

|                                                                                         | Page      |
|-----------------------------------------------------------------------------------------|-----------|
| <b>1</b> Scope.....                                                                     | <b>1</b>  |
| <b>2</b> Normative reference .....                                                      | <b>1</b>  |
| <b>3</b> Definitions .....                                                              | <b>1</b>  |
| <b>4</b> Principles .....                                                               | <b>2</b>  |
| <b>4.1</b> General .....                                                                | <b>2</b>  |
| <b>4.2</b> Double-timing method.....                                                    | <b>2</b>  |
| <b>4.3</b> Quadruple-timing method .....                                                | <b>3</b>  |
| <b>4.4</b> Phase-locked-loop method .....                                               | <b>4</b>  |
| <b>5</b> Conditions of use .....                                                        | <b>5</b>  |
| <b>5.1</b> General .....                                                                | <b>5</b>  |
| <b>5.2</b> Double-timing method.....                                                    | <b>5</b>  |
| <b>5.3</b> Quadruple-timing method .....                                                | <b>6</b>  |
| <b>5.4</b> Phase-locked-loop method .....                                               | <b>6</b>  |
| <b>6</b> Meter requirements.....                                                        | <b>6</b>  |
| <b>7</b> Tests for pulse interpolation system .....                                     | <b>7</b>  |
| <b>7.1</b> General .....                                                                | <b>7</b>  |
| <b>7.2</b> Test circuit .....                                                           | <b>8</b>  |
| <b>7.3</b> Test schedule .....                                                          | <b>8</b>  |
| <b>7.4</b> Immunity from electrical noise .....                                         | <b>9</b>  |
| <b>8</b> Test report and markings.....                                                  | <b>9</b>  |
| <b>Annex A</b> (normative) Measurement techniques for determining pulse intervals ..... | <b>10</b> |
| <b>Annex B</b> (informative) Bibliography .....                                         | <b>12</b> |

© ISO 1998

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
Case postale 56 • CH-1211 Genève 20 • Switzerland  
Internet central@iso.ch  
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland