

Operating Instructions for Lab pH Electrode LE438

Mettler-Toledo AG, Analytical
Sonnenbergstrasse 74
CH-8603 Schwerzenbach
Tel: +41 44 806 77 11
Fax: +41 44 806 73 50
<http://www.mt.com>

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

Mettler-Toledo AG 2011
Printed in P.R.China Ver.C



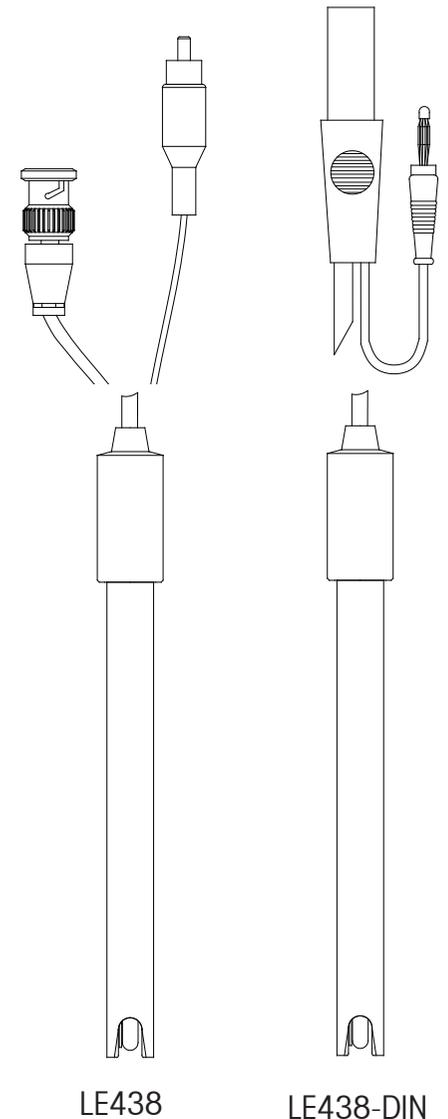
1. When unpacking, please check electrode for possible mechanical damage to the temperature sensor and the membrane. Electrodes subject to complaints must be returned to our agent in the original box indication the invoice number.
2. Take off watering cap and flush electrode with distilled water. Wipe the electrode with a tissue. Do not rub as an increase of the response time might result.
3. Eliminate any air bubbles inside the membrane space of the measuring electrode by smoothly shaking it the vertical plane.
4. Plug in and fasten BNC & RCA/Cinch or DIN & 4mm banana plugs to the sockets on pH meter.
5. Follow the calibration procedure described in the manual of pH meter. After calibration, flush electrode with distilled water. Then wipe the electrode with tissue. Now the electrode is ready for measurement.
6. Rinse and clean electrode after use, replace the watering cap which is partly filled (1/3) with 3M KCl storage solution (order No. 51350072). Do not store the electrode in distilled water, otherwise the life time of electrode would be drastically shortened.
7. Trouble shooting:
 - A. Slow response/drift.
Clean open apertures with warm tap water.

- After dry storage, soak for 24 hours in 3M KCl electrolyte (order No. 51350072).
- B. Slope not adjustable.
Clean open aperture with warm tap water. Clean connectors with anhydrous ethylalcohol.
 - C. Contamination by oil/organic liquids.
Rinse with acetone or ethanol.
- Warning: Cleaning with strong acids (e.g.HCl) will decrease the life time of the electrode. Each time the electrode is cleaned, it must be recalibrated.

Order No.
51340242 LE438
51340346 LE438-DIN

Specifications
pH range: 0...14pH
Temperature range: 0...80°C
Temperature probe:
NTC30K LE438
Pt1000 LE438-DIN
Type of junction: Nylon
Cable: 1m
Connectors:
BNC & RCA/Cinch LE438
DIN & 4mm bananas LE438-DIN
Shaft lengths: 120mm
Shaft diameter: 12mm

Storage
short term: 3M KCl (order No.51350072), buffer pH 4 or 7
long term: 3M KCl electrolyte (order No. 51350072) in watering cap



LE438

LE438-DIN