



MM 41 a high performance instrument, the combination of a pH-meter + an ion-meter + a conductivity meter. Multiparametric instrument with two measuring channels: Channel 1, pH + E.C. + °C. Channel 2, pH or mV or I.S.E. + °C.

It is supplied with magnetic stirrer, calibration flasks, pH buffers and conductivity standard solutions. In addition, there is a connection for a second stirrer which allows for a second measuring stand.

Interface RS 232 C for printer of PC and connection for external PC keyboard or barcode reader. Data logger. Storage of up to 400 data per channel.

ComLabo Software optional. For bidirectional communication with a PC and to interconnect CRISON modules. It allows automating processes such as measuring pH + EC with an automatic sample changer.

Authorised CRISON dealer:

Sample changer
Optional.



Measurement ranges

pH	-2...16
mV	± 2000
Temp.	-20...150 °C (-4...302 °F)
ISE	10 ⁻⁶ M ... 10 ⁻¹ M,
EC	0.001* µS/cm... 1000** mS/cm (* with C=0.1 cm ⁻¹ ** with C=10 cm ⁻¹)
Salinity	5.85 mg/l ... 311.1 g/l NaCl
TDS	0 mg/l ... 500 g/l

	Resolution	Measurement error (± 1 digit)	Reproducibility (± 1 digit)
pH	0.1/0.01/0.001	≤ 0.005	± 0.001
mV	0.1/1	≤ 0.5	± 0.1
ISE	programmable	--	--
EC	variable	≤ 0.5 %	± 0.1 %
NaCl	variable	≤ 0.5 %	± 0.1 %
TDS	variable	≤ 0.5 %	± 0.1 %
Temp.	0.1 °C (0.18 °F)	≤ 0.2 °C (0.36 °F)	± 0.1 °C (0.18 °F)

Automatic temperature compensation

pH: manual entrance or with Pt 1000 temperature probe.
Programmable isopotential pH, standard value 7.00
EC: TC (temperature coefficient) **Linear**, 0.00 ... 5.00 % / °C.
Non linear for natural waters (UNE EN 27888).
TR (ref. temperature) 20 °C (68 °F), 25 °C (77 °F) or values between 0 e 99 °C (0 e 210 °F).

pH calibration

Technical buffers DIN 19267: 2.00, 4.01, 7.00, 9.21 & 10.90 (25 °C) (77 °F).
DIN 19266 buffers: 1.679, 4.006, 6.865, 9.180 & 12.454 (25 °C) (77 °F).
Specific user's buffers.
With 1, 2 or 3 buffers selectable inside the range.
Calibration at any pH value (indirect calibration).
Manual introduction of the calibration parameters.
Programmable calibration validity between 0 h and 7 days.
Automatic rejection of electrodes in poor condition.

mV calibration

Automatic recognition of redox standard 220 mV at 25 °C (77 °F).
Calibration at any mV value.

ISE calibration

2...5 programmable standards.
Selectable calibration units mol/l, g/l, mg/l or mmol/l.
Up to 4 calibration curves per channel.

EC calibration (conductivity)

Standards: 147 µS/cm, 1413 µS/cm, 12.88 mS/cm and 111.8 mS/cm [values at 25 °C (77 °F)].
With 1, 2 or 3 standards selectable inside the range.
Special calibration at any EC, salinity or TDS value.
Manual introduction of cell constant.
Programmable calibration validity between 0 to 99 days.

TDS conversion factor

Values between 0.4 ... 1. Standard 0.64.

Temperature readjustment

Correction of the temp. probe deviation (A.T.C.) at 25 °C (77 °F) and 85 °C (185 °F).

Measuring modes

By stability (selectable criteria), in continuous and by time.

Data Logger

Storage capacity up to 400 readings.

Languages

Spanish, Italian, French, English and Catalan.

Display

Graphic, backlit liquid crystal, 128 x 64 dots.

Connectable sensors

2 combined or indicator electrodes, BNC connector (Imp. >1012Ω).
2 Reference electrodes, banana connector.
1 A.T.C. type Pt 1000, banana or telephone connector.
1 Conductivity cell with built-in Pt 1000 sensor, telephone connector.

Connectable peripherals

2 CRISON magnetic stirrer.
Printer or PC.
External PC keyboard or barcode reader.

Directives low voltage and EMC

According to 2004/95/EC. According to 2004/108/EC.

Power supply

External plug-in power supply 220VCA/12 VDC, 3.3 W.

Materials

Enclosure, ABS and PC. Keypad, PET with protective treatment.

Physical parameters

Weight: 1100 g. Size: 350 x 200 x 110 mm.

Specifications subject to change without notice.



How to order

Code	Description	Included accessories
41 10	MM 41 Multimeter with accessories, without sensors .	<ul style="list-style-type: none"> • Magnetic stirrer. • Support for sensors. • Solutions: pH 4, pH 7, 1413 µS/cm and KCl. • Calibration flasks with magnetic stirring bar. • User manual.
41 40	Complete Kit: MM 41 Multimeter, accessories + electrode 50 14 + cell 50 70 .	