

## MARS-ENR – Fully-Automatic Enamel Rater

### Fully-automatic In-Line Enamel Rater

This fully-automatic, online can sampling and reporting system integrates directly with the production line to receive cans and testing instructions without any operator intervention - a substantial labor savings.

### World's Fastest Enamel Rater at 4 CPM



The new and improved MARS-ENR is the latest edition to CMC-KUHNKE's line of Measurement and Rating Stations (MARS) - a fully-automated line of modular can inspection equipment priced low enough for can makers to justify an installation on every line.

At 4cpm, the MARS-ENR is the fastest enamel rater in the world. The MARS-ENR may be integrated directly with the production line to receive cans and testing instructions without any operator intervention - a substantial labor savings. Enamel rater test information may be collected at a higher frequency and at a lower cost. The MARS-ENR may also be installed offline using a manually fed in-feed.

The gauge automatically takes cans from the in-feed, and performs customized enamel rating – Programmable Measurement Events include: Measurement Duration, Measurement Range, Contact Control, Current Limits, and Fill level Control. In the event of an out-of-spec condition, or if statistical anomalies are discovered, several optional automatic responses are available to notify operators that corrective action is needed. These range from simple warning lights and alarms, to a signal sent to the line to stop production.

Measurement results may also be shown graphically on the gauge [Current over time], and test results may be automatically transferred either directly into Visionary QCTM or to another plant wide data acquisition software.

## Features

- World's fastest automated enamel rater at 4cpm
- Welded stainless steel frame designed for maximum corrosion resistance
- High resolution measurements displayed in 0.001mA
- No changeover from 8oz to 16oz
- Customized measurement events - duration, range, contact control, current limits and fill level
- Installed In-line, or stand-alone
- Test data automatically transferred via RS232, or Ethernet

## Technical Details

<b>Max Size:</b>	603 (153 mm)
<b>Min Size:</b>	200 (53 mm)
<b>Range: Max Height:</b>	12 in (300 mm)
<b>Characteristics Measured:</b>	Enamel Rating
<b>Air Pressure Required:</b>	72.5 - 145 psi (5-10 Bar) Clean, Dry Air
<b>Electrical Power Required:</b>	12V - 115/240 VAC
<b>Output Interface:</b>	RS232C
<b>Calibration:</b>	20 available values
<b>Voltage:</b>	3-9 V with accuracy to two decimal places
<b>Resolution:</b>	0.001 $\mu$ A
<b>Accuracy:</b>	$\pm$ 1% of measuring value
<b>Measurement Range:</b>	0.01 $\mu$ A – 250 mA [0.0001 mA – 250 mA]
<b>Dimensions:</b>	1500 mm x 900 mm x 2000 mm (59 in x 35 in x 79 in)
<b>Weight:</b>	700 kg (1,540 lbs)
<b>Liquid Required:</b>	20L potable water and 20L electrolyte solution (3% NaCl)