



MMC INTERNATIONAL CORP.

# **OPERATING AND MAINTENANCE INSTRUCTIONS**

INTRINSICALLY SAFE TRIPLE  
FUNCTION GAUGING TAPE FOR  
OPEN APPLICATIONS

**LIQUID MEASURE OF ULLAGE, OIL/WATER  
AND TEMPERATURE**

## **MODEL D-2401-2**

TECHNICAL APPROVED BY:

FACTORY MUTUAL AND SIRA FOR  
CLASS I, DIVISION I, GROUPS C & D

AND

LLOYD'S REGISTER AND BUREAU VERITAS "MED" APPROVED

**IN ACCORDANCE WITH IMO RESOLUTION MEPC.5 (XIII)  
FOR OIL/WATER DETECTION**

MMC INTERNATIONAL CORP  
60 INIP DRIVE INWOOD,  
NEW YORK 11096

DRAWING FILE NO. A-2401-600 REV A



## 1.1 LINEAR ACCURACY SPECIFICATION:

### MMC PORTABLE ELECTRONIC GAUGING TAPE STANDARD PRODUCTION LINEAR MEASUREMENT ACCURACY

<b>Applicable Equipment:</b>	MMC Models D-2401-2 (Trimode), D-2401-2UI (Ullage/Interface,
<b>Tape Lengths:</b>	50 FT., 65 FT., 75 FT., 100 FT., and 15M, 20M, 25M, 30M, 40M
<b>Basic Gauging Tape Style:</b>	Steel, 0.375 wide x 0.006 thick, yellow or white faced, black and red graduation markings. Manufactured in accordance with Federal Specification GGG-T-106F.
<b>System Linear Accuracy at 68°F:</b>	English Reading, $\pm 1/8"$ of reading plus $\pm 0.01\%$ of total tape length.  Metric Reading, $\pm 2\text{MM}$ of reading plus $\pm 0.01\%$ of total tape length.

### GENERAL STATEMENT OF LINEAR ACCURACY

MMC warrants that the above listed, newly produced equipment models, incorporating the listed basic gauging tape style and lengths, will perform to the stated system accuracy.

Certification of accuracy for new equipment is available at extra cost. Certification cost to standards of accuracy more precise than the stated system accuracy will be quoted upon request.

## SECTION I

### I. **GENERAL**

#### 1.0 **SPECIFICATIONS:**

Display Readable Temperature Range . . . . .	°F = -40° to 199.9°*
*Reading Limit Due to 3-1/2 Digit LCD Display on °F Range.	°C = -40° to 150.0°
Guaranteed Temperature Calibration Range . . . . . (and 0°C to 88°C)	32°F to 190°F
Accuracy Over Calibration Range . . . . .	±0.5°F (±0.2°C)
Accuracy Linear Measurements . . . . .	±1/8" (±2.0MM), Plus ±0.01% of Total Tape Length, worst case
Minimum Detectable Tank Bottom Liquid Level . . . . .	3/8" (10MM)
Minimum Detectable Floating Product Level . . . . .	1/8" (3MM)
Batteries for Intrinsically Safe Operation Only (supplied) . . . . .	Duracell MN1604, Duracell MN1604
Battery Drain (Temperature Mode) . . . . .	1.3 ma (In Air) 2.6 ma (In Fluid)
Display . . . . .	3-1/2 Digit Liquid Crystal Display 1/2" Character Height
Operating Temperature Limit of Liquid Crystal Display, Ambient Conditions . . . . .	-40°F to 176°F -40°C to 80°C
Storage Temperature Limits . . . . .	-67°F to 185°F -55°C to 85°C
Available Tape Length - Single Face Scale . . . . .	50 FT or 15 Meters 65FT or 20 Meters 75 FT or 25 Meter 100 FT or 30 Meters 100 FT (10ths & 100ths) 40 Meters
Hazardous Environments . . . . .	Certified Intrinsically Safe BASEEFA/SIRA Gas Groups C&D