HMA-TMN is an on-line colorimetric analyzer for total Manganese in industrial wastewater.

**Features**

- **Low waste solution**
  The amount of waste solution is only 1.1L/month. (at 4H measurement interval)
- **Low reagent consumption**
  No need for reagent change for 1 month.
- **Auto range with automatic dilution**
  HMA-TMN has two measurement ranges (0.1 - 5, 0.5 - 20mg/L) which can be switched automatically depending on the concentration of total Manganese.
- **Automatic backwashing sample filter**
- **Automatic cleaning with each cycle**
- **Automatic calibration**
- **5.7 inch color LCD touch panel**

**Measurements Method**

The Formaldoxime absorptiometry method is adopted. The sample is pumped into the high temperature digestion unit and added the digestion reagent. Then total manganese is digested into dissolved Mn\(^{2+}\) ion. And formaldoxime alkaline solution is added into the solution. Then Mn\(^{2+}\) ion is react with formaldoxime and form the brown colored complex. Concentration of total manganese is calculated as Mn\(^{2+}\) based on absorbance at 470nm.

**Options**

- Pure Water Tank 20L, with level sensor
- Waste Water Tank 20L, with level sensor

**Specification**

- **Product name**: Automatic Online Analyzer for Total Manganese
- **Model**: HMA-TMN
- **Measurement method**: Formaldoxime absorptiometry
- **Measurement Range**: 0.1 - 20mg/L
- **Repeatability**: Within ±5%
- **Display**: 5.7 inch LCD display
- **Transmission output**: 4 - 20mA (Load resistance less than 600Ω)
  - 2 channels
  - CH1, Measured Data
  - CH2, Temperature of reactor or inside temperature of the panel (selectable)
- **Contact output**: Transfer contact 2 points
  - (220VAC 3A, 24VDC 3A)
  - (1) Equipment Failure
  - (2) Select one from followings
    - (a) In measurement operation
    - (b) Out of upper limit
    - (c) Out of lower limit
- **Sample water conditions**
  - Consumption: 1 - 3L/min
  - Pressure: 20 - 50kPa
  - Temperature: 0 - 50°C
  - SS and colored components must be removed

**Power requirements**: 220VAC (±10%), 50/60Hz
**Power consumption**: 350VA(max.), 130W(Average)
**Installation**: Ambient temperature: 10 - 40°C
  - Ambient humidity: Less than 85%RH
  - Indoor installation
**Dimensions**: 600(W)x255(D)x900(H)mm
**Weight**: Approx. 50kg
Installation (Example)

1. Remove Dirt, etc by Thoroughly Flushing the Inside of the Piping Before Piping to the Equipment. Dirt in the Piping will Clog the Solenoid Valves.
2. Rack/Mounting Brackets Should be Provided by the Customer.

Note

Product Code

HMATMN-0-