# SINGLE COLOUR LED MATRIX -16x6 RED-

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16X6 LED MATRIX V1.0

### Part I

# **Design Consideration**

## 1 Assignment Details

Select 'Renesas RL78 / G12 family 'Microcontroller suitable for following Application

- 1. Interface 12VDC, 20mA Buzzer (use HA6 Circuit )
- $2. \ \, \text{Interface HONGFA Relay} \,\,,\, 1\text{Form A} \,\,,\, 12 \,\, \text{VdC coil supply} \,\,,\, 10\text{A Contact rating (use HA9 circuit)}$
- 3. Sense Healthiness of Mains AC Power supply , Mains supply > 100 VAC is healthy condition ( use HA8 circuit)
- 4. Measure Sensor response, which O/P is in the range of 5mV to 100mV, amplified suitably for Single ended ADC of selected Microcontroller (use HA7 circuit)
- 5. Interface non isolated RS 485 port. (use TI make SN65HVD08)

# 2 Block Diagram