

## MULTIPOINT SCANNER

MODEL:( MTS-16X )



- **DESIGNED TO SCAN, MONITOR AND CONTROL UPTO 16 PROCESS VARIABLES**
- **MICRO CONTROLLER BASED**
- **UNIVERSAL INPUT (ACCEPTS J,K,S,T,E,N,R,Pt100,50mV,10V or 4-20mA)**
- **SOFTWARE LINEARISATION**
- **BUILT-IN COLD JUNCTION COMPENSATION FOR THERMOCOUPLE INPUT**
- **THREE WIRE LEAD LENGTH COMPENSATION FOR RTD INPUTS**
- **SOFTWARE LOCK**
- **RS485/ RS 232 SERIAL PORT ON MODBUS PROTOCOL FOR DIGITAL COMMUNICATION**
- **CHANNEL SKIPPING FACILITY**
- **AUTO MANUAL SELECTION FACILITY**
- **IMMUNE TO FURIOUS SIGNAL PICK**

### APPLICATION

The MTS – 16 is a Micro controller based scanner which can scan, monitor and control up to 16 process inputs from Thermocouples, RTD, DC sources in process industries. The system can work as a standalone scanner, capable of communicating with a host PC through RS 485/ RS 232 serial communication with MODBUS protocol. If the serial configuration is preferred then the scanner can be supplied with necessary HMI / SCADA package.

### DESCRIPTION

The model MTS 16X is a highly reliable, versatile and micro controller based scanner with RS 485 / RS 232 serial port on MODBUS protocol for monitoring & controlling process parameters at PC side. The process values are scanned, simultaneously digitized and sent to PC through RS 485/ RS 232 serial communication port. The MTS 16X accepts inputs from RTD, Thermocouples, and DC sources. A maximum of 8 relays are provided which can be factory configured to groups of channels. Two set values for each channel are programmable through an in-built membrane keypad. A watch-dog Timer

and normally energised relay outputs ensure totally fail-safe operation of the scanner. Sufficient filters are provided at input signal conditioning stage of the scanner, which filters out any noise pick up, by field cables. The input values are averaged out over a period of time, which further ensures noise immunity, stability of measurement and avoids relay chattering. Software linearisation is provided for non-linear input signals.

A Front panel membrane keypad is provided for selecting the modes of operation, monitoring and entering of set values, selecting dwell time and channel skipping. Software lock is provided for entering/changing set values. Battery back up is provided to retain the set values even during power failure. This model provides 3 modes of operation viz.

- 1) Auto mode
- 2) Manual mode and
- 3) SP1 & SP2 modes

**Auto mode** : System displays the temperature of all non-skipped channels as per programmed display dwell time. Skipped channels are shown as 'OFF'. Sensor-break is shown as 'OPN'.

**Manual mode** : Temperature of any particular channel may be Selected for continuous monitoring without affecting Scanning of all channels

**SP 1, SP 2 modes** : In these modes the operator can observe and program the set Points of any channel

### **SPECIFICATIONS**

NO OF CHANNELS	:	8/12/16
UNIVERSAL INPUT	:	a) T/C (K,N,T,J,E,R,S,B) with Linearisation and CJC Built – in b) RTD (Pt-100, Pt-46, Cu-53) 2 wire / 3 wire with In – built Lead resistance compensation c) 0 – 20 mA DC (Linear/ to be linearised) d) 0-10V DC (Any voltage, linear/to be linearised)
DISPLAY	:	a) 3 digit 7 segment 12.5mm height bright red LED for process value b) 2 digit 7 segment 12.5mm height bright red LED for channel number c) 3 digit 8mm height red alphanumeric display for engineering unit
DISPLAY DWELL TIME	:	1 to 9 sec. (programmable)
INPUT SCAN RATE	:	100 Ch/sec.
ALARM STATUS INDICATION	:	Two LEDs are provided per channel for 2 set points
SETPOINT	:	Two individual set points per channel, Programmable from front panel keypad
RELAY OUTPUT	:	8 relays. Field configurable to 4 groups
RELAY CONFIGURATION	:	H-H/H-L/L-L

